GOVERNMENT OF KHYBER PAKTUNKHWA
IRRIGATION DEPARTMENT

BIDDING DOCUMENTS

FOR

THE WORK

"SOLARIZATION OF EXISTING IRRIGATION TUBE WELLS IN TRIBAL DISTRICTS [MA] (ADP NO. 2154/192017-190092/2023-24)"

<u>SUB WORKS</u>

1. Solarization of Existing Irrigation Tube Well at Shahkass Area Tehsil Jamrud District Khyber
2. Solarization of Existing Irrigation Tube Well at Shahkass / Katia Khel Area Tehsil Jamrud District Khyber
3. Solarization of Existing Irrigation Tube Well at Mukha Kally Draghay Dhand Narai Karawal MDK Bara Tehsil District Khyber

(SOLAR COMPONENTS)

IRRIGATION DIVISION, DISTRICT KHYBER

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INVITATION
FOR BIDS

INVITATION FOR BIDS

NOTICE INVITING E-BIDDING (3rd Time)
(Single Stage Two Envelop E-Bidding System)

Irrigation Department, Government of Khyber Pakhtunkhwa, Irrigation Division, District Khyber invites Technical and Financial (Electronic Bids) proposals on the basis of Single Stage Two Envelop procedure for the following works from the eligible firms / contractors who have renewed their enlistment and PEC license in relevant category for Solar (EE-11) for the year 2023-24, registered with the Khyber Pakhtunkhwa Revenue Authority (KPRA) and on active tax payer list of Income Tax Department & KPPRA.

S.No	Name of Work/Sub Work.	Estimated Cost (Rs. in M)	2% Earnest Money (Rs.)
(A)	**Solarization of Existing Irrigation Tube Wells in Tribal Districts [MA] (ADP No. 2154/192017-190092/2023-24)**		
01	Solarization of Existing Irrigation Tube Well at Shahkass Area Tehsil Jamrud District Khyber **(Solar Work)**	4.652	93040/-
02	Solarization of Existing Irrigation Tube Well at Shahkass / Katia Khel Area Tehsil Jamrud District Khyber **(Solar Work)**	4.627	92540/-
03	Solarization of Existing Irrigation Tube Well at Mukha Kally Draghay Dhand Narai Karawal MDK Bara Tehsil District Khyber **(Solar Work)**	3.798	75960/-

1. Last date & time for submission of Technical & Financial Proposals is 10/10/2023 at 12:00 (Noon) & the Technical Proposal will be opened on the same day at 12:30 PM.
2. Bidding documents including instructions to bidders, Terms and conditions and evaluation criteria can be downloaded from Irrigation Department Web site **(www.irrigation.gkp.pk)** and KPPRA official website.
3. Technical design should be based on Hydraulic Parameter of the schemes provided in the bidding documents and rates should be quoted accordingly in the financial bid. Specification and design parameter of pumping machinery are given in the bidding documents.
4. For **Additional Security** in case of abnormally low bids **KPPRA Notification S.R.O (14)/Vol:1-24/2021-22, Dated: 10th May, 2022** shall be enforced.
5. Pre-bid meeting will be held on 04/10/2023 at 12:00 Noon in office of the undersigned.
6. All the prevailing KPPRA rules / Act and other Govt: notifications issued from time to time shall be applicable.

Executive Engineer,
Irrigation Division, District Khyber.
Office: Jamrud Bazar near Jamrud Civil Hospital, District Khyber
(Contact No. 091-5820090)

TERMS & CONDITIONS.

TERMS AND CONDITIONS

1. Technical design should be based on Hydraulic Parameter of the scheme provided in the bidding documents and rates should be quoted accordingly In the Financial bid. Specification and design parameter of pumping machinery are given in the bidding documents.
2. Financial bid should be submitted online on E-bidding portal of Irrigation Department.
3. Date of Financial Opening will be communicated later to the qualified firms after technically evaluation.
4. Technical bid must be accompanied with bidding documents sealed in envelop which should reach to the office of undersigned through post / courier / representative before closing date and time. Unsealed tender /bid shall be rejected.
5. The technical proposal shall be evaluated on the basis of criteria specified in the bidding document and any proposal which does not confirm / meet the specified requirements shall be rejected. During the technical evaluation, no amendment in the technical proposal will be permitted.
6. After the evaluation and approval of the technical proposals, the financial proposals of the technically qualified/accepted bids only shall be opened at a time within the bid validity period. The financial proposals found technically non-responsive shall be returned un-opened to the respective bidders, along with others whose technical bids failed to qualify.
7. For **Additional Security** in case of abnormally low bids **KPPRA Notification S.R.O (14)/Vol: 1-24/2021-22, Dated: 10th May, 2022** shall be enforced.
8. All Bidders are required to be registered with the Khyber Pakhtunkhwa Revenue Authority (KPRA) established under the Khyber Pakhtunkhwa Finance act. 2013 (Khyber Pakhtunkhwa Act No.XXI of 2013). for theworks. consulting and non-consulting services as listed in Schedule-11 of the Act ibid.
9. The bidders shall submit NTN/Registration Certificate from Income Tax department along with income tax submission certificate or valid exemption certificate. The firm will be on Active Taxpayer list to make him eligible for participation.
10. The bidders must submit (1) Income Tax Returns, (2) Sales Tax Returns (both Federal and Provincial), (3) Audited balance sheets, for the last five years with their

Technical Bids so as to ascertain the annual turnover. In case of any inconsistency in the three documents, the bidder may be rejected and reported to RTO / relevant offices for punitive action.

11. Information regarding GST, Federal (FBR) sales tax on goods, Provincial (KPRA) sales tax on services, etc. must be provided by the bidder in the BOQ filled / submitted, otherwise bid shall be declared as non-responsive. (Any exempted tax must be duly supported by evidence of exemption).
12. If the performance security is not provided by the bidder in the required period, the bid security of the defaulting bidder will be forfeited.
13. If the evaluated electronic bid costs of two or more bidders are equal then the successful bidder will be declared through draw/ toss.
14. The employer has the authority or eject any E-bid or all E-bids assigning valid reasons.
15. Bid security of 1st, 2nd and 3rd lowest bidders will be retained by the employer till the approval of bids.
16. All the prevailing KPPRA rules /Act and other Govt: notifications issued from time to time shall be applicable.

Executive Engineer, Irrigation Division, District Khyber
Office: Jamrud Bazar near Jamrud Civil Hospital, District Khyber

INSTRUCTIONS
TO
BIDDERS

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INSTRUCTIONS TO BIDDERS

A. GENERAL

IB.1 Scope of Bid and Source of Funds

1.1 Scope of Bid

The Employer as defined in the bidding data wishes to receive bids for the following scope of work:

Solarization of Existing Irrigation Tube Wells in Tribal Districts [MA] (ADP No. 2154/192017-190092/2023-24)

Sub Work: As per NIT

Bidders must quote for the complete scope of work. Any bid covering partial scope of work will be rejected as non-responsive, pursuant to Clause IB.24.

1.2 Source of Funds

ADP / AIP No. 2154/192017-190092/2023-24.

IB.2 Eligible Bidders

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

a. Duly licensed by the Pakistan Engineering Council (PEC) in the category relevant to the value of the works with specialization code as mentioned in the invitation for E-Bidding.

b. Firms have not been blacklisted by any Govt: Organization or involved in such like litigations.

c. Registered with KPRA.

d. NTN/Registration certificate from income Tax department along with up to date clearance certificate. The contractor must also be active on “Active Tax Payer list.”

e. Enlistment with the Irrigation Department.

f. Furnished valid 2% Earnest Money and Additional Security as per KPPRA Notification No. S.R.O. (14)/Vol: 1-24/2021-22, dated 10/05/2022.

IB.3 Eligible Goods and Services

3.1 All Goods and ancillary Services to be supplied under this Contract shall have their origin in eligible countries listed in Appendix „A‟ to Instructions to Bidders and all expenditures made under the Contract will be limited to such Goods and Services.

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

3.3 The origin of Goods and Services is distinct from the nationality of the Bidder.

IB.4 Cost of Bidding

4.1 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.5 Contents of Bidding Documents

5.1 In addition to Invitations for Bids, the Bidding Documents are those stated below, and should be read in conjunction with any Addendum issued in accordance with Clause IB.7.

1. Instructions to Bidders with Appendices
2. Form of Bid & Schedules to Bid

   Schedules to Bid are the following:

   (i) Schedule A: Specific Works Data
   (ii) Schedule B: Work to be Performed by Subcontractors
   (iii) Schedule C: Proposed Programme of Works
   (iv) Schedule D: Deviations from Technical Provisions
   (v) Schedule E: Deviations from Contractual Conditions
   (vi) Schedule F: Method of Performing Works
   (vii) Schedule G: Proposed Organisation
   (viii) Schedule H: Integrity Pact
3. Schedule of Prices
4. Preamble to Conditions of Contract
5. General Conditions of Contract
6. Particular Conditions of Contract
7. Standard Forms
   Forms include the following:
   (i) Form of Bid Security
   (ii) Form of Contract Agreement
   (iii) Form of Performance Security
   (iv) Form of Bank Guarantee/Bond for Advance Payment
8. Specifications - Special Provisions
9. Specifications - Technical Provisions
10. Drawings

5.2 The bidders are expected to examine carefully the contents of all the above documents. Failure to comply with the requirements of bid submission will be at the bidders own risk. Pursuant to Clause IB.24, bids which are not substantially responsive to the requirements of the Bidding Documents will be rejected.

IB.6 Clarification of Bidding Documents

6.1 A prospective bidder requiring any clarification(s) in respect of the Bidding Documents may notify the Employer with a copy to the Engineer in writing at the address mentioned in the bidding data.

Employer will examine the request for clarification of the Bidding Documents which it receives earlier than the period specified in the Bidding Data prior to the deadline for submission of bids

and if needed will issue the clarification/amendment of the Bidding Documents before the date of submission of Bids (without identifying the source of enquiry) to all prospective bidders.

6.2 The Employer may, on his own or at the request of any prospective bidder(s), hold a pre-bid meeting to clarify issues and to answer any questions on matters related to the Bidding Documents. The date, time and venue of pre-bid meeting, if convened, are as stipulated in the Bidding Data. All prospective bidders or their authorized representatives shall be invited to attend such a pre-bid meeting.

IB.7 Amendment of Bidding Documents

7.1 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.

7.2 Any addendum thus issued shall be part of the Bidding Documents pursuant to Sub-Clause 7.1 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.

7.3 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 in accordance with Clause IB.19.

C. PREPARATION OF BIDS

IB.8 Language of Bid

8.1 The Bid prepared by the Bidder and all correspondence and documents relating to the Bid, exchanged by the Bidder and the Engineer 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.9 Documents Comprising the Bid

9.1 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 Clause IB.17.

(c) Schedules (A to H) to Bid duly filled and signed, in accordance with the instructions contained therein.

(d) Schedule of Prices completed in accordance with Clauses IB.11 and 12.

(e) Bid Security furnished in accordance with Clause IB.15.

(f) Power of Attorney in accordance with Clause IB 17.5.

(g) Joint Venture Agreement (if applicable).

(h) 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.

(i) Documentary evidence established in accordance with Clause IB.14 that the Goods and ancillary Services to be supplied by the bidder are eligible Goods and Services and conform to the Bidding Documents.

(j) Bidders applying for eligibility for domestic preference in bid evaluation shall supply all information & evidence to establish the claim for domestic preference required to satisfy the criteria for eligibility as described in Clause IB.27. The particulars for domestic Goods prescribed in Appendix C to these Instructions shall also be filled in to substantiate claim for domestic preference.

(k) Any other documents prescribed in Particular Conditions of Contract or Technical Provisions to be submitted with the bid.

IB.10 Form of Bid and Schedules

10.1 The bidder shall complete, sign and seal the Form of Bid, Schedules (A to H, or as modified) to Bid and Schedule of Prices furnished in the Bidding Documents and shall also enclose other information as detailed in Clause IB.9.

10.2 For the purpose of granting a margin of domestic preference pursuant to Clause IB.27, the Employer/Engineer will classify the bids, when submitted in one of three groups as follows:

(a) **Group „A‟ Bid.** (i) For Goods for which labour, raw materials and components from within Pakistan account for at least 20% of the ex-factory bid price of the products offered (ii) For Goods for which labour, raw materials and components from within Pakistan account for over 20% and up to 30% of the ex-factory bid price of the products offered (iii) For Goods for which labour, raw materials and components from within Pakistan account for over 30% of the ex-factory bid price of the products offered.

(b) **Group „B‟ Bid.** For Goods manufactured in Pakistan for which the domestic value added in the manufacturing cost is less than 20% of the ex-factory bid price; and

(c) **Group „C‟ Bid.** For Goods of foreign origin.

In preparing their bids, the bidders,whether local or foreign, shall enter in the Schedule of Prices ex-factory price for indigenously manufactured products and CIF price as well as customs duty and sales tax and other import charges for products to be imported from outside Pakistan.

IB.11 Bid Prices

11.1 The bidder shall fill up the Schedule of Prices attached to these documents indicating the unit rates and prices of the Works to be performed under the Contract. Prices on the Schedule of Prices shall be entered keeping in view the instructions contained in the Preamble to the Schedule of Prices.

11.2 The bidder shall fill in rates and prices for all items of the Works described in the Schedule of Prices. Items against which no rate or price is entered by a bidder will not be paid for by the Employer when executed and shall be deemed covered by rates and prices for other items in the Schedule of Prices.

11.3 The bidder‟s separation of price components in accordance with Sub-Clause 11.1 above, will be solely for the purpose of facilitating the comparison of bids by the Employer/Engineer and will

not in any way limit its right to contract on any of the terms offered.

11.4 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. When the bidders are required to quote only fixed price(s) a bid submitted with an adjustable price quotation will be treated as non-responsive and rejected, pursuant to Clause IB.24.

11.5 Any discount offered shall be valid for at least the period of validity of the bid. A discount valid for lesser period shall be considered null and void.

IB.12 Currencies of Bid

12.1 Prices shall be quoted in the following currencies:

(a) For Goods and Services which the bidder will supply from within Pakistan, the prices shall be quoted in the Pak. Rupees.

(b) For Goods and Services which the bidder will supply from outside Pakistan, the prices shall be quoted either in U.S. Dollars or in any other freely convertible currency.

12.2 Further, a bidder expecting to incur a portion of its expenditure in the performance of the Contract in more than one currency (but use no more than 3 foreign currencies), and wishing to be paid accordingly, shall so indicate in its bid.

12.3 The currencies of payment shall be as stated in Particular Conditions of Contract. However, provisions in Sub-Clauses 12.1 & 12.2 above, shall not in any way constitute a contractual or legal binding on the Employer for the payment in the currencies required by the Contractor.

IB.13 Documents Establishing Bidder‟s Eligibility And Qualifications

13.1 Pursuant to Clause IB.9, 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.

13.2 The documentary evidence of the bidder‟s eligibility to bid shall establish to the Employer‟s satisfaction that the bidder, at the time of submission of its bid is from an eligible source country as defined under Clause IB.2.

13.3 The documentary evidence of the bidder‟s qualification to perform the Contract if its bid is accepted, shall establish to the Employer‟s/Engineer‟s satisfaction:

(a) that, in the case of a bidder offering to supply Goods under the Contract which the bidder did not manufacture or otherwise produce, the bidder has been duly authorized by the Goods manufacturer or producer to supply the Goods to Pakistan;

(b) that the Bidder/Manufacturer has the financial, technical and production capability necessary to perform the Contract; and

(c) that, in the case of a bidder not doing business within Pakistan the bidder is or will be (if successful) represented by an agent in Pakistan equipped and able to carry out the Supplier‟s maintenance, repair and spare parts stocking obligations prescribed by the Conditions of Contract and/or Technical Provisions.

13.4 (a) Bidder/Manufacturer must possess and provide evidence of the following experience as mentioned in the bidding data.

The Bidder shall certify the capacity and capability of the plant (from which Goods are now offered) for manufacturing, quality assurance and testing facilities, qualified man-power and production/delivery of quality materials according to bid specifications and delivery requirements. The number of years of working of such plant having production of same required items and number of years and such Goods shall have proven successful in the field as mentioned in the bidding data.

The bidder shall submit with the bid all necessary documentation in this regard. The Employer/Engineer will have the right to verify the particulars regarding the plant and other related information furnished with the bid and the joint venture as well as the partners thereof shall be liable for disqualification in the event of any mis-statement/mis-representation on their part.

The bidder shall furnish documentary evidence of qualification on the Form "Evidence of Bidder"s Capability" specified in the Bidding data.

(b) The bidder should have an average annual turnover in the last five years equal to or more than the Total Bid Price. Alternately, the bidder should have successfully completed in the last five years any specific project having value equal to or higher than the total Bid Price.

13.5 Joint Venture

In order for a Joint Venture to qualify:

(a) At least one of the partners of joint venture shall satisfy the relevant experience criteria specified in Sub-Clause 13.4(a) hereinabove.

(b) All firms comprising the joint venture shall be legally constituted and shall meet the eligibility requirement of Sub-Clause 2.1 hereof.

(c) All partners of the joint venture shall at all times and under all circumstances be liable jointly and severally to Employer for the execution of the entire Contract in accordance with the Contract terms and conditions and a statement to this effect shall be included in the authorization mentioned under para (f) below as well as in the Form of Bid and Form of Contract Agreement (in case of a successful bidder).

(d) The Form of Bid, and in the case of successful bidder, the Form of Contract Agreement, shall be signed so as to be legally binding on all partners.

(e) One of the joint venture partners shall be nominated as being in-charge and this authorisation shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the joint venture partners.

(f) The partner-in-charge shall be authorized to incur liabilities, receive payments and receive instructions for and on behalf of any or all partners of the joint venture.

(g) A copy of the agreement entered into by the joint venture partners shall be submitted with the bid stating the conditions under which it will function, its period of duration, the persons authorized to represent and obligate it and which persons will be directly responsible for due performance of the Contract and can give valid receipts on behalf of the joint venture, the proportionate participation of the several firms forming the joint venture, and any other information necessary to permit a full appraisal of its functioning. No amendments / modifications whatsoever in the joint venture agreement shall be

agreed to between the joint venture partner without prior written consent of the Employer.

13.6 The Bidder shall propose, in order of his priority; plant, equipment or goods of not more than three Manufacturers. Employer at his own jurisdiction will evaluate the plant, equipment or goods of only one of such Manufacturers.

IB.14 Documents Establishing Goods‟ Eligibility and Conformity to Bidding Documents

14.1 Pursuant to Clause IB.9, the bidder shall furnish, as part of its bid, documents establishing the eligibility and conformity to the Bidding Documents of all Goods and Services which the bidder proposes to perform under the Contract.

14.2 The documentary evidence of the Goods and Services eligibility shall establish to the Employer‟s satisfaction that they will have their origin in an eligible source country as defined under Clause IB.3. A certificate of origin issued at the time of shipment will satisfy the requirements of the said Clause.

14.3 The documentary evidence of the Goods and Services‟ conformity to the Bidding Documents may be in the form of literature, drawings and data and shall furnish:

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

(b) Complete set of technical information, description data, literature and drawings as required in accordance with Schedule A to Bid, Specific Works Data. This will include but not be limited to the following:

(i) A sufficient number of drawings, photographs, catalogues, illustrations and such other information as is necessary to illustrate clearly the significant characteristics such as general construction dimensions and other relevant information about the Goods to be furnished.
(ii) Details of equipment and machinery with capacity.
(iii) Any other information which is required for evaluation purposes.

(c) A clause-by-clause commentary on Technical Provisions, provided with the Bidding Documents, demonstrating the Goods‟ and Services‟ substantial responsiveness to those Specifications or a statement of deviations and exceptions to the provisions of the Technical Provisions as required in Schedule D to Bid.

14.4 For purpose of the commentary to be furnished pursuant to Sub-Clause 14.3(c) above, the Bidder shall note that standards for workmanship, material and equipment, and references to brand names or catalogue numbers, designated by the Engineer in the Technical Provisions are intended to be descriptive only and not restrictive. The bidder may substitute alternative standards, brand names and/or catalogue numbers in its bid, provided that it demonstrates to the Engineer‟s satisfaction that the substitutions are substantially equivalent or superior to those designated in the Technical Provisions. Copies of the standards proposed by the bidder other than those specified in the Bidding Documents shall be furnished.

IB.15 Bid Security

15.1 Each bidder Each bidder shall furnish, as part of his bid, a Bid Security in the amount stipulated in NIT & Bidding Data in Pak. Rupees (or Additional Bid Security as per KPPRA notification No. S.R.O. (14)/Vol: 1-24/2021-22, dated 10/05/2022) in the form of Deposit at Call in favour of the **Executive Engineer, Irrigation Division, Khyber**. [The bid security shall be submitted from the account of the firm/bidder/contractor who submits the bid].

15.2 The Bid Security shall be in the form of Deposit at Call from a Scheduled Bank in Pakistan, in favour of the Procuring Entity.

15.3 The Bid Security is required to protect the Employer against the risk of bidder's conduct which would warrant the security's forfeiture, pursuant to Sub-Clause 15.7 hereof.

15.4 Any bid not accompanied by an acceptable Bid Security shall be rejected by the Employer as non-responsive, pursuant to Clause IB.24.

15.5 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 which ever is earlier.

15.6 The Bid Security of the successful bidder will be returned when the bidder has furnished the required Performance Security, pursuant to Clause IB.34 and signed the Contract Agreement, pursuant to Clause IB.35.

15.7 The Additional Security shall be released to the contractor in four installments that is 25% to be released upon completion of 25% of the project, 50% to be released upon completion of 50% of the project, 75% to be released upon completion of 75% of the project and the remaining amount to be released after completion of the project.

15.8 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 24.2 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.34, or

(ii) sign the Contract Agreement, in accordance with Clause IB.35.

IB.16 Validity of Bids

16.1 Bids shall remain valid for 120 days after the date of bid opening as prescribed in Clause IB.19.

16.2 In exceptional circumstances prior to expiry of original bid validity period, the Employer may request the bidders to extend the period of validity for a specified additional period which shall in no case be more than the original bid validity period. The request and the responses thereto shall be made in writing. A bidder may refuse the request without forfeiture of his Bid Security. A bidder agreeing to the request will be required to extend the validity of his Bid Security for the period of the extension, and in compliance with Clause IB.15 in all respects in which case, the Employer will be obligated to compensate the bidders, upon substantiation for their increase in costs (if it is a fixed price bid).

IB.17 Format and Signing of Bid

17.1 Bidders are particularly directed that the amount entered on the Form of Bid shall be for performing the Contract strictly in accordance with the Bidding Documents.

17.2 All Schedules to Bid are to be properly completed and signed.

17.3 No alteration is to be made in the Form of Bid nor in the Schedules thereto 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.

17.4 Each bidder shall prepare one (1) Original and one Copy, 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.

17.5 The original and all copies 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 authorising the signatory of the bidder to act for and on behalf of the bidder. All pages of the bid shall be initialed and stamped by the person or persons signing the bid.

17.6 The bid shall contain no alterations, omissions or additions, except to comply with instructions issued by the Employer, or as are necessary to correct errors made by the bidder, in which case such corrections shall be initialed by the person or persons signing the bid.

17.7 Bidders shall indicate in the space provided in the Form of Bid their full and proper addresses at which notices may be legally served on them and to which all correspondence in connection with their bids and the Contract is to be sent.

17.8 Bidders should retain a copy of the Bidding Documents as their file copy.

D. SUBMISSION OF BIDS

IB.18 Sealing and Marking of Bids

18.1 Each bidder shall submit his bid as under:

(a) ORIGINAL and each COPY of the Bid shall be separately sealed and put in separate envelopes and marked as such.

(b) The envelopes containing the ORIGINAL and COPIES will be put in one sealed envelope and addressed / identified as given in Sub- Clause 18.2 hereof.

18.2 The inner and outer envelopes shall;

(a) be addressed to the Employer at the address given in Sub-Clause 6.1 heretofore.
(b) bear the Project name, Loan No., Bid No. and Date of opening of Bid.
(c) provide a warning not to open before the time and date for bid opening.

18.3 The Bid shall be delivered in person or sent by registered mail at the address to Employer as given in Sub-Clause 6.1 heretofore.

18.4 In addition to the identification required in Sub-Clause 18.2 hereof, the inner envelope shall indicate the name and address of the bidder to enable the bid to be returned unopened in case it is declared “late” pursuant to Clause IB.20.

18.5 If the outer envelope is not sealed and marked as above, the Employer will assume no responsibility for the misplacement or premature opening of the bid.

IB.19 Deadline for Submission of Bids

19.1 (a) Bids must be received by the Employer at the address specified in Sub-Clause 6.1 hereof not later than the time and date stipulated in the Invitation for Bids.

(b) Bids with charges payable will not be accepted, nor will arrangements be undertaken to collect the bids from any delivery point other than that specified above. Bidders shall bear all expenses incurred in the preparation and delivery of bids.

(c) Where delivery of a bid is by mail and the bidder wishes to receive an acknowledgment of receipt of such bid, he shall make a request for such acknowledgment in a separate letter attached to but not included in the sealed bid package.

(d) Upon request, acknowledgment of receipt of bids will be provided to those making delivery in person or by messenger.

19.2 Bids submitted through telegraph, telex, fax or e-mail shall not be considered.

19.3 The Employer may, at his discretion, extend the deadline for submission of bids by issuing an addendum in accordance with Clause IB.7, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will thereafter be subject to the deadline as extended.

IB.20 Late Bids

20.1 (a) Any bid received by the Employer after the deadline for submission of bids prescribed in Clause IB.19 will be returned unopened to such bidder.

(b) Delays in the mail, delays of person in transit, or delivery of a bid to the wrong office shall not be accepted as an excuse for failure to deliver a bid at the proper place and time. It shall be the bidder‟s responsibility to determine the manner in which timely delivery of his bid will be accomplished either in person, by messenger or by mail.

IB.21 Modification, Substitution and Withdrawal of Bids

21.1 Any bidder may modify, substitute or withdraw his bid after bid submission provided that modification, substitution or written notice of the withdrawal is received by the Employer prior to the deadline for submission of bids.

21.2 The modification, substitution or notice for withdrawal of any bid shall be prepared, sealed, marked and delivered in accordance with the provisions of Clause IB.18 with the outer and inner envelopes additionally marked “MODIFICATION”, “SUBSTITUTION” or “WITHDRAWAL”, as appropriate.

21.3 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 Clause IB.15.

E. BID OPENING AND EVALUATION

IB.22 Bid Opening

22.1 A committee consisting of nominated members by the Employer and by the Engineer will open the bids, including withdrawals, substitution and modifications made pursuant to Clause IB.21, in the presence of bidders‟ representatives who choose to attend, at the time, date and location stipulated in the Invitation for Bids.

The bidders‟ representatives who are present shall sign in a register evidencing their attendance.

22.2 Envelopes marked “MODIFICATION”, “SUBSTITUTION” or “WITHDRAWAL” shall be opened and read out first and the name of the Bidder shall be read out. Bids for which an acceptable notice of withdrawal has been submitted pursuant to Clause IB.21 shall not be opened.

22.3 The bidder‟s name, Bid Prices, unit rates, any discount and price of any Alternate Proposal(s), bid modifications, substitutions and withdrawals, 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 minutes of bid opening.

Any Bid Price or discount which is not read out and recorded at bid opening will not be taken into account in the evaluation of bid.

22.4 Discounts offered for lesser period than the bid validity shall not be considered in evaluation.

IB.23 Clarification of Bids

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

IB.24 Preliminary Examination & Determination of Responsiveness of Bids

24.1 Prior to the detailed evaluation of bids, pursuant to Clause IB.26,

(a) the Engineer will examine the Bids to determine whether;

(i) the Bid is complete and does not deviate from the scope,
(ii) any computational errors have been made,
(iii) required sureties have been furnished,
(iv) the documents have been properly signed,
(v) the Bid is valid till required period,
(vi) the Bid prices are firm during currency of contract if it is a fixed price bid,
(vii) completion period offered is within specified limits,
(viii) the Bidder/Manufacturer is eligible to Bid and possesses the requisite experience,
(ix) the Bid does not deviate from basic technical requirements and
(x) the Bids are generally in order.

(b) A bid is likely not to be considered, if;

(i) it is unsigned,
(ii) its validity is less than specified,
(iii) it is submitted for incomplete scope of work,
(iv) it indicates completion period later than specified,
(v) it indicates that Works and materials to be supplied do not meet eligibility requirements,
(vi) it indicates that Bid prices do not include the amount of income tax,

(c) A bid will not be considered, if;

(i) it is not accompanied with bid security and additional bid security, if applicable.
(ii) it is submitted by a bidder who has participated in more than one bid,
(iii) it is received after the deadline for submission of bids,
(iv) it is submitted through fax, telex, telegram or email,
(v) it indicates that prices quoted are not firm during currency of the contract whereas the bidders are required to quote fixed price(s),
(vi) the bidder refuses to accept arithmetic correction,
(vii) it is materially and substantially different from the Conditions/Specifications of the Bidding Documents.

24.2 Arithmetical errors will be rectified on the following basis:

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

24.3 Prior to the detailed evaluation, pursuant to Clause IB.26 the Employer/Engineer will determine the substantial responsiveness of each Bid 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.

A material deviation or reservation is one

(i) which affects in any substantial way the scope, quality or performance of the Works.
(ii) which limits in any substantial way, inconsistent with the Bidding Documents, the Employer‟s rights or the bidder‟s obligations under the Contract; or
(iii) whose rectification/adoption would affect unfairly the competitive position of other bidders presenting substantially responsive bids.

The Employer's/Engineer's determination of a Bid's responsiveness will be based on the contents of the Bid itself without recourse to extrinsic evidence.

24.4 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.

24.5 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 Bidder.

IB.25 Conversion to Single Currency

25.1 To facilitate evaluation and comparison, the Employer/Engineer will convert, all Bid Prices expressed in the amount in various currencies in which Bid Price is payable, to Pak. Rupees at the Telegraphic Transfer and Over Draft (TT&OD) composite (selling) exchange rates published/authorised by State Bank of Pakistan and applicable to similar transactions, on the date of the opening of Bids.

IB.26 Detailed Evaluation of Bids

26.1 The Employer/Engineer will evaluate and compare only the bids previously determined to be substantially responsive pursuant to Clause IB.24 as per requirements given hereunder.

26.2 Evaluation and Comparison of Bids

(a) Bids will be evaluated for each item and/or complete scope of work.

(b) Basis of Price Comparison
The prices will be compared on the basis of the Evaluated Bid Price pursuant to Para (e) herein below.

(c) Technical Evaluation
It will be examined in detail whether the Goods offered by the bidder comply with the Technical Provisions of the Bidding Documents. For this purpose, the bidder‟s data submitted with the bid will be compared with the specific work data prescribed by the Employer and technical features/criteria of the Goods detailed in the Technical Provisions. Other technical information submitted with the bid regarding the Scope of Work will also be reviewed.

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

(e) Evaluated Bid Price
In evaluating the bids, the 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 errors pursuant to Sub-Clause 24.2 hereof.
(ii) excluding Provisional Sums, if any, but including priced Daywork.
(iii) making an appropriate adjustment for any other acceptable variation or deviation.

26.3 Evaluation Methods

Pursuant to Sub-Clause 26.2, Para (e)(iii) following evaluation methods for price adjustments will be followed:

(a) Price Adjustment for Completeness in Scope of Work
(b) Price Adjustment for Technical Compliance
(c) Price Adjustment for Commercial Compliance
(d) Price Adjustment for Deviations in Terms of Payment
(e) Price Adjustment for completion Schedule

(i) Price Adjustment for Completeness in Scope of Work
In case of omission in the scope of work of a quoted item no price adjustment for the omitted item(s) shall be applied provided that the Bidder has mentioned in his bid that the same is covered in any other item.

The price adjustment shall not justify any additional payment by the Employer. The price(s) of omitted item(s) shall be deemed covered by other prices of the Schedule of Prices.

(ii) Price Adjustment for Technical Compliance

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

(iii) Price Adjustment for Commercial Compliance

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

(iv) Price Adjustment for Deviation in Terms of Payment

If a bid deviates from the terms of payment/payment conditions as specified in the Conditions of Contract and if such deviation is considered acceptable to the Employer, mark-up earned for any earlier payments involved in the terms outlined in the Bid as compared to those stipulated in the Conditions of Contract shall be calculated at the following mark-up rates:

- for foreign currency component: LIBOR + 1%.
- for local currency component: KIBOR + 1%.

and shall be added to the Corrected Total Bid Price for comparison purposes only.

(v) Price Adjustment for Completion Schedule

Bids indicating completion in advance of the dates stated in Preamble to Conditions of Contract, no credit will be given in this evaluation.

Bids indicating completion period later than the period set out in Preamble to Conditions of Contract shall be adjusted in the evaluation by adding a factor of 0.05% of the Corrected Total Bid Price for each calendar day of completion later than specified period of the completion.

Bids indicating completion beyond 180 days later than the dates set out in Preamble to Conditions of Contract, shall not be considered and rejected as non responsive.

26.4 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 (i.e. more than 30% below on Engineer Estimate as per KPPRA notification No. S.R.O. (14)/Vol: 1-24/2021-22, dated 10/05/2022), the the bidder shall produce detailed rate analysis of his bid price in relation to all the items of bill of quantities, scope of work, allocation of risks and responsibilities and/or any other requirements of the bid solicitation document.After evaluation of the price analyses, the Employer may require that the amount of the Performance Security set forth in Clause IB.34 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. The contract shall be awarded to the lowest evaluated bidder who has satisfied the procuring entity on rate analysis.

IB.27. Domestic Preference

27.1 In the comparison of evaluated Bids, the Goods manufactured in Pakistan, will be granted a margin of preference in accordance with the following procedures, provided the bidder shall have established to the satisfaction of Employer that the manufacturing cost of such Goods includes a domestic value addition equal to at least 20% of the ex-factory Bid price of such Goods. Bidders applying for domestic preference shall fill in Appendix C to these Instructions to substantiate their claim.

27.2 The Employer/Engineer will first review the Bids to determine, the Bid group classification in accordance with Sub-Clause 10.2 hereof.

27.3 The comparison shall be Ex-factory price of the Goods to be offered from within Pakistan (such prices to include all costs as well as custom duties and taxes paid or payable on raw materials and components incorporated or to be incorporated in the Goods) and the DDP (CIF + Customs duty, sales tax and other import charges) Pakistan seaport price of the Goods to be offered from outside Pakistan.

27.4 The lowest evaluated bid of each Group shall first be determined by comparing all evaluated bids in each Group among themselves taking into account:

(a) In the case of Goods manufactured in Pakistan, sales tax, local body charges and other similar taxes which will be payable on the furnished Goods in Pakistan.

(b) In the case of Goods of foreign origin offered from abroad, customs duties, sales tax and other import charges which will be payable on furnished Goods in Pakistan.

(c) In the case of Goods of foreign origin already located in Pakistan, customs duty, sales tax and import charges on CIF price as applicable for Sub-Clause 27.4(b) here above.

27.5 The price preference to Group A bids will be:

(i) 15% of the ex-factory bid price, if the value addition through indigenous manufacturing is at least 20%;

(ii) 20% of the ex-factory bid price, if the value addition through indigenous manufacturing is over 20% and up to 30%; and

(iii) 25% of the ex-factory bid price, if the value addition through indigenous manufacturing is over 30%.

27.6 The applicable price preference i.e., as per Sub-Clause 27.5 here above will be applied to Group A Bid by reducing the ex-factory bid price.

IB.28 Process to be Confidential

28. 1 Subject to Clause 23 heretofore, no Bidder shall contact Employer and/or Engineer on any matter relating to its Bid from the time of the Bid opening to the time the bid evaluation result is announced by the Employer. The evaluation result shall be announced at least ten (10) days prior to award of Contract. The announcement to all bidders will include table(s) comprising read out prices, discounted prices, price adjustments made, final evaluated prices and recommendations against all the bids evaluated.

28.2 Any effort by a Bidder to influence Employer and/or Engineer 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 the procurement process.

F. AWARD OF CONTRACT

IB.29. Post-Qualification

29.1 The Employer, at any stage of the bid evaluation, having credible reasons for or *prima facie* evidence of any defect in supplier‟s or contractor‟s capacities, may require the suppliers or contractors to provide information concerning their professional, technical, financial, legal or managerial competence whether already pre-qualified or not:

Provided that such qualification shall only be laid down after recording reasons therefor in writing. They shall form part of the records of that bid evaluation report.

29.2 The determination will take into account the bidder‟s financial, technical and production capabilities. It will be based upon an examination of the documentary evidence of the bidder‟s qualification submitted under Appendix B to Instructions to Bidders "Evidence of Bidder‟s Capability" by the bidder pursuant to Clause IB.13, as well as such other information as required under the Bidding Documents.

29.3 An affirmative determination will be a pre-requisite for award of the Contract to the lowest evaluated bidder. A negative determination will result in rejection of that bidder‟s bid in which event, Employer will proceed to undertake a similar determination of the next lowest evaluated bidder's capabilities to perform the Contract satisfactorily.

IB.30 Award Criteria

30.1 Subject to Clause IB.32, the Employer will award the Contract to the bidder whose bid has been determined to be substantially responsive to the Bidding Documents and who has offered the lowest evaluated Bid Price, provided that such bidder has been determined to be qualified to satisfactorily perform the Contract in accordance with the provisions of Clause IB.29.

IB.31 Employer’s Right to Vary Quantities

31.1 Employer reserves the right at the time of award of Contract to increase or decrease by upto 15% the quantity of goods and services specified in the Schedule of Prices without any change in the unit price or other terms and conditions.

IB.32 Employer’s Right to Accept any Bid and to Reject any or all Bids

32.1 Notwithstanding Clause IB.30, 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 shall upon request be communicated, to any bidder who submitted a bid, without justification of grounds. Rejection of all bids shall be notified to all bidders promptly.

32.2 No negotiations with the bidder having been evaluated as lowest responsive or any other bidder shall be permitted. However, the Employer may have clarification meeting(s) to get clarify any item(s) in the bid evaluation report.

IB.33 Notification of Award

33.1 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. This letter shall name the sum which the Employer will pay the Contractor in consideration of the execution and completion of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Conditions of Contract called the "Contract Price").

33.2 The Letter of Acceptance and its acceptance by the bidder will constitute the formation of the Contract, binding the Employer and the Bidder till signing of the formal Contract Agreement.

33.3 Upon furnishing by the successful bidder of a Performance Security, the Employer will promptly notify the other bidders that their bids have been unsuccessful and return their bid securities.

IB.34 Performance Security

34.1 The successful bidder shall furnish to the Employer a Performance Security in the form and the amount stipulated in the Conditions of Contract within a period of twenty eight (28) days after the receipt of Letter of Acceptance.

34.2 Failure of the successful bidder to comply with the requirements of Sub-Clause IB.34.1 or Clause IB.35 or Clause IB.43shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security.

IB.35 Signing of Contract Agreement

35.1 Within fourteen (14) days from the date of furnishing of acceptable Performance Security under the Conditions of Contract, the Employer will send to the successful bidder the Form of Contract Agreement provided in the Bidding Documents, duly filled in and_incorporating all agreements between the parties for signing and return it to the Employer.

35.2 The formal Agreement between the Employer and the successful bidder shall be executed within fourteen (14) days of the receipt of such Form of Contract Agreement by the successful bidder from the Employer.

G. ADDITIONAL INSTRUCTIONS

IB.36 Instructions not Part of Contract

36.1 Bids shall be prepared and submitted in accordance with these Instructions which are provided to assist bidders in preparing their bids, and do not constitute part of the Bid or the Contract Documents.

IB.37 Contract Documents

37.1 The Documents which will be included in the Contract are listed in the Form of Contract Agreement set out in these Bidding Documents.

IB.38 Sufficiency of Bid

38.1 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. Except insofar as it is otherwise expressly provided in the Contract, the rates and prices entered in the Schedule of Prices shall cover all his obligations under the Contract and all matters and things necessary for the proper completion of the Works.

IB.39 One Bid per Bidder

39.1 Each bidder shall submit only one bid either by himself, or as a partner in a joint venture. A bidder who submits or participates in more than one bid (other than alternatives pursuant to Clause IB.41) will be disqualified and bids submitted by him shall not be considered for evaluation and award.

IB.40 Bidder to Inform Himself

40.1 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. This shall include but not be limited to the following:

(a) inquiries on Pakistani Income Tax/Sales Tax to the Commissioner of the Income Tax and Sales Tax, Pakistan.

(b) inquiries on customs duties and other import taxes, to the concerned authorities of Customs and Excise Department.

(c) information regarding port clearance facilities, loading and unloading facilities, storage facilities, transportation facilities and congestion at Pakistan seaports.

(d) investigations regarding transport conditions and the probable conditions which will exist at the time the Goods will be actually transported.

IB.41 Alternate Proposals by Bidder

41.1 Should any bidder consider that he can offer any advantage to the Employer by a modification to the designs, specifications or other conditions, he may, in addition to his bid to be submitted in strict compliance with the Bidding Documents, submit any Alternate Proposal(s) containing (a) relevant design calculations; (b) technical specifications; (c) proposed construction methodology; and (d) any other relevant details / conditions, provided always that the total sum entered on the Form of Bid shall be that which represents complete compliance with the Bidding Documents.

41.2 Alternate Proposal(s), if any, of the lowest evaluated responsive bidder only may be considered by the Employer as the basis for the award of Contract to such bidder.

IB.42 Local Conditions

42.1 Bidder must verify and supplement by his own investigations the information about site and local conditions. However, Employer will assist the Bidder wherever practicable and possible.

IB.43 Integrity Pact

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

BIDDING DATA

IB Clause Reference	Bidding Data
1.1	Name and address of the Employer: **Irrigation Department,Peshawar.** **Through** Executive Engineer, Irrigation Division, District Khyber. Office at Jamrud Bazar near Jamrud Civil Hospital, District Khyber
1.1	Name of the Project & Summary of the Works: Name of Work: **Solarization of Existing Irrigation Tube Wells in Tribal Districts [MA]** (ADP / AIP No. 2154-192017-190092/2023-24. Sub Work: **Comprises solarization of the following tube wells:** i. Solarization of Existing Irrigation Tube Well at Shahkass Area Tehsil Jamrud District Khyber ii. Solarization of Existing Irrigation Tube Well at Shahkass / Katia Khel Area Tehsil Jamrud District Khyber iii. Solarization of Existing Irrigation Tube Well at Mukha Kally Draghay Dhand Narai Karawal MDK Bara Tehsil District Khyber
1.2	Name of the Borrower/Source of Financing/Funding Agency: *Provincial ADP/AIP through Govt of Khyber Pakhtunkhwa*
1.2	Amount and type of financing: *As per NIT through Provincial ADP*
2.1 (a)	Bidders shall be duly Licensed by the Pakistan Engineering Council (PEC), relevant to the Works in the category: **C-6 & Above with Code of Specialization of EE-11** In the case of JV of firms, number of Partners shall not be more than 2 Foreign firms may form JV with Local firms having share not less than 30%.
IB Clause Reference	**Bidding Data**
2.1(b)	Bidder,,s Country: *[Eligible countries listed in Annexure-A to Bidding Data]*

2.1(c)	*NA; Any Firm can apply having the required qualifications. Post Qualifications method of procurement is applicable.*
3.1	*[Goods and ancillary Services to be supplied under this Contract shall have their origin in eligible countries listed in Annexure-A to Bidding Data]*
6.1	a) **Irrigation Department through Executive Engineer, Irrigation Division,Khyber.** Office at Jamrud Bazar near Jamrud Civil Hospital, District Khyber. **Email:** xen.irr.khy@gmail.com. b) **Executive Engineer, Irrigation Division, District Khyber.** Office at Jamrud Bazar near Jamrud Civil Hospital, District Khyber. **Email:** xen.irr.khy@gmail.com Time limit for clarification: 7 days
6.2	Venue, time, and date of the pre-Bid meeting: **Office of the Executive Engineer, Irrigation Division,** Jamrud Bazar near Jamrud Civil Hospital, District Khyber. **Email:** xen.irr.khy@gmail.com **At 12:00 Noon on 04/10/2023**
8.1	Bid language: **English**
9.1(j)	*[The particulars for domestic Goods prescribed in Annexure-C to Bidding Data]*
13.4 (a)	Bidder/Manufacturer's Experience: *03 Years* Plant should have produced required items for at least 03 years. Those items have proven successful in the field for at least 02 years. *[The bidder shall furnish documentary evidence of qualification in accordance with Annexure-B to Bidding Data]*
15.1	Amount of Bid Security As per NIT
16.1	Period of Bid Validity: *120 days*
17.4	Number of copies of the Bid to be completed and returned: **01 No**
IB Clause Reference	**Bidding Data**

19.1(a)	Employer's address for the purpose of Bid submission: **Office of the Executive Engineer, Irrigation Division,** Jamrud Bazar near Jamrud Civil Hospital, District Khyber. **Email:** xen.irr.khy@gmail.com Deadline for submission of bids: **12:00 Noon; 10/10/2023**
22.1	Venue, time, and date of Bid opening: **Office of the Executive Engineer, Irrigation Division,** Jamrud Bazar near Jamrud Civil Hospital, District Khyber.
29.2	*[The documentary evidence of the bidder's qualification shall be asper Annexure-B to Bidding Data]*

Appendix A to
Instructions to Bidders

NAME OF ELIGIBLE COUNTRIES

[User to list down the Name of eligible countries as per Clause 2 of Instructions to Bidders]

Appendix B to
Instructions to Bidders

EVIDENCE OF BIDDER"S CAPABILITY

[Note: Bidders to provide the following information with the bid separately and indicate herein its references where this information is available.]

Sr.No.	Information to be Supplied	Bid References
1.	Name of bidder, business address and country of incorporation.	Annexure-B1 Bidder Information Sheet
2.	Type of firm whether individually owned, partnership, corporation or joint venture and the names of its owners or partners	Annexure-B2 Party to JV Information Sheet
3.	Copy of PEC license in the appropriate category relevant to the value of the Works	
4.	Copy of the NTN and Sale Tax Registration and Income Tax Return for the last five (5) years	
5.	The annual reports or qualification statements giving general description of the firm, sort of business carried out, balance sheets, profit and loss statements, turn over and business done by the firm, duly authenticated, for the last five (5) years. Audited Balance Sheets for the preceding 5 years and projected assets and liabilities for the next 2 years shall be provided.	Annexure-B3 Financial Situation, Annexure-B4 Average Annual Construction Turnover, Annexure-B5 Financial Resources, Audit Report and others
6.	Location and address of manufacturing facilities.	
7.	Full description of factories owned and the annual manufacturing capacities of various items made therein.	
8.	Details of the factory or factories where the offered equipment is proposed to be manufactured. This description should include the facilities and capacities of the particular factories including testing facilities and the processes used inmanufacturing and testing. Where parts or components are purchased from outside, the details of equipment purchased and the names and experience record of the suppliers.	
9.	Detailed description of the quality control testing and research facilities. If the equipment is manufactured under license, the name of the licenser and details of the licensing arrangements, such as the duration of the license, the facilities provided to the bidder by the licenser and whether future improvements are available or not etc. A copy of the license agreement may be attached.	

<table>
<tr><th>Sr.No.</th><th>Information to be Supplied</th><th>Bid References</th></tr>
<tr><td>10.</td><td>In the case of a bidder offering to supply Goods under the Contract which the bidder did not manufacture or otherwise produce, the bidder has been duly authorized by the Goods manufacturer or producer to supply the Goods to Pakistan. In such case The Bidder/Supplier shall require the Manufacturer to fill in the Authorization letter.</td><td>Annexure-B6 Manufacturer's Authorization Letter</td></tr>
<tr><td>11.</td><td>Names, qualifications and experience of the key technical personnel.

The Bidder must demonstrate that it will have the personnel for the key positions that meet the following requirements:
<table>
<tr><th>No.</th><th>Position</th><th>Total Work Similar Experience (years)</th><th>In Similar Works Experience (years)</th></tr>
<tr><td>1.</td><td></td><td></td><td></td></tr>
<tr><td>2.</td><td></td><td></td><td></td></tr>
<tr><td>3.</td><td></td><td></td><td></td></tr>
<tr><td>…</td><td></td><td></td><td></td></tr>
</table>
The Bidder shall provide details of the proposed personnel and their experience records in the given Annexure.</td><td>Annexure-B7 Key Personnel & Annexure-B8 Resume of Key Personnel</td></tr>
<tr><td>12.</td><td>The time since the manufacturer has been in this business and the time since he has been doing work of similar nature.</td><td></td></tr>
<tr><td>13.</td><td>The time since the particular equipment offered has been manufactured and the time for which it has been in service. The manufacturer shall have the following experience;
_____
_____

[List the equipment and experience required]

The Bidder must demonstrate that it will have access to the key Contractor's equipment listed hereafter:
<table>
<tr><th>No.</th><th>Equipment Type and Characteristics</th><th>Minimum Number required</th></tr>
<tr><td>1.</td><td></td><td></td></tr>
<tr><td>2.</td><td></td><td></td></tr>
<tr><td>3.</td><td></td><td></td></tr>
<tr><td>…</td><td></td><td></td></tr>
</table>
The Bidder shall provide further details of proposed items ofequipment using the relevant Annexure.</td><td>Annexure-9 Contractor's Equipment</td></tr>
</table>

Sr.No.	Information to be Supplied	Bid References
14.	Reference lists of similar works done by the bidder in its country and abroad indicating the name of customer, description and quantity of product, year of supply and the approximate value.	Annexure-10 General Experience & Annexure-11 Specific Experience
15.	Details of projects under execution and future contractual commitments (for each partner, in case of a joint venture).	Annexure-12 Current Contract Commitments
16.	Banking reference, names of banks and addresses may be given to whom reference regarding financial capability of the bidder may be made, with authority to make inquiries from the bidder's bankers and clients regarding any financial and technical aspects (for each partner, in case of a joint venture).	
17.	Information on any litigation or arbitration resulting from contracts completed or under execution by the bidder over the last ten (10) years. The information shall indicate the parties concerned, the matter of dispute, the disputed amounts and the result thereof (for each partner, in case of a joint venture).	Annexure-13 Pending Litigation

SYSTEM DESIGN FOR THE SUB SCHEME

SNo.	Name of Work	Q Discharge (I-GPH)	Total Head (Feet)	Pump Setting (feet)	WHP (HP)= (Q*H)/(60*3300)	Pump efficiency (%)	Motor Efficiency (%)	Motor input Powers (Watt)	(HP) = WHP/Pu	Total PV Power (Wp) Minimum Required	Total PV Power (Wp) Quoted As per string arrange-ments	Single PV Modulesize (Watts)	No ofPV Modulesin Series	No of stringsin parallel	String(Vmp)	Motor,Model,Make & HP	Pump,Model,Make & HP	Du/Dtor Sine Filter Make & Model	InverterModel	Column Pipe Dia & Wall Thickness	Motor Flat Cable (Core x Area) as per pump setting with maximum 2.5% voltage drop losses
01	As per SI.No Below	6000	530	510																	
02	As per SI.No Below	6000	530	510																	
03	As per SI.No Below	5600	410	390																	

i. Solarization of Existing Irrigation Tube Well at Shahkass Area Tehsil Jamrud District Khyber
ii. Solarization of Existing Irrigation Tube Well at Shahkass / Katia Khel Area Tehsil Jamrud District Khyber
iii. Solarization of Existing Irrigation Tube Well at Mukha Kally Draghay Dhand Narai Karawal MDK Bara Tehsil District Khyber

Application Form A –

General Information

All individual firms and each partner of a joint venture applying for qualification are requested to complete the information in this form. Nationality information is also to be provided for foreign owners or applicants who are forming part of the Joint Ventures as required under the PEC Bye-Laws as a Partnership/Joint Venture.

Where the Applicant proposes to use named subcontractors for critical components of the works or for work contents in excess of 10 percent of the value of the whole works, the following information should also be supplied for the specialist subcontractor(s).

1.	Name of Firm	
2.	Head Office Address	
3.	Telephone	Contact Person: Name: Title:
4.	Fax	
5.	Place of Incorporation/Registration	Year of Incorporation/Registration

NATIONALITY OF OWNERS		
	NAME	**NATIONALITY**
1.		
2.		
3.		
4.		
5.		

Application Form A – 2

General Experience Record

Name of Applicant or partner of a joint venture

All individual firms and all partners of a joint venture are requested to complete the information in this form. The information supplied should be the annual turnover of the Applicant (or each member of a joint venture), in terms of the amounts billed to clients for each year for work in progress or completed over the past five years.

Use a separate sheet for each partner of a joint venture.

Annual Turnover		
Year	**Turnover (in actual currency)**	**Equivalent Rupees in Millions**
1.		
2.		
3.		
4.		
5.		

Application Form A - 3

Joint Venture Summary

Names of all Partners of a Joint Venture
1. Lead Partner
2. Partner
3. Partner

Total value of annual turnover, in terms of work billed to clients,

Annual Turnover Data (Equivalent in Pak Rupees, Millions)						
Partner	**Form A-2 Page No.**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
1. Lead Partner						
2. Partner						
3. Partner						
Total:						

Application Form A –

Particular Experience Record

Name of Applicant or partner of a joint venture

On a separate page, using the format of Application Form A-5, each applicant or partner of a Joint Venture is required to list all contracts of a value equivalent to Pak **Rupees 4 million** and above of a similar nature and complexity (Supply & Installation of Solar Based Pumping Machinery in any Public Work/NGOs) to the contract for which the Applicant wishes to qualify, undertaken during the last five years. The information is to be summarized, using Application Form A-5, for each contract completed or under execution by the Applicant or by each partner of a Joint Venture.

Where the Applicant proposes to use named subcontractor(s) for critical components of the works or for work contents in excess of 10 percent of the value of the whole works, the information in the afore-mentioned forms should also be supplied for each specialist subcontractor.

Application Form A – 5

Details of Contracts of Similar Nature & Complexity

Name of Applicant or partner of a joint venture

Use a separate sheet for each contract.

1.	Name of Contract
	Country
2.	Name of Employer
3.	Employer Address.....
4.	Nature of works and special features relevant to the contract for which the Applicant wishes to pre-qualify ....
5.	Contract Role (Tick One) (a) Sole Contractor (b) Sub- Contractor (c) Partner in a Joint Venture
6.	Value of the total contract (in specified currencies) at completion, or at date of award forcurrent contract Currency …….. Currency …….. Currency ……..
7.	Equivalent in Pak/Rs.
8.	Date of Award
9.	Date of Completion
10.	Contract Duration (Years and Months) Years Months
11.	Specified Requirements[1] ....

Application Form A – 6

Summary Sheet: Current Contract Commitments/Works in Progress

Name of Applicant or partner of a joint venture

Applicants and each partner to an application should provide information on their current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which substantial Completion Certificate has yet to be issued.

Name of Contract	**Value of Outstanding work (Rs. 10 Millions & above)**	**Estimated Completion Date**
1.		
2.		
3.		
4.		
5.		
6.		

Application Form A – 7

Personnel Capabilities

Name of Applicant

For specific positions essential to contract implementation, Applicants should provide the names of at least two candidates qualified to meet the specified requirements stated for each position. The data on their experience should be supplied on separate sheets using one Form for each candidate (Application FormA-8).

1.	Title of Position
	Name of Prime Candidate
	Name of Alternate Candidate
2.	Title of Position
	Name of Prime Candidate
	Name of Alternate Candidate
3.	Title of Position
	Name of Prime Candidate
	Name of Alternate Candidate
4.	Title of Position
	Name of Prime Candidate
	Name of Alternate Candidate

Application Form A – 8

Candidate Summary

Name of Applicant

Position		**Candidate** [Tick appropriate one] ☐ Prime ☐ Alternate
Candidate information	1. Name of Candidate	2. Date of Birth
	3. Professional Qualification	4. PEC Registration No.
Present employment	5. Name of employer	
	Address of employer	
	Telephone	Contact (manager/personnel officer)
	Fax	
	Job title of candidate	Years with present employer

Summarize professional experience over the last 10 years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the Project.

Month/ Dates/Years		**Company/Project/Position/Relevant technical and management experience**
From	**To**	

Application Form A – 9

Equipment Capabilities

Name of Applicant

The Applicant shall provide adequate information to demonstrate clearly that he has the capability to meet the requirements for each and all items of equipment listed in the Evaluation Criteria 1.2 (v). A separate Form shall be prepared for each item of equipment listed or for alternative equipment proposed by the Applicant.

Item of Equipment		
Equipment information	1. Name of manufacturer	2. Model and power rating
	3. Capacity	4. Year of manufacture
Current status	5. Current location	
	6. Details of current commitments	
Source	7. Indicate source of the equipment ☐ Owned ☐ Rented ☐ Leased	

Omit the following information if it is owned by the Applicant or partner.

Owner	8. Name of owner	
	9. Address of owner	
	Telephone	Contact name and title
	Fax	
Agreement	Details of rental/lease specific to the Project	

Application Form A - 10

Financial Capability

Name of Applicant or Partner of a Joint Venture

Applicants, including each partner of a joint venture, should provide financial information to demonstrate that they meet the minimum requirements that the lead partner shall meet not less than 40 percent of all qualifying criteria and each of the partners shall meet not less than 25 percent of all the qualifying criteria given in Evaluation Criteria. All the above figures will be added together to arrive at JV"s total capacity. Each applicant or partner of a joint venture must fill-in this form. If necessary, use separate sheets to provide complete banker information. A copy of the audited balance sheets should be attached.

Banker	Name of banker	
	Address of banker	
	Telephone	Contact name and title
	Fax	Telex

Summarize actual assets and liabilities in Pak Rupees (Equivalent at the current rate of exchange at the end of each year) for the previous five years, based upon known commitments, projected assets and liabilities in pak Rupees equivalent for the next two years.

Financial information in Pak Rs. or equivalent	**Actual: previous five year**					**Projected next two years**	
	1	**2**	**3**	**4**	**5**	**6**	**7**
1. Total assets							
2. Current assets							
3. Total liabilities							
4. Current liabilities							
5. Profits before taxes							
6. Profits after taxes							

Specific proposed sources of financing to meet the cash flow of the Project, net of current commitments

Source of financing	**Amount (Pak Rs. or equivalent)**
1.	
2.	
3.	
4.	

Attach audited financial statements for the last five years (for individual applicant or each partner of joint venture).Firms owned by individuals, and partnerships, may submit their balance sheets certified by a registered accountant, and supported by copies of tax returns, if audits are not required by the laws of their countries of origin in case of foreign firms.

Application Form A – 11

Litigation History

Name of Applicant or Partner of a Joint Venture

Applicants, including each of the partners of a joint venture, should provide information on any history of litigation or arbitration resulting from contracts executed in the last five years or currently under execution. A separate sheet should be used for each partner of joint venture.

Year	Award FOR or AGAINST Applicant	Name of client, cause of litigation, and matter in dispute	Disputed amount (current value Pak Rs. or equivalent)

Check List.

Yes	No	Check list
☐	☐	Valid PEC Certificate(s) in required category
☐	☐	Copy of valid dealer ship certificate
☐	☐	Application form (A-1), General Information
☐	☐	Application form (A-2), General Experience Record
☐	☐	Application form (A-3), Joint Venture Summary
☐	☐	Application form (A-4), Particular Experience (Record List of Solar based pumping machinery projects of similar nature and complexity completed in last five years and complexity in-hand.)
☐	☐	Application form (A-5), Detail of Contracts of Similar Nature and Complexity (Supply & Installation of Solar based pumping machinery)
☐	☐	Application form (A-6) Current Contract Commitments/Works in Progress
☐	☐	Application form (A-7), Personnel Capabilities
☐	☐	Application form (A-8) Candidate Summary (List of B.Sc. Engineers having relevant experience with their CVs and PEC Reg. No.& List of Associates Engineers (DAE) with their CVs having relevant experience)
☐	☐	Application form (A-9), Equipment capabilities
☐	☐	Application form (A-10), Financial Capability
☐	☐	Application form (A-11), Litigation History
☐	☐	Undertaking that all equipment listed in this document for qualification will be made available for the subject Project
☐	☐	Audited balance sheets for at least last five years and Bank statements
☐	☐	Undertaking that the Applicant has not been declared bankrupt
☐	☐	Original affidavit that the firm has not been black listed
☐	☐	Applicants legal status
☐	☐	Principal place of Business
☐	☐	Place of incorporation or registration
☐	☐	Certificate of registration with Income Tax & Sales Tax Department
☐	☐	Enlistment record with Government organizations and other agencies
☐	☐	Location of workshop facility, if any
☐	☐	Equipment's sole agencies represented by the Contractor
☐	☐	Written description of internal quality control program for specified works

EVALUATION CRITERIA

1.1 Eligibility for Qualification

Keeping in view the complexity of the Project, eligibility of Applicants for qualification evaluation is as mentioned below:

Sr. No.	Description	Yes/No
1.	Registration with Pakistan Engineering Council (PEC) in relevant category C-6 with field of specialization EE-11 **(Specified for Solar Energy).** Enlisted with Irrigation Department Khyber Pakhtunkhwa.	If "YES" the applicant will be Eligible for further Evaluation for qualification (copy of valid PEC certificate shall be attached).
2.	Valid NTN and on Active Tax Payer list. Valid KPRA Active registration.	If "YES" the applicant will be Eligible for further Evaluation forqualification.
3.	Blacklisting from any Government/Semi-Government Agency/Department.	If "YES" the applicant will not be Eligible for further Evaluation for qualification. (Original Affidavit on Judicial Stamp Paper that the firm has not been black listed from any Government/ Semi Government Agency/ Department till date shall be provided).
4.	System Design	System Design must be submitted in technical bid otherwise applicant will not be Eligible for further Evaluation.
5.	i. Firm must have ISO 9001-2008 certificate quality management system ii. Warranty period for solar panel etc will be 25 years and Defect Liability Period for electrical /mechanical works will be 2 years. iii. The Firm must have an average annual turnover in the last 5 years equal to or more than the total bid price. Alternately, the bidder should have successfully completed in the last five years any specific project having value equal to or higher than total bid price. Documentary Proof must be attached in support with the average annualturnover. iv. Goods declaration (bill of entry) must be provided for each product (i.e Solar Panel, Pumps, Motors, Inverter). v. Performance curves at STC for both solar panel and pumping machinery should be provided for each work separately along with bidding documents vi. The PV modules offered should not be more than One (01) year old with respect	Attach Valid documents otherwise applicant will not be eligible for further evaluation.

	to the date of manufacturing. vii. Brand name(s) of PV modules, the supplier intends to supply must be included in the technical proposal.	
6	i. Income tax returns for last five years, ii. Sales tax return (both Federal and Provincial) for last five years and iii. Audited Balance Sheets for last five years.	If "YES" the applicant will be Eligible for further Evaluation for qualification.

1.2 Evaluation Criteria

Keeping in view the complexity of the Project works, criteria for qualification has been evolved by considering the prevailing market trends as mentioned below:

Sr. No.	Category	Weightage/Marks
i.	General Capabilities	10
ii.	Financial Soundness	20
iii.	Experience Record	30
iv.	Personnel Capabilities	20
v.	Equipment Capabilities	20
	Total:	100

Qualification will be carried out on the point scoring basis. Any applicant securingoverall minimum score of 60 % as total will be considered as qualified.

An applicant may score below 60% in any one category provided it is not less than 50%.

Applicants having score of less than 60% in any two categories shall not be considered for further evaluation.

For JV, 40% qualifying criteria in each category for lead partner and 25% qualifying criteria in each category for JV partner.

Qualification Evaluation Criteria

i) General Capabilities

a)	Copy of Valid dealer ship (pumps & solar panels) certificate from Sub-Contractor/JV Partner	2	▪ No marks will be given if license is not attached and 2 points will be added in case of valid certificate.
c)	Litigation History in which Decision has been given against the firm(s)	6	▪ In case the firm is involved in any litigation, **-5** will be given and ▪ 6 points will be added in case original affidavit of no litigation is attached.
d)	Description of Internal Quality Control assurance program for Construction/ Erection/Maintenance	2	▪ 2 Marks will be given if Description is provided.
Total Marks Allocated			**10**

ii) Financial Soundness

Sr. No.	Description	Marks Assigned	Criteria for Marks Obtained
a)	Bank Certificate including Bank Credit Line (Evidence in Original from Guarantor Bank)	5	**<u>Bank Certificate (2-Marks)</u>** • 2 Marks are given if Original Bank Certificate is provided. **<u>Bank Credit Line (3-Marks)</u>** • 2 Marks are given if the available bank credit line limit is equal to 4 Million. • For limit less than 4 Million, use following weight-age: 2 x (A/10) • For the limit more than 4 million but less than 10 million use following weight-age: 2 + (A/20) A = Available Bank Credit Line Limit

			• Full Marks are given in case of limit is 15 million or more.
b)	Audited Balance Sheets for at least last five years	5	• No marks will be given if Audited Balance Sheets are not attached and full marks will only be given if complete 5 years audited balance sheets are provided.
c)	Working Capital in last 5 years	5	• 3 Marks are given if the available average working capital for last three years is equal to 4 Million as ascertained from income tax, sales tax (both federal and provincial) and audited balance sheets. • For the capital less than 4 million use following weight-age: 3 x (A/10) • For the capital more than 4 million but less than 10 million use following weight-age. 3+ (A/20) A = Average working capital in last three years. • Full Marks are given in case of limit is 15 million or more.
d)	Registration with income tax & sale tax department along with sales tax returns (both federal and provincial) and income tax returns for the last five years.	5	• No marks will be given if NTN & GST Registration certificate is not attached and 5 points will be added in case of valid certificates along with returns for last five years.
Total Marks Allocated			**20**

iii) Experience Record

Sr. No.	Description	Marks Assigned	Explanation for Marks Obtained
a)	Projects of similar nature and complexity Rs. 4 (M) & Above (Supply & Installation of Solar Based Pumping Machinery) completed in last five years in any Public Works Department/NGOs.	16	• 8 Marks are given if the applicant has completed at least 5 projects of similar nature in last five years. • For less than 5 projects completed use the following weight age. 8 x (A/5) • For more than 5 projects but less than 10 projects completed use the following weight age. 8 + (A/5) x 4 A = No of projects of similar nature completed in last five years • Full Marks are given in case of 10 projects or more.
b)	Projects of similar nature and complexity Rs. 4 (M) (Supply & Installation of Solar Based Pumping Machinery) in-hand in any Public Works Department/NGOs.	9	• 4 Marks are given if the applicant has completed at least 3 projects of similar nature in last five years. • For less than 5 projects completed use the following weight age. 4 x (A/5) • For more than 5 projects but less than 10 projects completed use the following weight age. 4 + (A/10) x 4

			A = No of projects of similar nature completed in last five years Full Marks are given in case of 10 projects or more.
c)	Enlistment record with Government Organizations & other agencies	5	• 1 Mark for each enlistment up to maximum of five enlistments.
Total Marks Allocated			**30**

iv) Personnel Capabilities

Sr. No.	Description	Marks Assigned	Explanation for Marks Obtained
i)	B.Sc. Engineers registered with Pakistan Engineering Council (PEC)	14	**Experience (6-Marks)** • 6 Marks will be given if the individual relevant experience of at least 1 numbers of B.Sc. Engineer Electrical/Electronics/Mechanical (professional) is equal to 15 years or above. **Strength of Engineers (8 Marks)** • 4 Marks will be given if the total no. of Engineers registered with PEC is 3. • 8 Marks will be given if the total no. of engineers registered with PEC is 5 or above.
ii)	Associates Engineers (DAE)	6	**Experience (4-Marks)** • 4 Marks will be given if the individual relevant experience of at least 1 number of Associates Engineers Electrical/Mechanical (DAE) is equal to 8 years or above. **Strength of Associate Engineers (2 Marks)** • 2 Marks will be given if the total no. of Associate Engineers (DAE) are 3 or above.
Total Marks Allocated			**20**

v) Equipment Capabilities

Sr. No.	Description	Marks Assigned	Explanation for Marks Obtained
a)	1. Test Bed for verification / testing of Solar pumps along with all accessories as per ISO-9906 in company premises. (Firm must have Third Party Certification regarding Test Bed arrangements).	13	13 Marks for complete setup are given. (Attached Third Party Certificate)
b)	Workshop facilities. Attach layout sketch of workshop.	5	No marks will be given if Contractor has no workshop facilities.
c)	Equipment sole agencies represented by the Contractor	2	1 mark for each agency Upto maximum 2 points
Total Marks Allocated			**20**

Annexure-B1

BIDDER INFORMATION SHEET

Date:_____
ICB No.: _____
Page____of___pages

Bidder"s Information	
1. Bidder"s Legal Name:	
2. In case of JV, legal name of each party:	
3. Bidder"s actual or intended Country of Registration:	
4. Bidder"s Year of Registration:	
5. Bidder"s Legal Address in Country of Registration:	
6. **Bidder"s Authorized Representative Information** Name: Address: Telephone/Fax numbers: Email Address:	

7. Attached are copies of the original documents:

- Articles of Incorporation or Registration of firm named in 1,above.
- In case of JV, letter of intent to form JV including a draft agreement, or JV agreement.
- In case of government owned entity from the Employer's country, documents establishing legal and financial autonomy and compliance with the principles of commercial law.

PARTY TO JV INFORMATION SHEET

Date:_____
ICB No.: _____
Page____of___pages

[Each member of a JV must fill in this form]

JV Information	
1. Bidder's legal name	
2. JV Partner's legal name	
3. JV Partner's country of constitution	
4. JV Partner's year of constitution	
5. JV Partner's legal address in country of constitution	
6. JV Partner's authorized representative information Name: Address: Telephone/Fax numbers: Email Address:	
7. Attached are copies of the following original documents. ▪ Articles of incorporation or constitution of the legal entity named above. ▪ Authorization to represent the firm named above. ▪ In the case of government-owned entity, documents establishing legal and financial autonomy and compliance with commercial law.	

Annexure-B3

FINANCIAL SITUATION

Date:_____
ICB No.: _____
Page____of___pages

Bidder,,s Legal Name: _____
JV Partner Legal Name: _____

[Each Bidder or member of a JV must fill in this form]

	Financial Data for Last 5 Years [Pak Rs Equivalent]		
	Year 1:	**Year 2:**	**Year 3:**
Information from Balance Sheet			
Total Assets			
Total Liabilities			
Net Worth			
Current Assets			
Current Liabilities			
Information from Income Statement			
Total Revenues			
Profits Before Taxes			
Profits After Taxes			

- Attached are copies of financial statements (balance sheets including all related notes, and income statements) for the last three years, as indicated above, complying with the following conditions.
  - All such documents reflect the financial situation of the Bidder or partner to a JV, and not sister or parent companies.
  - Historic financial statements must be audited by a certified accountant.
  - Historic financial statements must be complete, including all notes to the financial statements.

Historic financial statements must correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted).

AVERAGE ANNUAL TURNOVER

Date:_____
ICB No.: _____
Page____of___pages

Bidder,,s Legal Name: _____
JV Partner Legal Name: _____

[Each Bidder or member of a JV must fill in this form]

Annual Turnover Data for the Last 5 Years			
Year	**Amount Currency**	**Exchange Rate**	**Pak Rs Equivalent**
		Average Annual Turnover	

Average annual turnover calculated as total certified payments received for work in progress or completed, divided by the number of years specified.

FINANCIAL RESOURCES *Annexure-B5*

Bidder,,s Legal Name: _____ Date:_____
JV Partner Legal Name: _____ ICB No.: _____
Page____of___pages

[Specify proposed sources of financing, such as liquid assets, unencumbered real assets, lines of credit, and other financial means, net of current commitments, available to meet the total construction cash flow demands of the subject contract.]

Financial Resources		
No.	**Source of financing**	**Amount [Pak Rs Equivalent]**
1		
2		
3		

MANUFACTURER'S AUTHORIZATION

Date:_____

Bidde,s Legal Name: _____ ICB No.: _____

[The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer. The Bidder shall include it in its bid.]

To: _____

WHEREAS

We_____, who are official manufacturers of_____, having factories at_____, do hereby authorize_____to submit a bid the purpose of which is to provide the following goods, manufactured by us _____, and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty with respect to the goods offered by the above firm.

Signed:_____

Name:_____

Title:_____

Duly authorized to sign this Authorization on behalf of:

_____

Dated on_____day of _____, _____

Annexure-B7

KEY PERSONNEL

Date:_____

Bidder,,s Legal Name: _____ ICB No.: _____

[Bidders should provide the names of suitably qualified personnel to meet the requirements as specified. The data on their experience should be supplied using the Form Annexore-B8 below for each candidate.]

Key Personnel	
1.	**Title of position***
	Name
2.	**Title of position***
	Name
3.	**Title of position***
	Name
4.	**Title of position***
5.	**Title of position***
	Name

*As listed in Annexure-B

RESUME OF KEY PERSONNEL

Date:_____

Bidder,,s Legal Name: _____ ICB No.: _____

Position			
Personnel information	Name		Date of birth
	Professional qualifications		
Present employment	Name of employer		
	Address of employer		
	Telephone	Contact (manager / personnel officer)	
	Fax	E-mail	
	Job title	Years with present employer	

Summarize professional experience in reverse chronological order. Indicate particular technical andmanagerial experience relevant to the project.

From	To	Company / Project / Position / Relevant technical and management experience

Annexure-B9

CONTRACTOR'S EQUIPMENT

Date:_____

Bidder,,s Legal Name: _____ ICB No.: _____

Item of equipment		
Equipment information	Name of manufacturer	Model and power rating
	Capacity	Year of manufacture
Current status	Current location	
	Details of current commitments	
Source	Indicate source of the equipment ☐ Owned ☐ Rented ☐ Leased ☐ Specially manufactured	

Omit the following information for equipment owned by the Bidder

Owner	Name of owner	
	Address of owner	
	Telephone	Contact name and title
	Fax	Telex
Agreements	Details of rental / lease / manufacture agreements specific to the project	

Annexure-B10

GENERAL EXPERIENCE

Date:_____

Bidder,,s Legal Name: _____ ICB No.: _____

JV Partner Legal Name: _____ Page____of___pages

[Each Bidder or member of a JV must fill in this form]

General Experience				
Starting Month Year	**Ending Month Year**	**Years**	**Contract Identification and Name Name and Address of Employer Brief Description of the Works Executed by the Bidder**	**Role of Bidder**

[List calendar year for years with contracts with at least nine (9) months activity per year startingwith the earliest year.]

Annexure-B11

SPECIFIC EXPERIENCE

Date:_____

Bidder,,s Legal Name: _____ ICB No.: _____

JV Partner Legal Name: _____ Page____of___pages

[Fill up one (1) form per contract]

Contract of Similar Size and Nature		
Contract No . . .	**Contract Identification**	
Award Date	**Completion Date**	
Role in Contract	▪ **Contractor** ▪ **Management Contractor** ▪ **Subcontractor**	
Total Contract Amount	**Pak Rs**	
If partner in a JV or subcontractor, specify participation of total contract amount	**Percent of Total**	**Amount**
Employer"s Name **Address** **Telephone/Fax Number** **E-mail**		
Description of the similarity		
Amount **Physical size** **Complexity** **Methods/Technology** **Physical Production Rate**		

Annexure-B12

CURRENT CONTRACT COMMITMENTS

Date:_____

Bidder,,s Legal Name: _____ ICB No.: _____

JV Partner Legal Name: _____ Page____of___pages

[Bidders and each partner to a JV should provide information on their current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.]

Current Contract Commitments					
No.	**Name of Contract**	**Employer"s Contact Address, Tel, Fax**	**Value of Outstanding Work [Current Pak Rs Equivalent]**	**Estimated Completion Date**	**Average Monthly Invoicing Over Last Six Months [Rs/month)]**
1					
2					
3					
4					
5					

Annexure-B13

PENDING LITIGATION

Date:_____

Bidder,,s Legal Name: _____ ICB No.: _____

JV Partner Legal Name: _____ Page____of___pages

[Each Bidder or member of a JV must fill in this form]

Pending Litigation			
ϒ **No pending litigation** ϒ **Pending litigation**			
Year	**Matter in Dispute**	**Value of Pending Claim in Pak Rs Equivalent**	**Value of Pending Claim as a Percentage of Net Worth**

Appendix C to
Instructions to Bidders

Domestic Goods (Value added in Pakistan)

Date: _____

Bidder,s Legal Name:_____ICB No._____

[Bidders claiming eligibility for domestic preference should fill in for supply items only, all columns hereunder and provide necessary documentation to substantiatetheir claim]

Sr. No.	Description of Indigenous Goods	Unit	Qty	Total Price of Goods Ex-Factory (Pak Rs.)	Domestic value added in the manufacturing cost as percentage of Ex-Factory Price	Amount of value addition (Pak Rs.)
1	2	3	4	5	6	7
			Total in columns 5 & 7			

Computations:	
A. Total amount of Value Addition (from Col.7)	Rs_____
B. Total Ex-Factory Price of Indigenous Goods (from Col.5)	Rs_____
C. Total DDP Price of imported supply items	Eqv.Rs_____
D. Total Price of supply items [B+C]	Eqv.Rs_____
E. % of value addition = [(A/D)x100]	_____%
F. Domestic Preference =(15,20 or 25)% of B	Rs_____

FORM OF BID AND SCHEDULES TO BID

FORM OF BID
(LETTER OF OFFER)

Bid Reference No._____

ADP No. 2154/192017-190092/2023-24
Name of work: **Solarization of Existing Irrigation Tube Wells in Tribal Districts [MA]**

Sub Work: As per NIT

E/Cost: As per NIT

To

Executive Engineer
Irrigation Division, District Khyber.

_____

Gentlemen,

1. Having examined the Bidding Documents including Instructions to Bidders, Conditions of Contract, Specifications, Drawings, Schedule of Prices and Addenda Nos._____for the execution of the above-named Works, we, the undersigned, being a company doing business under the name of and address _____ _____ and being duly incorporated under the laws of _____ 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 comprising Foreign Currency Component of _____ (_____) and Local Currency Component of Rs. _____ (Rupees_____) or such other sum as may be ascertained in accordance with the said Documents.

2. We understand that all the Schedules attached hereto form part of this Bid.

3. As security for due performance of the undertakings and obligations of this Bid, we submit herewith a Bid Security in the amount of _____ _____drawn in your favour or made payable to you and valid for a period 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.

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: Specific Works Data
- Schedule B to Bid: Work to be Performed by Subcontractors
- Schedule C to Bid: Proposed Programme of Works
- Schedule D to Bid: Deviations from Technical Provisions
- Schedule E to Bid: Deviations from Contractual Conditions
- Schedule F to Bid: Method of Performing Works
- Schedule G to Bid: Proposed Organisation
- Schedule H to Bid: Integrity Pact

SCHEDULE – A TO BID

SPECIFIC WORKS DATA

(Proforma for specific Data to be prepared and incorporated by the Employer which will be filled in by the bidders)

SCHEDULE – B TO BID

WORK TO BE PERFORMED BY SUBCONTRACTORS

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

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

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.

SCHEDULE – C TO BID

PROPOSED PROGRAMME OF WORKS

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

SCHEDULE – D TO BID

DEVIATIONS
FROM
TECHNICAL PROVISIONS

It is presumed that the bidder shall not take any deviation. However, if he intends to take deviations to the specified terms, those must be listed in the space provided below:

Sr. No.	Clause No. / Section No.	Deviations/Clarifications

[Note**:** Attach additional sheets, if necessary]

SCHEDULE – E TO BID

DEVIATIONS
FROM
CONTRACTUAL CONDITIONS

It is presumed that the bidder shall not take any deviation. However, if he intends to take deviations to the specified Contractual/Commercial Conditions, those must be listed in the space provided below:

Sr. No.	Clause No. / Section No.	Deviations/Clarifications

[Note: Attach additional sheets, if necessary]

SCHEDULE – F TO BID

METHOD OF PERFORMING WORKS

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

- The sequence and methods in which he proposes to carry out the Works, including the number of shifts per day and hours per shift, he expects to work.

- A list of all major items of constructional and erection plant, 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 Civil Work and Erection, Testing and Commissioning of the Works, in sufficient detail to demonstrate fully that the equipment will meet all the requirements of the Technical Provisions.

- The procedure for installation of equipment and transportation of equipment and materials to the site.

- Details regarding mobilization in Pakistan, 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.

SCHEDULE – G TO BID

PROPOSED ORGANISATION

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

Designation	Name of	Summary of Qualifications Experience, Present Position and Nationality

- Head Office:

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

SCHEDULE – H TO BID

(INTEGRITY PACT)

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

Contract No._____Dated_____
Contract Value: _____
Contract Title: _____

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

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

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

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

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

Name of Buyer: ……	Name of Seller/Supplier: ……
Signature: ……	Signature: ……
[Seal]	[Seal]

SCHEDULE OF PRICES

	Description	Page No.
1.	Preamble to Schedule of Prices	47
2.	Schedule of Prices	
	2. (a) Summary of Bid Prices	56
	2. (b) Equipment, Erection, Testing & Commissioning	57
	2. (c) Civil Works	58
	2. (d) Daywork	59
	2. (e) Additional Recommended Erection and Testing Equipment & Maintenance Tools	60
	2. (f) Additional Recommended Spare Parts	61

1. PREAMBLE TO SCHEDULE OF PRICES

1. General

1.1 The Schedule of Prices shall be read in conjunction with the Conditions of Contract together with the Specifications and Drawings.

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 Work.

2. Description

2.1 The general directions and descriptions of work 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.

2.2 The quantities shown in the Schedule of Prices are estimated quantities only as an indication of the Scope of Work to enable the bidder to bid for different items of the Works for his estimate of costs. The estimated quantities shall be used for comparing the bids. It is, however, to be noted that in the event of any increase or decrease in the quantity of any item of Works and subject to provisions of the Conditions of Contract herein, the actual quantities executed will be paid.

3. Units & Abbreviations

3.1 Units of measurement, symbols and abbreviations expressed in the Bidding Documents shall comply with the Systeme Internationale d‟ Unites (SI Units).

The following abbreviations shall be used in the Schedule of Prices:

	Abbreviation
Foreign Currency Component	FCC
Local Currency Component	LCC
United States Dollars	US$
Pakistani Rupees	PKR/Rs
Number	No.
Kilometer	km
Kilogram	Kg
Cubic Meter	Cu.m
Provisional Sum	PS
Percent	%

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 work

set forth or implied in the Contract; except for the amounts reimbursable to the Contractor under the Contract.

4.2 Unless otherwise stipulated in the Conditions of Contract, 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 under the Contract, or for any other cause, as on the date twenty eight (28) days prior to the deadline for submission of bids shall be included in the rates and prices and the total Bid Price submitted by a bidder.

Additional/reduced duties, taxes and levies due to subsequent additions or changes in legislation shall be reimbursed/deducted as per provisions of the Conditions of Contract.

4.4 The whole cost of complying with the provisions of the Contract shall be included in the items provided in the priced 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 The bidder shall be deemed to have obtained all information as to port clearance facilities and charges, loading and unloading facilities and charges, storage facilities and charges, transportation facilities and charges, congestion and/or other conditions to be expected at Karachi Port and or any other seaport of Pakistan and all requirements related thereto.

The Contractor shall be responsible to make complete arrangements for the transportation of the Plant to the Site.

The bidder shall be deemed to have included all clearing, forwarding and other incidental costs in this regard in his bid. The Contractor will have the option to use either Karachi Port or or any other seaport of Pakistan.

4.6 The Contractor shall provide for all parts of the Works to be completed in every respect for commercial operation. Notwithstanding that any details, accessories, etc. required for the complete installation and satisfactory operation of the Plant, 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 below:

a) FOB Port of Shipment

The bidder shall quote prices for FOB Port of Shipment for all individual items and for each sub-total of Plant, Erection Equipment and Spare Parts to be supplied from outside Pakistan on FOB (Port of Shipment) basis. The FOB Port of Shipment price shall include the cost of the following:

i) Design, manufacture, finishing, factory testing, packing for transport and all transportation costs incurred in placing the Plant, Erection Equipment and Spare Parts and other materials on board the vessel.

ii) Provision of clean on-board bills of lading.

iii) Export taxes, fees or charges levied on exporting Plant, Erection Equipment and Spare Parts and other materials in the country of origin, in the case of Plant imported to Pakistan.

iv) Provision of certificates of origin, consular invoices (if required) or any other documents issued in the country of origin.

b) Insurance & Shipping

i) Insurance

The bidder shall quote prices for insurance cover from ex-factory/ ex-works to the Site for the sub-totals of the Plant, Erection Equipment, Spare Parts and other materials to be imported for the Contract. Such prices shall include all insurance costs covering the responsibility for all loss or damages while loading, unloading, storing and trimming on board or on inland carrier and transportation to Site.

The prices for transportation/marine insurance cover shall be quoted on the basis of insurance through insurers from any country(ies) of the world acceptable to the Employer.

ii) Shipping

The bidder shall quote prices for shipping from port of shipment to the port of entry in Pakistan for the sub-totals of the Plant, Erection Equipment, Spare Parts and other materials to be imported for the Contract in Pakistan. Such prices shall include all marine transportation costs including ocean freight and other charges, etc.

The prices for shipping/marine transportation shall be quoted for shipment through reputed shipping lines including Pakistan National Shipping Corporation (PNSC).

Cost of shipment(s) effected by the Contractor at his option by aircraft shall be deemed to be included in the Total Bid Price.

c) CIF (Pakistan Seaport) Price

CIF (Pakistan Seaports) price will be the total of FOB price, insurance and shipping prices, described hereabove.

d) Customs Duties

Customs duty for Plant, Erection Equipment, Spare Parts and other materials, if any, offered from outside Pakistan shall also include sales tax, import duty and other import charges.

e) DDP (Pakistan Seaport) Price

DDP (Pakistan Seaport) price will be the total of CIF price and customs duties, described hereabove.

f) Ex-factory Price for Local Goods

The bidder shall quote prices for Local Goods, materials (other than materials required for civil works such as concrete and reinforcement etc. Cost of which will be included in the price of civil works) and equipment in the relevant column of Ex-Factory (Pakistan) of "Schedule of Prices". Such prices shall include:

i) Design documentation, drawings, drafting, planning services, manufacturing, testing and packing of finished goods ready for delivery to Site.
ii) All custom duties, sales tax and other taxes already paid or payable on the components and raw materials used in the manufacture or assembly of Local Goods, materials and equipments.

g) Insurance of Local Goods

Insurance of Local Goods and other materials from factory to Site shall include all insurance costs covering the responsibility of all losses or damages, while loading, unloading, storing, trimming on the carrier and transporting to Site. Checking and verifying of consignments, issuance of receiving reports and damage reports (when applicable) shall be the Contractor"s responsibility. The cost of insurance shall be quoted on the basis of insurance through National Insurance Company (NIC) of Pakistan or any other insurance company operating in Pakistan and acceptable to the Employer.

h) Local Transport

Inland transportation for the Plant, Erection Equipment and Spare Parts shall be the Contractor‟s responsibility in respect of:

i) the Plant, Erection Equipment, Spare Parts and other materials offered from outside Pakistan; from the port of entry in Pakistan to the storage area at the Site, and

ii) indigenous Plant, Erection Equipment, Spare Parts and other materials if any, offered from within Pakistan; from the factory in Pakistan to the storage area at the Site, and

all charges occuring therefrom including octroi, zila tax, fees etc. and charges for loading, forwarding and unloading expenses shall be borne by the Contractor. Unloading at the Site, handling of the Plant, Erection Equipment, Spare Parts and other materials to the designated point of Site storage, checking and verifying all shipments received against shipping documents, issue of all receiving reports and issues of damage reports (when applicable) shall be the Contractor‟s responsibility.

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

i) Erection & Other Work

The bidder shall quote prices for Erection & Other Work (foreign and local currency portion) for the sub-totals of the Plant at the Site. Such prices shall include the costs of handling of the Plant and other materials from Site storage to point of final installation, erection, installation, testing, commissioning including all inspection, reliability tests, the cost of foreign and local erection staff and labour, tools and equipment, etc. It shall also cover the services of qualified representative(s) of the supplier(s) of Plant or adviser(s) to assure proper erection and commissioning of the Plant. The price shall also include cost of arranging insurances in respect of Contractor‟s operations in Pakistan which insurances shall be effected by the Contractor with the National Insurance Company (NIC) of Pakistan or any other insurance company operating in Pakistan and acceptable to the Employer.

5.2 Total Bid Price

The total of bid prices under foreign currency and local currency columns in the Schedule of Prices shall be entered in the Summary of Bid Prices. The unit rates and prices and lumpsum amount entered in the Schedule of Prices will be

the rates at which the Contractor will be paid, and shall be deemed to be the full inclusive value of the work including all costs of performing the Works such as overheads, income tax, super tax, profits, costs of accepting the general risks, liabilities and obligations set forth or implied in the Contract except for the amounts reimbursable, if any, to the Contractor under the Contract. The rates shall also include Contractor‟s cost for providing Performance Security and other Bank Guarantees required for performance of the Contract.

6. Erection and Testing Equipment and Maintenance Tools

6.1 In the Schedule of Prices, under Erection and Testing Equipment & maintenance tools the Employer has drawn up a list of Erection and Testing Equipment and Maintenance Tools along with estimated quantities. The bidder shall enter the price only in FOB price column for all individual items and shall give the break-up of the prices into FOB Port of Shipment, Shipping to wharf at the port of entry in Pakistan, Insurance to Site and Local Transport in Pakistan against each sub-total. These Erection and Testing Equipment and Maintenance Tools shall be furnished and the cost included in the Bid Price.

The Employer shall have the option of ordering additional quantities of these essential Erection and Testing Equipment and Maintenance Tools, at the unit rates entered in the Schedule of Prices no later than one year after the Commencement Date.

The unit rate for any item shall be computed by dividing the total amount by the quantity of that item.

6.2 The bidder shall also list, in the space provided in the Schedule of Prices, Additional Recommended Erection and Testing Equipment and Maintenance Tools, any Erection and Testing Equipment and Maintenance Tools which he recommends be provided for the Works, in addition to those already specified by the Employer in the Schedule of Prices. The bidder shall enter against each such item, its recommended quantity, and price. The cost of such Additional Recommended Erection and Testing Equipment and Maintenance Tools will not be taken into account in the evaluation of bids.

The Additional Recommended Erection and Testing Equipment and Maintenance Tools may be selected by the Engineer/Employer and the Contract Price will be adjusted in accordance with the prices set against those items in the Schedule of Prices.

7. Spare Parts

7.1 In the Schedule of Prices, under Spare Parts, the Employer has drawn up a list of spare parts along with estimated quantities. The bidder shall enter the price only in FOB price column for all individual items and shall indicate the break-up of price into FOB Port of Shipment, Shipping to wharf at the port of entry in Pakistan, Insurance to Site and Local Transport in Pakistan against each

sub-total. These spare parts shall be furnished and the cost included in the Bid Price.

The successful Bidder shall prepare and at the time of preparation of Letter of Acceptance submit to the Employer the unit rates of all individual items of the spare parts. The unit rates of the spare parts for the required quantities shall give a total cost equal to the amount entered in the Schedule of Price for spare parts.

The Employer shall have the option of ordering additional quantities of these essential spare parts, at the unit rates entered in the Schedule of Prices, no later than one year after the Commencement Date.

The unit rate for any item shall be computed by dividing the total amount by the quantity of that item.

7.2 The Bidder shall also list in the space provided in the Schedule of Prices any Spare Parts which he recommends be provided for the Works, in addition to those specified by the Employer in the Schedule of Prices. The Bidder shall enter against each such item, its recommended quantity, rate and price. The cost of such Additional Recommended Spare Parts will not be considered in the evaluation of bids.

The Additional Recommended Spare Parts may be selected by the Engineer/ Employer and the Contract Price will be adjusted in accordance with the prices set against those items in the Schedule of Prices.

8. Reimbursable Costs

8.1 If provided in the Particular Conditions of Contract, the Contractor shall be reimbursed the actual amounts (without any overhead charges and profits) disbursed by him in respect of non-exempt Pakistani customs, import duties, and taxes, levied upon Plant, Erection Equipment and Spare Parts imported directly by him or his subcontractors into Pakistan for the purpose of this Contract for incorporation in the Works.

8.2 The bidder shall recognize such elements of the costs which he expects to incur in the performance of the Works and which are reimbursable, and he shall not include any such costs in the rates and amounts entered in the Schedule of Prices.

9. Provisional Sums

9.1 Provisional Sums 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/ Engineer. The Contractor will only receive payment in respect of Provisional Sums if he has been instructed by the Employer/Engineer to utilise such sums.

DAYWORK SCHEDULE

1. General

1.1 Work shall not be executed on a Daywork basis except by written Order of the Engineer. The rates for Daywork items entered in the Schedule of Prices shall apply to any quantity of Daywork ordered by the Engineer. Nominal quantities have been indicated against each item of Daywork, and the extended total for Daywork shall be carried forward as a provisional sum to the Summary of Bid Prices.

2. Daywork - Labour

2.1 In calculating payments due to the Contractor for the execution of Daywork, the hours for labour shall be reckoned from the time of arrival of the labour at the job Site to execute the particular item of Daywork to the time of departure, but excluding meal breaks and rest periods. Only the times of classes of labour directly doing work ordered by the Engineer and for which they are competent to perform shall be measured.

The time of Plant Erectors or other expatriate supervisory personnel shall not be measured unless their time on Site is extended by Variation Order. The rates entered by the Bidder for these categories shall be daily rates inclusive of all allowances and overheads.

2.2 For labour other than Plant Erectors or other expatriate supervisory personnel, the Contractor shall be entitled to payment in respect of the total time that labour is employed on Daywork, calculated at the basic rates entered by him in the Schedule of "Daywork Rates – Labour" together with an additional percentage payments on basic rates representing the Contractor's profit, overheads, etc., as described below:

a) The basic rates for labour shall cover all direct costs to the Contractor, including (but not limited to) the amount of wages paid to such labour, transportation time, overtime, subsistence allowances and any sums paid to or on behalf of such labour for social benefits in accordance with Pakistan Labour laws. The basic rates will be payable in Pak. Rupees only, and

b) The additional percentage payment to be quoted by the Bidder and applied to costs shall be deemed to cover the Contractor's overheads, profits, superintendence, liabilities and insurances and allowances to labour, timekeeping and clerical and office work, the use of consumable stores, water, lighting and power; the use and repair of staging, scaffolding, workshops and stores, portable power tools, manual plant and tools; supervision by the Contractor's staff, foremen and other supervisory personnel; and charges incidental to the foregoing. Payments under this item shall be made in foreign currency and local currency at the percentages entered in the Daywork Schedule.

2.3 Rates entered in the Daywork Schedule shall apply to labour of trade and qualification as described and to labour of other trades with similar skill and qualification.

3. Daywork - Contractor's Equipment

3.1 The Contractor shall be entitled to payments in respect of Contractor's Equipment already on Site and employed on Daywork at the basic rental rates entered by him in the "Schedule of Daywork Rate - Contractor's Equipment". The said rates shall be deemed to include complete allowance. for depreciation, interest, indemnity and insurance, repairs, maintenance, supplies, fuel, lubricants and other consumables and all overheads, profit and administrative costs related to the use of such equipment.

3.2 In calculating the payment due to the Contractor for Contractor's Equipment employed on Daywork, only the actual number of working hours will be eligible for payment, except that, where applicable and agreed with the Engineer, the travelling time from the part of the Site where the Contractor's Equipment was located when ordered by the Engineer to be employed on Daywork and the time for the return journey thereto shall be included for payment.

3.3 The rental rates for Contractor's Equipment employed on Daywork shall be stated in Pakistani Rupees but payments to the Contractor will be made in local and foreign currencies according to the rates entered in the Schedule.

4. Daywork-Materials

4.1 The Contractor shall be entitled to the following payments in respect of materials used for Daywork (except for materials for which the cost is included in the percentage addition to labour costs) which are actually incorporated into the Works:

a) The net cost of such materials delivered to warehouse or workyard area or storage area at the Site. Such cost shall be calculated by the Contractor on the basis of the invoiced price and freight and insurance as certified by the Engineer on the basis of invoices produced.

b) Percentage addition, in local and/or foreign currency, of such net cost of materials to cover the Contractor's handling charges, overheads and profits.

4.2 Payment of the net cost to the Contractor of Daywork materials shall be made in the same currency as the invoice. Payment of the addition for handling charges, overheads and profit shall be in local and/or foreign currency as entered in the Schedule of Daywork - Materials.

2. (a) SCHEDULE OF PRICES – SUMMARY OF BID PRICES

Item No.	Description	TOTAL PRICE	
		Foreign Currency Component	Local Currency Component
2(b)	Equipment (at Site), and Erection, Testing & Commissioning.		
2(c)	Civil Works		
2(d) .	Day Work		
Total Bid Price (The amount to be entered in Paragraph 1 of the Form of Bid) (In Words)			

(Note: Total Price, in each currency, shall be provided in figures as well as in words)

2. (b) SCHEDULE OF PRICES – EQUIPMENT, ERECTION, TESTING & COMMISSIONING

Item No.	Description	Unit	Qty	Unit Rate											Total Price	
				Foreign Currency Component						Local Currency Component					Foreign Currency Component	Local Currency Component
				FOB Price	Shipping	Insurance	CIF Pak Sea Port	Erection & Other Work	Total	Customs Duty for Col No.8	Ex-Factory Pakistan (For Local Goods)	Local Trans-port	Erection & Other Work	Total		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1.	Main Plant															
2.	Erection & Testing Equipment & Maintenance Tools (Mandatory)															
3.	Spare Parts (Mandatory)															
4.	Provisional Sum															
Total (to be carried to Summary of Bid Price)																

[Note*:* Ref: Col. 12 above, the bidder claiming margin of domestic preference for Goods manufactured in Pakistan shall also fill Appendix C to Instructions to Bidders.]

2. (c) SCHEDULE OF PRICES – CIVIL WORKS

Item No.	Description	Unit	Qty	Volume of Concrete per Foundation (m^3)	Weight of Steel per Foundation (kg)	Unit Rate of Concrete per m^3 (Rs.)	Unit Rate of Steel per kg (Rs.)	Unit Rate per Foundation (Rs.)	Total (Pak. Rupees)
Total (to be carried to Summary of Bid Price)									

2. (d) SCHEDULE OF PRICES
DAYWORK

Item No.	Description	Nominal Quantity	UNIT RATE		TOTAL AMOUNT	
			FCC	LCC (PKR)	FCC	LCC (PKR)
1.	Daywork-Labour					
2.	Daywork - Contractor‟s Equipment					
3.	Daywork – Materials					
Total (to be carried to Summary of Bid Price)						

2. (e) SCHEDULE OF PRICES – ADDITIONAL RECOMMENDED ERECTION AND TESTING EQUIPMENT & MAINTENANCE TOOLS

1. The bidder shall propose in the space provided, a detailed list of Erection and Testing Equipment & Maintenance Tools which are recommended by him in addition to those specified by the Employer under Schedule 2(b) above.

2. The purchase of additional recommended Erection and Testing Equipment & Maintenance Tools would be at the discretion of the Employer and the cost of such equipment will not be taken into consideration in the evaluation of bids. However, the Contract Price will be adjusted to include the cost of additional Erection and Testing Equipment & Maintenance Tools which are selected by the Employer.

3. The list of Erection and Testing Equipment & Maintenance Tools shall include description as well as quantity of each item and the unit rate and prices for the total quantity proposed for each item of Erection and Testing Equipment & Maintenance Tools.

Item No.	**Description**	**Unit**	**Qty**	**Unit Rate**									**Total Price**	
				Foreign Currency Component					**Local Currency Component**				Foreign Currency Component	Local Currency Component
				FOB Price	Shipping	Insurance	CIF Pak Sea Port	Total	Customs Duty for Col No.8	Ex-Factory Pakistan (For Local Goods)	Local Trans-port	Total		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.	Erection Equipment													
2.	Testing Equipment													
3.	Maintenance Tools													
Total (not to be carried to Summary of Bid Price)														

2. (f) SCHEDULE OF PRICES – ADDITIONAL RECOMMENDED SPARE PARTS

1. The bidder shall propose in the space provided, a detailed list of Spare Parts which are recommended by him in addition to those specified by the Employer under Schedule 2(b) above.

2. The purchase of additional recommended Spare Parts would be at the discretion of the Employer and the cost of such equipment will not be taken into consideration in the evaluation of bids. However, the Contract Price will be adjusted to include the cost of additional Spare Parts which are selected by the Employer.

3. The list of Spare Parts shall include description as well as quantity of each item and the unit rate and prices for the total quantity proposed for each item of Spare Parts.

Item No.	**Description**	**Unit**	**Qty**	**Unit Rate**									**Total Price**	
				Foreign Currency Component					**Local Currency Component**				Foreign Currency Component	Local Currency Component
				FOB Price	Shipping	Insurance	CIF Pak Sea Port	Total	Customs Duty for Col No.8	Ex-Factory Pakistan (For Local Goods)	Local Trans-port	Total		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Total (not to be carried to Summary of Bid Price)														

PREAMBLE
TO
CONDITIONS OF CONTRACT

PREAMBLE TO CONDITIONS OF CONTRACT

Commencement Date	Sub-Clause 1.1.1.(i) The date for commencement of the Works is the date as per work order.
Defect Liability Period	Sub-Clause 1.1.11 The Defect Liability Period is **120** days.
The Employer	Sub-Clause 1.1.12. The Employer is **Irrigation Department Khyber Pakhtunkhwa through Executive Engineer, Irrigation Division, District Khyber.**
The Engineer	Sub-Clause 1.1.15. The Engineer is **Executive Engineer, Irrigation Division, District Khyber.**
Time for Completion	Sub-Clause 1.1.35. The Time for Completion is 365 days from the Commencement Date.
Warranty Period	Sub-Clause 1.1.40. The Warranty Period is **25** years for solar panels, **10** years for inverter. Other equipment warranty shall be as per specifications provided in the bidding documents.
Engineer"s Duties & Authorities	Sub-Clause 2.1 Amount of Variation Order in emergency is **Upto maximum 15% of the Contract Price stated in the Letter of Acceptance.**
Confirmation in Writing	Sub-Clause 2.6 (i) If the Contractor shall require the confirmation it shall be notified to the Engineer within **14** days. (ii) Engineer shall confirm the decision/instruction within **28** days.
Ruling Language	Sub-Clause 5.1. The version in **English** language (ruling language) shall prevail.
As-Built Drawings	Sub-Clause 6.10 As-Built drawings shall be provided to the Engineer within **28** days from the date of issue of Taking Over Certificate.
Programme to be Furnished	Sub-Clause 12.1. The Programme must be submitted in the form of **as per instruction of the Engineer incharge.**
Electricity Water, Gas and Other Services	Sub-Clause 14.3. Supplies on the Site are: a. Electricity: **Contractor to make his own arrangements.** b. Water: **Available.** c. Gas: **Contractor to make his own arrangements.** _____. d. Other Services: **Contractor to make his own arrangements.**

Employer"s Equipment	Sub-Clause 14.4. The following Employer"s equipment is available for use by the Contractor under the Employer"s operation: **Contractor to arrange all the equipments required for erection etc.**
Working Hours	Sub-Clause 18.3. The normal working hours are **as per working standards.**
Time for Completion	Sub-Clause 25.1 (i) Place of the Project **District Khyber**. **(ii)** Period as per work order.
Earlier Completion	Sub-Clause 26.3 **(i)** Amount of Bonus per day **Not Applicable.** **(ii)** Max. Amount of Bonus **Not Applicable.**
Delay in Completion	Sub-Clause 27.1. Failure to meet the Time for Completion entitles the Employer to reduction in Contract Price as follows: Percentage per day **0.05% of Contract cost** Maximum **0.01% of Contract cost per day.**
Prolonged Delay	Sub-Clause 27.2. Maximum amount recoverable from the Contractor by the Employer **10% of Contract Price of stated in the Letter of Acceptance.**
Terms of Payment	Sub-Clause 33.1. In addition to the provisions under Clause 33, the terms of payment shall be as stated in Particular Conditions of Contract.
Payment	Sub-Clause 33.5 **(i)** Period of Payment by Employer to Contractor **As soon as possible.** **(ii)** Period of Final Certificate of Payment **As soon as possible.**
Payment in Foreign Currencies	Sub-Clause 35.1. Payment in foreign currencies shall be arranged as follows: **Not Applicable.**
Insurance of Works	Sub-Clause 43.1. The deductible limits in the insurance cover of the Works shall not exceed **Rs. 2.00 (Million).** Sub-Clause 43.1.(a) The additional risks to be insured are: _____
Third Party Liability	Sub-Clause 43.3. The amount of insurance against third party liability taken out by the Contractor shall not be less than: **Rs. 5.00 (Million).**

Notices to Employer and Engineer	Sub-Clause 49.2. The address of the Employer for notices is: **Irrigation Department, Peshawar through Executive Engineer, Irrigation Division, Khyber, Phone No: 091-5820090.** The address of the Engineer for notices is: **Near Jamrud Civil Hospital Jamrud Tehsil District Khyber**
Disputes & Arbitration	Sub-Clause 50.4 Venue of Arbitration **Khyber** Pakistan.
Applicable Law	Sub-Clause 51.1. The applicable law is **Islamic Republic of Pakistan** law.
Procedural Law for Arbitration	Sub-Clause 51.2. The procedural law for arbitration is **Arbitration Act 1940.**
Language and Place of Arbitration	Sub-Clause 51.3. The language of arbitration is **English** language. The place of arbitration is **Khyber.**

GENERAL CONDITIONS OF CONTRACT

[Notes on the Conditions of Contract]

The Conditions of Contract comprise two parts:

(a) General Conditions of Contract
(b) Particular Conditions of Contract

Over the years, a number of "model" General Conditions of Contract have evolved. The one used in these Standard Bidding Documents was prepared by the International Federation of Consulting Engineers (Federation Internationale des Ingenieurs-Conseils, or FIDIC), and is commonly known as the FIDIC Conditions of Contract. (The used version is the 1987 edition, reprinted in 1988 with editorial amendments.)

The FIDIC Conditions of Contract have been prepared for an ad measurement (unit price or unit rate) type of contract, and cannot be used without major modifications for other types of contract, such as lump sum, turnkey, or target cost contracts.

The standard text of the General Conditions of Contract chosen must be retained intact to facilitate its reading and interpretation by bidders and its review by the Employer. Any amendments and additions to the General Conditions, specific to the contract in hand, should be introduced in the Particular Conditions of Contract.

The use of standard conditions of contract for all electrical/mechanical Works will ensure comprehensiveness of coverage, better balance of rights or obligations between Employer and Contractor, general acceptability of its provisions, and savings in time and cost for bid preparation and review, leading to more economic prices.

The FIDIC Conditions of Contract are copyrighted and may not be copied, faxed, or reproduced. Without taking any responsibility of its being accurate, Pakistan Engineering Council with prior consent of FIDIC Secretariat, has reproduced herein the FIDIC General Conditions of Contract for reference purpose only which cannot be used by the users for preparing their bidding documents. The bidding document may include a purchased copy, the cost of which can be retrieved as part of the selling price of the bidding document. Alternatively, the FIDIC Conditions of Contract can be referred to in the bidding documents, and the bidders are advised to obtain copies directly from FIDIC.*

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* Add the following text if the bidding documents, as issued, do not include a copy:
"Copies of the FIDIC Conditions of Contract can be obtained from:
FIDIC Secretariat
P.O. Box 86
1000 Lausanne 12
Switzerland
fidic.pub@fidic.org – FIDIC.org/bookshop]

The **“CONDITIONS OF CONTRACT FOR ELECTRICAL AND MECHANICAL WORKS”** section from page 71-141 has been removed as FIDIC doesn‟t allow it to be copied. Download the PDF version of this document from PICC website to view it completely OR Copies of the FIDIC Conditions of Contract can be obtained from:

FIDIC Secretariat
P.O. Box 86
1000 Lausanne 12
Switzerland

e-mail: fidic.pub@fidic.org – FIDIC.org/bookshop]

PART-II: PARTICULAR CONDITIONS OF CONTRACT

(Mandatory Provisions- not to be amended/substituted except where indicated by PEC)

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PART-II: PARTICULAR CONDITIONS OF CONTRACT

1.1 Definitions

The text of Sub-Clause 1.1.1 is deleted and substituted by the following:

"Commencement Date" means the date specified in the Preamble to Conditions of Contract.

The text of Sub-Clause 1.1.2 is deleted and substituted by the following:

"Conditions" means the Preamble to Conditions of Contract, General Conditions of Contract and Particular Conditions of Contract.

Sub-Clause 1.1.3

At the end of Sub-Clause the following is added:
"Any subsequent document mutually agreed and signed by the Employer and the Contractor, shall be the part of the Contract."

The text of Sub-Clause 1.1.5 is deleted and substituted by the following:

"Contract Price" means the sum stated in the Letter of Acceptance as payable to the Contractor for the execution and completion of the Works subject to such additions thereto or deductions therefrom as may be made under the provisions hereinafter contained and remedying of any defects therein in accordance with the provisions of the Contract."

Sub-Clause 1.1.11

The Defects Liability Period is the period mentioned in the Preamble to Conditions of Contract.

Sub-Clause 1.1.15

The following is added at the end of Sub-Clause:

"or any other competent person appointed by the Employer as his replacement."

Sub-Clause 1.1.23

The following paragraph is added:

The word "Goods" is synonymous with "Plant."
The text of Sub-Clause 1.1.27 is deleted and substituted by the following:

"Schedule of Prices" means the completed and priced Schedule of Prices, or any part or individual schedule thereof, submitted by the Contractor with his Bid or revised and mutually agreed and forming a part of the Contract documents.

Sub-Clause 1.1.33

The word "Tender" is synonymous with the word "Bid" and the word "Tender Documents" with the

word “Bidding Documents”.

The following Sub-Clauses are added:

“1.1.38 “Month” means calendar month according to Gregorian calendar.
1.1.39 “Operation and Maintenance Manuals” has the meaning described in Sub-Clause 6.6.
1.1.40 “Warranty Certificate” means the certificate against specified goods/equipment, for the period mentioned in the Preamble to Conditions of Contract, to be issued by the Contractor that the goods/equipment supplied under the Contract are new, unused and incorporate all recent improvements in design and materials unless provided otherwise in the Contract and that the Contractor will be responsible for making good or replacing any defective goods/equipment during the Warranty Period specified in the Preamble to Conditions of Contract which should commence after expiry of Defect Liability Period.

Sub-Clause 1.1.41

The word “Part II” stated in FIDIC Conditions of Contract is synonymous with the word “Particular Conditions of Contract”.

Sub-Clause 1.6 Cost, Overhead Charges and Profit

The last sentence “Any profit_____stated in the Preamble” is deleted and substituted by the following:
“Any profit entitlement shall be added to cost at the percentage stated in the Bid and agreed in the Contract Agreement.”

Sub-Clause 2.1 Engineer‟s Duties

The text of Sub-Clause 2.1 is deleted and substituted by the following:

“The Engineer shall carry out the duties specified in the Contract.

The Engineer may exercise the authority attributable to the Engineer as specified in or necessarily to be implied from the Contract. The Engineer is required to obtain the specific approval of the Employer before carrying out his duties in accordance with the following Clauses of General Conditions of Contract:

(a) approval of Subcontractor under Sub-Clause 4.1,
(b) certifying additional sums under Sub-Clause 5.4,
(c) certifying additional costs under Sub-Clauses 11.3 & 12.3,
(d) certifying any cost under Sub-Clause 14.6,
(e) approval of extension of time under Clause 26,
(f) issuing a Taking–Over Certificate under Sub-Clause 29,
(g) issuing a Defects Liability Certificate under Sub-Clause 30.11,
(h) issuing a Variation Order under Clause 31,
(i) fixing rates or prices under Clauses 31 and 34,
(j) certifying additional costs under Sub-Clause 44.5 and
(k) certifying additional costs under Sub-Clause 47.2;

Except for such variations pursuant to Sub-Clause 31.1 of the GCC which may be necessary in an emergency affecting safety of life, the works or of adjoining property.”
Except as expressly stated in the Contract the Engineer shall have no authority to relieve the Contractor of any of his obligations under this Contract.”

Sub-Clause 2.6 Confirmation in Writing

(i) In line 3 after the words “undue delay” the following is added:
“but not after the number of days mentioned in the Preamble to Conditions of Contract from

the instruction or decision."

(ii) At the end of Sub-Clause 2.6, the following is added:
"The Engineer shall confirm or otherwise within the period mentioned in the Preamble to Conditions of Contract from the receipt of requirement(s) from the Contractor."

Sub-Clause 2.7 Disputing Engineer"s Decisions and Instructions

The following text is deleted:
"If either party .....in accordance with the Contract."

Sub-Clause 2.8 Replacement of Engineer

The text of Sub-Clause 2.8 is deleted and substituted by the following:

"If the Employer intends to replace the Engineer, the Employer shall, not less than 14 days before the intended date of replacement, give notice to the Contractor, of the name, address and relevant experience of the intended replacement Engineer. The Employer shall not replace the Engineer with a person against whom the Contractor raises reasonable objection by notice to the Employer, with supporting particulars."

Sub-Clause 2.9 Engineer Not Liable

Sub-Clause 2.9 is added as follows:

"Approval, reviews and inspection by the Engineer of any part of the Works does not relieve the Contractor from his sole responsibility and liability for the supply of remaining materials and equipment for the Works and parts thereof and complete the remaining erection works and testing and commissioning in accordance with the Contract and neither the Engineer's authority to act nor any decision made by him in good faith as provided for under this Contract whether to exercise or not to exercise such authority shall give rise to any duty or responsibility of the Engineer to the Contractor, any Subcontractor, any of their representatives or employees or any other person performing any of the works. However the Contractor shall be compensated if any loss/damage is occurred due to the decision of the Engineer."

Sub-Clause 4.2 No Contractual Relation between Subcontractor and the Employer

Sub-Clause 4.2 is added as follows:

Nothing contained in the Contract Documents shall create any contractual relation between any Subcontractor and the Employer.

Sub-Clause 5.3 Priority of Contract Documents

Sub-Clause 5.3 is deleted and substituted by the following:

"Unless otherwise provided in the Contract the priority of the Contract Documents shall be as follows:

1. The Contract Agreement (if completed)
2. The Letter of Acceptance

3. The completed Form of Bid
4. Preamble to Conditions of Contract
5. The Particular Conditions of Contract
6. The General Conditions of Contract
7. The priced Schedule of Prices
8. The completed Schedules to Bid
9. The Specifications
10. The Drawings
11.(Any other document)

In case of discrepancies between drawings, those of larger scale shall govern unless they are superseded by drawing(s) of a later date regardless of scale. All drawings and specifications shall be interpreted in conformity with the Contract Agreement and these conditions."

Sub-Clause 5.4 Documents Mutually Explanatory

The text appearing in the last line after the words "the Contract Price" is deleted.

Sub-Clause 6.2 Consequences of Disapproval of Contractor's Drawings

Full stop is deleted and the following words are added at the end of Sub-Clause:
"for the approval of the Engineer. However, the Contractor shall not be entitled for time extension on this account."

Sub-Clause 6.6. Operation and Maintenance Manuals

Paras 2&3 are deleted and the following text is added at the end of Para 1 of Sub-Clause:

"The Operation and Maintenance Manuals shall include full instructions for the operation, servicing and maintenance of the Plant, not only during the period of the Contractor's liability but more particularly during its operating life.

The directions shall be set out simply, clearly and systematically. This may be divided into two volumes if desirable, one for operation and the second for servicing and maintenance (in sub–volumes for major items of Plant).

The operational data shall include a complete physical and functional description of the Plant (in sub–volumes for major items of Plant) and step–by–step procedures for inspection, checking and adjustments for proper operation of the Plant.

The maintenance data shall include complete instructions for routine checks, servicing, maintenance and repair of all parts and for dismantling, handling and re–assembly of all equipment, sub–assemblies and all separate components. The maintenance data shall also include where possible parts catalogues The lists shall provide all necessary information for identifying the parts and for re–ordering the parts including name of part, part number and catalogue references where applicable, name of manufacturer, size, capacity and other characteristics .

General arrangements, single line diagrams and detailed drawings shall be provided for ready reference in the operation and maintenance instructions.

The manuals shall be printed on ISO paper size A4 (210x297 mm) with offset or equivalent printing

strongly bound in a durable stiff cover bearing the title in approved legend. Drawings shall be folded or reduced to 297 mm height. All volumes shall bear on the spine an approved shortened version of the title.
The Contractor shall submit three draft copies for approval of the Engineer prior to producing finished volumes.

The Contractor shall provide ten (10) copies of the approved Operation and Maintenance Manuals prior to Taking Over by the Employer. Supplementary Operation and Maintenance Manual shall be provided by the Contractor, if required, to incorporate changes resulting from experience during the operation and maintenance period. The work shall not be considered to be completed for the purpose of taking over until such manual and drawings have been supplied to the Employer."

Sub-Clause 6.9 Manufacturing Drawings

The words "Unless otherwise specified in Part-II" are deleted and the following is added at the end of Sub-Clause:

"However, the Contractor is required to disclose to the Engineer or the Employer any confidential information necessary to justify the reliability, the efficiency and the operation and maintenance of the Plant supplied by him."

Sub-Clause 6.10 "As–Built" Drawings

The following new Sub-Clause is added:

The Contractor shall furnish to the Engineer six (6) copies and one (1) reproducible of approved quality of all "As–Built" drawings within the period mentioned in the Preamble to Conditions of Contract.

Sub-Clause 8.1 General Obligations

The text of Sub-Clause 8.1 is deleted and substituted by the following:

"(a) The Contractor shall commence the work on the date specified in the Preamble to Conditions of Contract and shall proceed with the same with due expedition and without delay.

(b) The Contractor shall, in accordance with the Contract, with due care and diligence, complete the Works and test and commission the Plant and carry out the Works within the Time for Completion. The Contractor shall also provide all necessary Contractor's Equipment, superintendence, labour and except as stated hereinbelow, all necessary facilities therefor.

The Employer will permit use of the Erection, Testing Equipment and Maintenance Tools as stated in the Preamble to Conditions of Contract.

The above facilities shall be provided at no cost to the Contractor but he shall procure at his cost all required consumable materials and any other items necessary for the proper execution of the Works. These shall be properly used and maintained by the Contractor and returned to the Employer upon handing over of the Works in good condition, fair wear and tear excepted. In case of any damage, loss or theft, the items shall be replaced by the Contractor at his own cost."

Sub-Clause 10.1 Performance Security

Sub-Clause 10.1 is deleted and substituted by the following:

"The Contractor shall provide a Performance Security in the prescribed Form annexed to these Documents. The said Security shall be furnished by the Contractor within 28 days after the receipt of Letter of Acceptance. The Performance Security shall be of an amount equal to 10 percent of the Contract Price in the currency (ies) of the Contract at the option of the bidder, in the form of Bank Guarantee from any Scheduled Bank in Pakistan or from a bank located outside Pakistan duly counter-guaranteed by a Scheduled Bank in Pakistan or an insurance company having alteast AA rating from PACRA/JCR."

The cost of complying with the requirements of this Sub-Clause shall be borne by the Contractor."

Sub-Clause 10.3 Claims under Performance Security

Sub-Clause 10.3 is deleted in its entirety.

The following Sub Clause is added:

Sub-Clause 10.4 Performance Security Binding on Variations and Changes

"The Performance Security shall be binding irrespective of variations and changes in the quantities of the Works or extensions in completion time of the Works, which are granted or agreed upon under the provisions of the Contract."

Sub-Clause 12.1 Programme to be Furnished

Sub-Clause 12.1(a) is deleted and substituted by the following:

"(a) the order in which the Contractor proposes to carry out the Works (including preliminaries, required material ordering, delivery to Site, erection and rectifications work, testing, commissioning and taking–over by the Employer). The programme shall also include the following:

(i) Employment of local and expatriate labour of various categories,

(ii) Local material procurement,

(iii) Material imports, if any."

In Sub-Clause 12.1(c)(iv) the words "any import licenses" are deleted.

Sub-Clause 12.4 Monthly Progress Report

The following Sub-Clause 12.4 is added:

"During the period of the Contract, the Contractor shall submit six sets of report to the Engineer not later than the 8th day of each month, including:

(i) a construction schedule indicating the progress achieved during the preceding month;

(ii) description of all work carried out since the last report;

(iii) description of the work planned for the next forty two days sufficiently detailed to enable the Engineer to determine his programme of inspection and testing;

(iv) summary of daily job record for the preceding month; and

(v) colour photographs to illustrate progress.

Sub-Clause 12.5 Daily Job Record

The following Sub Clause 12.5 is added:

"During the period of the Contract, the Contractor shall keep a daily record of the work progress, which shall be made available to the Engineer as and when requested.

The daily record shall include particulars of weather conditions, number of men working, in different categories, deliveries of materials, quantity, location and assignment of equipment."

Sub-Clause 13.1 Contractor's Representative

At the end of the Sub-Clause the following is added:

"The Contractor's Representative shall be a competent and skilled person approved by the Engineer (which approval may at any time be withdrawn) and who shall be present on the Site during all working hours. He shall be fluent in the English language. He shall not be transferred from the Site without the consent of the Engineer. The Contractor's Representative shall be a Registered/Professional engineer as defined in the Pakistan Engineering Council Act 1975 (V of 1976)."

Sub-Clause 13.3 Language Ability of Superintending Staff of Contractor

The following Sub-Clause 13.3 is added:

"A reasonable proportion of the Contractor's superintending staff shall have a working knowledge of the English language."

Sub-Clause 13.4 Employment of Local Personnel

The following Sub-Clause 13.4 is added:

"The Contractor shall, to the extent practicable and reasonable, employ staff and labour from sources within Pakistan."

Sub-Clause 14.1 Contractor's Equipment

Replace the word "or" at the end of Sub-paragraph (a) by the word "and" and insert the following at the end of Sub-paragraph(b):
"which shall not be unreasonably withheld."

Sub-Clause 14.2 Safety Precautions

At the end of the Sub-Clause the following is added:

"In order to provide for the safety, health and welfare of persons, and for prevention of damage of any kind, all operations for the purposes of or in connection with the Contract shall be carried out in compliance with the safety requirements of the Government of Pakistan with such modifications thereto as the Engineer may authorise or direct and the Contractor shall take or cause to be taken such further measures and comply with such further requirements as the Engineer may determine to be reasonably necessary for such purpose.

The Contractor shall make, maintain, and submit reports to the Engineer concerning safety, health and welfare of persons and damage to property as the Engineer may from time to time prescribe."

Sub-Clause 14.3 Electricity Water and Gas

The text of Sub-Clause 14.3 is deleted and substituted by the following:

"The Contractor shall be responsible for making his own arrangements for the adequate supply of electricity, water and gas required for the effective performance of his obligations under the Contract. Subject to the aforesaid, the Contractor shall be entitled to use for the purposes of the Works such supplies and services as may be available on the Site. The Contractor shall, before the commencement of the work at Site, seek the approval of the Engineer as to his detailed requirements of electricity, water and gas for the entire Contract period. The Contractor shall pay the Employer at the rates/cost incurred by the Employer. The Contractor shall at his own cost provide any apparatus necessary for such use."

Sub-Clause 14.4 Employer"s Equipment

The text of Sub-Clause 14.4 is deleted and substituted by the following:
"The Employer shall, if the Contractor so requests for the execution of the works, operate any available equipment of which details are given in the Preamble to Conditions of Contract. The Contractor shall pay the Employer a mutually agreed price for such use.

The Employer shall during such operation retain control of and be responsible for the safe working of the equipment.

Sub-Clause 14.8 Information for Import Permits & Licences

The text of Sub-Clause 14.8 is deleted and substituted by the following:

"The Contractor shall submit to the Employer in good time such details of all Plant and Contractor's Equipment as is to be imported into Pakistan and identify as to what assistance of the Employer is required for obtaining by the Contractor of all necessary import permits or licences."

Sub-Clause 15.2 Compliance with Laws

The Sub-Clause 15.2 is deleted and substituted by the following:
"The Contractor shall comply with the Laws of country of manufacture and the Laws of Pakistan where the Plant is to be erected."

Sub-Clause 16.4 Photographs of Works and Advertisement Prohibited

Sub-Clause 16.4 is added:

"Except with the prior written authorisation of the Employer the Contractor shall not exhibit or permit to be exhibited any photographs or advertisement on the Works. Any authorized exhibition shall be immediately removed if the Employer so requires."

Sub-Clause 16.5 Training of Employer's Staff

Sub-Clause 16.5 is added:

"The Contractor shall provide such facilities for the training of such numbers of Pakistani engineers, engineering students, apprentices and trade apprentices on such sections of the Works at the Site or on the Contractor"s premises or Contractor selected plant manufacturer's premises and factories, or wherever else work is in hand, as specified or directed by the Engineer. The Employer shall direct what sums by way of wages and allowances are to be paid by the Contractor to such persons and shall reimburse the Contractor for such sums as are so directed to be paid and are paid. The Contractor shall also provide medical expenses or medical insurance and travelling expenses for trainees if required by the Employer which shall be reimbursed by the Employer.

The language of training at the above stated premises shall be English and Urdu."

Sub-Clause 17.4 Consents and Way Leaves

The Sub-Clause 17.4 is deleted and substituted by the following:

The Employer shall issue permissions, letters, certificates and provide such other assistance to the Contractor for his obtaining permits-to-work, way leaves and approvals from any other department/authority and right of way from private owners, if required. The Contractor will bear the cost of logistics, fees, etc. for such activities. The Employer, will reimburse the Contractor only the payments made by him in respect of any land compensation for obtaining such way leaves, required for the Works.

Sub-Clause 17.5 – Import Permits and Licences

The word "Employer" is deleted and substituted by the word "Contractor" and the following is added at the end of Sub-Clause 17.5:
"the Employer will provide assistance for this purpose."

Sub-Clause 18.1 – Engagement of Labour

At the end of the Clause the following is added:
"in accordance with the regulations, orders and requirements of the Govt. of Pakistan."

Sub-Clauses 18.5 to 18.12 are added:

"Sub-Clause 18.5 Employment of Persons in the Service of Others

The Contractor shall not recruit or attempt to recruit staff and labour from amongst the persons in the

service of the Employer or the Engineer and vice–versa, unless mutually agreed between the Employer/Engineer and the Contractor

Sub-Clause 18.6 Alcoholic Liquor or Drugs

The Contractor shall not, otherwise than in accordance with the Statutes, Ordinances and Government Regulations or Orders for the time being in force, import, sell, give, barter or otherwise dispose of any alcoholic liquor or drugs, or permit or suffer any such importation, sale, gift, barter or disposal by his Subcontractors, agents, employees or labour.

Sub-Clause 18.7 Arms and Ammunition

The Contractor shall not give, barter or otherwise dispose of to any person or persons, any arms or ammunition of any kind or permit or suffer the same as aforesaid.

Sub-Clause 18.8 Festivals and Religious Customs

The Contractor shall in all dealings with his staff and labour have due regard to all recognised festivals, days of rest and religious or other customs.

Sub-Clause 18.9 Disorderly Conduct

The Contractor shall at all times take all reasonable precautions to prevent any unlawful riotous or disorderly conduct by or amongst his staff and labour and for the preservation of peace and protection of persons and property in the neighbourhood of the Works.

Sub-Clause 18.10 Records of Safety and Health

The Contractor shall maintain such records and make such reports concerning safety, health and welfare of persons and damage to property as the Engineer may from time to time prescribe.

Sub-Clause 18.11 Reporting of Accidents

The Contractor shall report to the Engineer details of any accident as soon as possible after its occurrence. In the case of any fatality or serious accident, the Contractor shall, in addition to appropriate action required under the law, notify the Engineer immediately by the quickest available means.

Sub-Clause 18.12 Compliance by Subcontractors

The Contractor shall be responsible for compliance by his Subcontractors of the foregoing provisions."

Sub-Clause 19.1 Manner of Execution

The following is added at the end of Sub-Clause:

"The Contractor shall submit for approval of the Engineer, his detailed method statement(s) for the execution of such items of work as may be desired by the Engineer. Approval of such method statement(s) shall neither relieve the Contractor of his responsibilities under the Contract nor form any basis for claiming additional costs."

Sub-Clause 19.3 Uncovering Work

The following is added at the end of second paragraph of Sub-Clause 19.3:

"In any other case, all costs shall be borne by the Contractor."

Sub-Clause 19.4 Use of Pakistani Materials

The following Sub-Clause 19.4 is added:

"The Contractor shall so far as may be consistent with the Contract make the maximum use of materials, supplies and equipment indigenous to or produced in Pakistan and services available in Pakistan or operated in Pakistan provided such materials, supplies, equipment and services shall be of required standard."

Sub-Clause 24.1 Cost of Suspension

At the end of the second paragraph after the word "Contractor" the following is added:

"or for the proper execution or for the safety of the Works or Plant unless such necessity results from any act or default of the Engineer or the Employer or in consequence of any of the Employer's Risks under Sub-Clause 37.2."

Sub-Clause 24.4 Resumption of Work

First paragraph of Sub-Clause 24.4 is deleted and substituted by the following:

"If the Contractor chooses not to treat prolonged suspension as an omission or termination under Sub-Clause 24.3, the Employer shall, upon the request of the Contractor, take over the responsibility for protection, storage, security and insurance of the suspended Works and of the Plant which has been delivered to the Site and which is affected by suspension and the risk of loss or damage thereto shall thereupon pass to the Employer."

Sub-Clause 25.1 Time for Completion

The text of Sub-Clause 25.1 is deleted and substituted by the following:

"The Works at the place of the project mentioned in the Preamble to Conditions of Contract shall be completed tested and commissioned within the period mentioned in the Preamble to Conditions of Contract."

Sub-Clause 26.1 Extension of Time for Completion

Sub-Clause 26.1(h) is deleted.

Sub-Clause 26.3 Earlier Completion

(i) At the end of Sub-Clause 26.3(a) the following text is added and Clause is re-designated as 26.3.

"The extra sum to be paid to the Contractor for Completion of Works prior to the date of Completion established under Sub-Clause 25.1 shall be computed on the basis of the sums mentioned in the Preamble to Conditions of Contract."

(ii) Sub-Clause 26.3 (b) is deleted.

"Sub-Clause 26.4 Rate of Progress

Sub-Clause 26.4 is added:

"If for any reason, which does not entitle the Contractor to an extension of time, the rate of progress of the Works or any Section is at any time, in the opinion of the Engineer, too slow to comply with the Time for Completion, the Engineer shall so notify the Contractor who shall thereupon take such steps as are necessary, subject to the consent of the Engineer, to expedite progress so as to comply with the Time for Completion. The Contractor shall not be entitled to any additional payment for taking such steps. If, as a result of any notice given by the Engineer under this Clause, the Contractor considers that it is necessary to do any work at night or on locally recognised days of rest, he shall be entitled to seek the consent of the Engineer so to do. Provided that if any steps, taken by the Contractor in meeting his obligations under this Sub-Clause, involve the Employer in additional supervision costs, such costs shall, after due consultation with the Employer and the Contractor, be determined by the Engineer and shall be recoverable from the Contractor by the Employer, and may be deducted by the Employer from any moneys due or to become due to the Contractor and the Engineer shall notify the Contractor accordingly, with a copy to the Employer."

Sub-Clause 27.1 Delay in Completion

Sub-Clause 27.1 is deleted and substituted by the following:

"If the Contractor fails to deliver the Works, or any part thereof, within the time stated in Sub-Clause 25.1, or fails to complete the whole of the Work, or, if applicable, any Section within the relevant time prescribed by Sub-Clause 25.1, then the Contractor shall pay to the Employer the relevant sum stated hereinbelow as liquidated damages for such default (which sum shall be the only moneys due from the Contractor for such default) for every day or part of a day which shall elapse between the relevant time for Delivery or Time for Completion and the actual date of delivery at site or the date stated in a Taking–Over Certificate of the whole of the Works or the relevant Section, as the case may be, subject to the applicable limit stated hereinbelow.

The Employer may deduct the amount of such damages from any monies due or to become due to the Contractor. The payment or deduction of such damages shall not relieve the Contractor from his obligation to complete the Works, or from any other of his obligations & liabilities under the Contract."

The liquidated damages for each day of delay and the maximum amount of liquidated damages shall be the amounts mentioned in the Preamble to Conditions of Contract.

Sub-Clause 28.7 Consequences of Failure to Pass Tests on Completion

The words "by arbitration" appearing at the end of the Sub-Clause 28.7(c) are deleted and substituted by the words "by the Engineer".

Sub-Clause 30.4 Extension of Defects Liability Period

At the end of 4th paragraph of Sub-Clause the following is added:
"or a mutually agreed period."

Sub-Clause 30.5 Failure to Remedy Defects

In first line after the words “reasonable time” the following is added:
“fixed by the Engineer”.

Sub-Clause 30.13 Unfulfilled Obligations

New Sub-Clause 30.13 is added as herein below:

“After the Defects Liability Certificate has been issued, the Contractor and the Employer shall remain liable for the fulfillment of any obligation which remains unperformed at that time. For the purposes of determining the nature and extent of any such obligation, the Contract shall be deemed to remain in force.”

Sub-Clause 31.1 Engineer's Right to Vary

The following is added at the end of second paragraph:

“No such variation shall in any way vitiate or invalidate the Contract, but the effect, if any, of all such variations shall be valued in accordance with Clause 31. Provided that where the issue of an instruction to vary the Works is necessitated by some default of or breach of Contract by the Contractor or for which he is responsible, any additional cost attributable to such default shall be borne by the Contractor.”

Sub-Clause 31.5 Record of Costs

The word “Engineer” in 4th line of Sub-Clause is deleted and substituted by “Engineer/Employer”.

Sub-Clause 31.6 Daywork under Variation Order

New Sub-Clause 31.6 is added as given below:

“A Variation Order may provide that work done pursuant thereto shall be executed as Daywork. In such case the Contractor shall be paid for such work under the conditions and the rates and prices set out in the Day Work Schedule.”

Sub-Clause 31.7 Value Engineering

New Sub-Clause 31.7 is added as given below:

The Contractor may, at any time, submit to the Engineer a written proposal which in the Contractor“s opinion will reduce the cost of constructing, maintaining or operating the works, or improve the efficiency or value to the Employer of the completed Works or otherwise be of benefit to the Employer. Any such proposal shall be prepared at the cost of the Contractor. However Employer is not bound to accept such proposal.

Sub-Clause 33.1 Terms of Payment

(Employer may vary this Sub-Clause)

The following Sub-Clauses are added:

Sub-Clause 33.1.1 Retention of Payment

If at any time any payment would fall due for Works or part of Works and, if there shall be any defect in part of such Works in respect of which such payment is proposed, the Employer may retain the whole or any part of such payment. Any sum retained by the Employer pursuant to the provisions of this Clause shall be paid to the Contractor after the said defect is removed.

Sub-Clause 33.1.2 Payment Where Taking-Over Certificate Issued for Section or part of Works

If any section or part of the Works shall be taken-over separately under Clause 29 (Taking-Over) hereof, the payments herein provided for on or after Taking-Over shall be made in respect of the section or part taken-over and reference to the price shall mean such part of the price as shall, in the absence of agreement, be apportioned thereto by the Engineer.

Sub-Clause 33.2 Method of Application

(Employer may vary this Sub-Clause)

Sub-Clause 33.5 Payment

Sub-Clause 33.5 is deleted and substituted by the following:

The amount due to the Contractor under any Interim Payment Certificate issued by the Engineer pursuant to this Clause, or to any other term of the Contract, shall, subject to Clause 27, be paid by the Employer to the Contractor within 30 days after such Interim Payment Certificate has been jointly verified by Employer and Contractor, or, in the case of the Final Certificate referred to in Sub-Clause 33.10 within 60 days after such Final Payment Certificate has been jointly verified by Employer and Contractor; Provided that the Interim Payment shall be caused in 42 days and Final Payment in 60 days in case of foreign funded project.

Deduction shall be made from the net amounts payable to the Contractor of any sum(s) in accordance with the prevalent Federal and/or Provincial laws, provided that no such deduction shall be made from those payments in respect of which the Contractor has obtained exemption under the Law."

Sub-Clause 33.6 Delayed Payment

The text of Sub-Clause 33.6 is deleted and substituted by the following:

"In the event of the failure of the Employer to make payment within the times stated in Sub-Clause 33.5, the Employer shall pay to the Contractor compensation at the rate of KIBOR+2% for local currency and LIBOR+1% for foreign currency per annum, upon all local currency sums unpaid from the date by which the same should have been paid. The provisions of this Sub-Clause are without prejudice to Contractor's entitlement under Sub-Clause 46.1."

Sub-Clause 33.8 Payment by Measurement

The work shall be measured for the units mentioned in the Schedule of Prices according to the Contract as determined by the Engineer from approved drawings, Specifications and Contract Documents.

Sub-Clause 33.12 Withholding of Payment

New Sub-Clause 33.12 is added as given below:

If the Works or any part thereof are not being carried out to the Engineer's satisfaction and in order to protect the Employer from loss on account of:

(a) defective work not rectified
(b) guarantees not met
(c) claims filed against the Contractor
(d) failure of the Contractor to make payments due for Plant procured or labour employed by him.
(e) damage to any other contractor employed by the Employer.
(f) Contractor's non–compliance with the Contract
(g) any Government dues recoverable from the Contractor if notified by the Government

The Engineer may notify withholding of such payments or part thereof as may, in his opinion, be related to the aforesaid reasons/grounds. When the reasons/grounds for withholding the payment are removed by the Contractor, the Engineer shall upon being satisfied to that effect issue Certificate of Payment in respect of withheld amounts.

Sub-Clause 35.1 Payment in Foreign Currencies

(Employer may vary this Sub-Clause)

Sub-Clause 35.2 Currency Restrictions

The text of Sub-Clause 35.2 is deleted and substituted by the following:

“Any required foreign currency transactions shall be met by the Employer/Contractor at his cost from his own resources.”

Sub-Clause 35.3 Rates of Exchange

The words “as stated in the Preamble” appearing in 3rd line of Sub-Clause are deleted and substituted by the words “as published or authorized by State Bank of Pakistan”.

Sub-Clause 36.4 Payment against Provisional Sums

Sub-Clause 36.4 is deleted and substituted by the following:

“Provisional Sum if any will be expended on the direction of the Engineer through Variation Orders which would be valued in accordance with the provisions of Clause 31 Conditions of Contract.”

Sub-Clause 37.2 Employer's Risks

The text of Sub-Clause 37.2 is deleted and substituted by the following:

"The Employer's Risks are:

(a) (Insofar as they relate to Pakistan) war and hostilities (whether war be declared or not), invasion, act of foreign enemies

(b) (Insofar as they relate to Pakistan) rebellion, revolution, insurrection, military or usurped power or civil war

(c) ionizing radiation or contamination by radioactivity from any nuclear fuel, radio-active toxic explosives or other hazardous properties of any explosive nuclear assembly or nuclear components thereof

(d) pressure waves caused by aircraft travelling at sonic or supersonic speed

(e) (Insofar as they relate to Pakistan) riot, commotion or disorder, unless solely restricted to the employees of the Contractor or of his Subcontractors

(f) use or occupation of the Work or any part thereof by the Employer

(g) fault, error, defect or omission in the design of any part of the Works by the Engineer, Employer or those for whom the Employer is responsible for which the Contractor has disclaimed responsibility in writing within a reasonable time after the receipt of such design

(h) the use or occupation of the Site by the Works or any part thereof, or for the purposes of the Contract: or interference, whether temporary or permanent with any right of way, light, air or water or with any easement, way leaves or right of a similar nature which is the inevitable result of the construction of the Works in accordance with the Contract

(i) the right of the Employer to construct the Works or any part thereof on, over, under, in or through any land

(j) damage (other than that resulting from the Contractor's method of construction) which is the inevitable result of the construction of the Works in accordance with the Contract

(k) the act, neglect or omission or breach of contract or of statutory duty of the Engineer, the Employer or other contractors engaged by the Employer or of their respective employees or agents."

Sub-Clause 39.2 Loss or Damage Before Risk Transfer Date

The words "by arbitration under Clause 50" are deleted and substituted by the words "by the Engineer".

Sub-Clause 39.4 Duty to Minimize Delay

New Sub-Clause 39.4 is added as given below:

Each Party shall at all times use all reasonable endeavours to minimize any delay in the Performance of the Contract as a result of Risks.

The Contractor shall give notice to the Employer and vice versa the Employer shall give notice to the Contractor in case of foreseeable delay by the Risks.

Sub-Clause 40.2 Employer's Liability

The text of Sub-Clause 40.2 from the words "or of death or personal injury" to the end of the Sub-Clause, is deleted and substituted by the following:

"..... (other than the Works) or of death or personal injury to the extent caused by any of the Employer's Risks listed in paragraphs (f), (g), (h), (i), (j), and (k) of Sub-Clause 37.2 but not otherwise."

Sub-Clause 42.2 Maximum Liability

the words "the sum stated in the Preamble to Conditions of Contract or if no such sum is stated" appearing in 2nd line of Sub-Clause are deleted.

Sub-Clause 42.6 Foreseen Damage

Sub-Clause 42.6 is deleted in its entirety.

Sub-Clause 43.1 The Works (Insurance)

(Employer may vary this Sub-Clause)

Sub-Clause 43.2 Contractor's Equipment

Sub-Clause 43.2 is deleted and substituted by the following:

"The Contractor shall insure the Contractor's Equipment for its full replacement value while on the Site against all loss or damage caused by any of the Contractor's Risks."

Sub-Clause 43.3 Third Party Liability (Insurance)

(Employer may vary this Sub-Clause)

Sub-Clause 43.7 Remedies on the Contractor"s Failure to Insure

In 3rd line after the word, "purpose", the expressions- "and reasonable costs including the man-hours costs of Employer"s Personnel" are added.

Sub-Clause 43.9 Currency of Insurance

New Sub-Clause 43.9 is added as given below:

"All policies of Insurance of the Plant shall provide for payment of indemnity to be made in such amounts as will allow making good of loss of or damage to the whole or any part of the Works."

Sub-Clause 43.10 Contractor to Notify

New Sub-Clause 43.10 is added as given below:

"It shall be the responsibility of the Contractor to notify the insurance company of any changes in nature and extent of the Works and to ensure the adequacy of the insurance coverage at all times in accordance with the provisions of the Contract."

Sub-Clause 43.11 Procurement of Insurance Policies

New Sub-Clause 43.11 is added as given below:
"The Contractor shall procure and submit the insurance cover under this Clause within a period of 28 days from the date of receipt of Letter of Acceptance from the Employer."

Sub-Clause 44.6 Damage Caused by Force Majeure
At the end of the Sub-Clause 44.6 the following is added:

"However the Contractor shall put up his claim to the Employer / Engineer with full details and justification."

Sub-Clause 44.8 Payment on Termination for Force Majeure
Text in sub-para (c) is deleted and para (d) and (e) are re-numbered as (c) and (d).

Sub-Clause 44.10 Force Majeure Affecting Engineer"s Duties

Sub-Clause 44.10 is deleted in its entirety.

Sub-Clause 45.2 Contractor's Default

The following paragraph is added at the end of Sub-Clause 45.2.

"The Employer or such other contractor may use for such completion any Contractor's Equipment which is upon the Site as he or they may think proper, and the Employer shall pay the Contractor a reasonable compensation for such use".

Sub-Clause 45.6 is added as follows:
Sub-Clause 45.6 Integrity Pact

If the Contractor, or any of his Subcontractors, agents or servants is found to have violated or involved in violation of the Integrity Pact signed by the Contractor as Schedule-H 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 Subcontractors, 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 Subcontractors, agents or servants.

The termination under Sub-Para (b) of this Sub-Clause shall proceed in the manner prescribed under Sub-Clauses 45.2 to 45.5 and the payment under Sub-Clause 45.4 shall be made after having deducted the amounts due to the Employer under Sub-Para (a) and (c) of this Sub-Clause.

Sub-Clause 46.1 Employer's Default

The comma and the word "or" at the end of paragraph (d) of Sub-Clause 46.1 are deleted and substituted by period (.) Paragraph (e) of Sub-Clause 46.1 is deleted.

Sub-Clause 46.3 Payment on Termination for Employer's Default

The words "including loss of profit" in the second paragraph of Sub-Clause 46.3 are deleted.

Sub-Clause 47.1 Labour, Materials and Transport

(Employer to modify this Sub-Clause as provided under Clause 70.1 of PCC of PEC Civil Documents and following PEC Procedure and Formula for Price Adjustment)

Sub-Clause 48.1 Customs and Import Duties

(Employer may vary this Sub-Clause)

The Sub-Clause 48.3 is added:

Sub-Clause 48.3 Port Charges and Port Congestion

The Contractor shall be deemed to have obtained all the information regarding facilities and charges, in respect of port clearance, loading and unloading, storage, transportation, congestion and confirmed the requirements thereof at his own responsibility and all such costs and charges are deemed to be included in the rates and prices of the Schedule of Prices.

Sub-Clause 49.1 Notice to Contractor

The following is added at the end of Sub-Clause 49.1:

"For the purposes of Sub-Clause 49.1 the Contractor shall, immediately after receipt of Letter of Acceptance, intimate in writing to the Employer and the Engineer by registered post, the address of his principal place of business or any change in such address during the period of the Contract."

Sub-Clause 50 Disputes & Arbitration

Clause 50 is deleted and in its place the following Sub-Clauses 50.1 to 50.5 are inserted:

"50.1 If a dispute of any kind whatsoever arises between the Employer and the Contractor in connection with, or arising out of, the Contract or the execution of the Works, whether during the execution of the Works or after their completion and whether before or after repudiation or other termination of the Contract, including any dispute as to any opinion, instruction, determination, certificate or valuation of the Engineer, 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 fifty sixth (56) day after the day on which he received such reference, the Engineer shall give notice of his decision to the Employer and the Contractor. Such decision shall state that it is made pursuant to this Clause.

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 amicable settlement or in an arbitral award.

In any case where the Conditions of Contract provide that the decision of the Engineer is to be final and conclusive, such decision shall not be referable to arbitration under this Clause nor shall the same be questioned in any other form of proceedings whatsoever.

50.2 If either the Employer or the Contractor be dissatisfied with a decision of the Engineer or if the Engineer fails to give notice of his decision on or before the fifty sixth (56) day after the day on which he received the reference, then either the Employer or the Contractor may, on or before the twenty eighth (28) day after the day on which the said period of fifty six (56) days expired, as the case may be, give notice to the other party to commence arbitration, as hereinafter provided, as to the matter in dispute. Such notice shall establish the entitlement of the party giving the same to commence arbitration, as hereinafter provided, as to such dispute and, subject to Sub-Clause 50.5, no arbitration in respect thereof may be commenced unless such notice is given.

If the Engineer has given notice of his decision as to a matter in dispute to the Employer and the Contractor and no notification of intention to commence arbitration as to such dispute has been given by either the Employer or the Contractor on or before the twenty eighth (28) day after the day on which the parties received notice as to such decision from the Engineer the said decision shall become final and binding upon the Employer and the Contractor.

50.3 Where notice of intention to commence arbitration as to a dispute has been given in accordance with Sub-Clause 50.2, arbitration of such dispute shall not be commenced unless an attempt has first been made by the parties to settle such dispute amicably through mutual negotiation within ninety (90) days from the date of notification of Engineer"s decision.

50.4 Any dispute in respect of which:

(a) the decision, if any, of the Engineer has not become final and binding pursuant to Sub-Clause 50.1 and

(b) amicable settlement has not been started/reached within the period stated in Sub-Clause 50.3

shall be finally settled, unless otherwise specified in the Contract, under the Pakistan Arbitration Act, 1940 (Act No. X of 1940) and Rules made thereunder as amended, by one or more arbitrators appointed under such Rules.

The said arbitrator(s) shall have full power to open up, review and revise any decision, opinion, instruction, determination, certificate or valuation of the Engineer for the purpose of obtaining said decision pursuant to Sub-Clause 50.1. No such decision shall disqualify the Engineer from being called as a witness and giving evidence before the arbitrator(s) on any matter whatsoever relevant to the dispute.

The venue of arbitration proceedings shall be the place in Pakistan as mentioned in the Preamble to Conditions of Contract.

50.5 Where neither the Employer nor the Contractor has given notice of intention to commence arbitration of a dispute within the period stated in Sub-Clause 50.1 or 50.2 and the related decision has become final and binding, either party may, if the other party fails to comply with such decision, and without prejudice to any other rights it may have, refer the failure to arbitration in accordance with Sub-Clause 50.4. The provisions of Sub-Clauses 50.1 to 50.2 shall not apply to any such reference

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• Form of Performance Security (Bank Guarantee)	178
• Form of Bank Guarantee/Bond for Advance Payment	180

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

FORM OF BID SECURITY
(Bank Guarantee)

Guarantee No._____
Executed on _____
Expiry date _____

[Letter by the Guarantor to the Employer]

Name of Guarantor (Bank) 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 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 24.2 of Instructions to Bidders, or
- (c) failure of the successful bidder to
  - (i) furnish the required Performance Security, in accordance with Clause 34 of Instructions to Bidders, or
  - (ii) sign the proposed Contract Agreement, in accordance with Clause 35 of Instructions to Bidders,

then the entire sum be paid immediately to the said Employer as liquidated damages and not as penalty for the successful bidder's failure to perform.

NOW THEREFORE, if the successful bidder shall, within the period specified therefor, on the prescribed

form presented to him for signature enter into a formal Contract with the said Employer in accordance with his Bid as accepted and furnish within twenty eight (28) days of his being requested to do so, 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 for its validity 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 bounden Guarantor has executed the instrument under its seal on the date indicated above, the name and seal of the Guarantor being hereto affixed and these presents duly signed by its undersigned representative pursuant to authority of its governing body.

_____
Guarantor (Bank)

Witness:

1. _____

_____
Corporate Secretary (Seal)

2. _____

_____
(Name, Title & Address)

Signature _____

Name _____

Title _____

_____

_____
Corporate Guarantor (Seal)

FORM OF CONTRACT AGREEMENT

THIS CONTRACT AGREEMENT (hereinafter called the "Agreement") made on the_____ day of _____(month) 20_____ between _____ _____(hereafter called the "Employer") of the one part and_____(hereafter called the "Contractor") of the other part.

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

NOW this Agreement witnesseth as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.

2. The following documents after incorporating addenda, if any except those parts relating to Instructions to Bidders shall be deemed to form and be read and construed as part of this Agreement, viz:

   (a) The Contract Agreement
   (b) The Letter of Acceptance
   (c) The completed Form of Bid
   (d) The Preamble to Conditions of Contract
   (e) The Particular Conditions of Contract
   (f) The General Conditions of Contract
   (g) The priced Schedule of Prices
   (h) The completed Schedules to Bid
   (i) The Specifications
   (j) 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 with the provisions of the Contract.

4. The Employer hereby covenants to pay the Contractor, in consideration of the execution and completion of the Works as per provisions of the Contract, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

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

Signature of the Contactor

_____

(Seal)

Signature of the Employer

_____

(Seal)

Signed, Sealed and Delivered in the presence of:

Witness:

_____

(Name, Title and Address)

Witness:

_____

(Name, Title and Address)

FORM OF PERFORMANCE SECURITY
(Bank Guarantee)

Guarantee No._____
Executed on _____
Expiry date _____

[Letter by the Guarantor to the Employer]

Name of Guarantor (Bank) 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 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 30, Defects after Taking Over, of Conditions of Contract are fulfilled.

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

We,_____(the Guarantor), waiving all objections and defencesunder the Contract, do hereby irrevocably and independently guarantee to pay to the Employer without delayupon 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 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-bounden 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 (Bank)

Witness:

1. _____

_____
Corporate Secretary (Seal)

2. _____

_____
Name, Title & Address

Signature _____

Name_____

Title _____

_____
Corporate Guarantor (Seal)

FORM OF BANK GUARANTEE/BOND FOR ADVANCE PAYMENT

Guarantee No._____
Executed on_____
Expiry date _____

[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 Rupees_____(Rs._____) 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 advance payment for performance of his obligations under the said Contract.

AND WHEREAS_____(Bank) (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 (Bank)

Witness:

1. _____

_____
Corporate Secretary (Seal)

2. _____

_____
Name, Title & Address

Signature _____

Name_____

Title _____

_____
Corporate Guarantor (Seal)

SPECIFICATIONS

SPECIAL PROVISIONS

(To be prepared and incorporated by the Employer)

SPECIFICATIONS - SPECIAL PROVISIONS (Sample Clauses)

SP-1 WORK BY CONTRACTOR

SP-2 WORK BY OTHERS

SP-3 FACILITIES PROVIDED BY THE EMPLOYER

SP-4 DESCRIPTION OF THE PROJECT

SP-5 ACCESS TO SITE

SP-6 SITE CONDITIONS

SP-7 STANDARDS AND DESIGN

SP-8 DRAWINGS AND INFORMATION

SP-9 INSTRUCTION MANUALS

SP-10 CONTRACTOR TO COOPERATE WITH OTHERS

SP-11 INSTRUCTIONS AND TRAINING OF EMPLOYER'S STAFF

SP-12 ERECTION AND TESTING EQUIPMENT AND MAINTENANCE TOOLS

SP-13 SPARE PARTS

SP-14 PACKING

SP-15 ERECTION MARKS

SP-16 PROGRAMME

SP-17 PROGRESS REPORTS AND MEETINGS

SP-18 PHOTOGRAPHS

SP-19 SECTIONS OF THE WORKS

SP-20 QUALITY ASSURANCE

SP-21 SUBCONTRACTS

SP-22 INSPECTION AND TESTING

SP-23 TESTS ON COMPLETION

SP-24 TAKING OVER

SP-25 TRANSPORTATION AND HANDLING OF PLANT

SP-26 DEFECTS AFTER TAKING OVER

SP-27 DIRECTED AND REQUIRED

SP-28 PAYMENT FOR WORK REQUIRED BY SPECIAL PROVISIONS

SP-29 SAFETY AND HEALTH

SP-30 RATING PLATES, NAMEPLATES AND LABELS

SPECIFICATIONS

TECHNICAL

PROVISIONS

Specification for Paneland Allied Equipment

1. SOLAR PANELS

- The Solar Panel shell meet the requirement set in IEC 61215:2016 or IEC 61215--2005 , IEC61730-1:2004 or latest and IEC 61730- 2:2004 or latest, IEC 61701(latest), / international standards.
- Solar Panels with Anti-PID Certification based on IEC standard TS-62804-1 will be preferred(i.e: TUV PPP-58042).
- The manufacturer name and date of manufacturing of solar panel in a definite pattern i.e, DD/MM/YYYY should be laminated inside front glass. The PV Module not more than one (1)year old.
- Outstanding conversion efficiency. (Module efficiency minimum 16.5% or higher)
- More Power per square meter than other panels.
- Positive watt class rating/positive power tolerance (+3 to +5 watt above industry average.
- Low temperature coefficient.
- PID degradation free.
- The PV module(s) shall contain mono crystalline silicon, Grade-A Solar cells. (only Monocrystalline or higher efficient will be preferred)
- The PV module have an ability to Works well with high-voltage input Inverters/ charge controllers (1000 Vdc)
- The PV Panel must have clear anodized aluminum frame with Anti-reflection cover glass.
- Maximum bus bars. (minimum 3 numbers of bus bars)
- Special glass etching and anti-reflective coating.
- Solid Warranty, stable and well established company.
- Ammonia and salt mist corrosion resistance.
- Tier 1 solar panel producer (Tier 1 or Financial Strong manufacture should be certified andlisted with third party insurance company providing worldwide coverage such as SolarIF, PowerGaurd etc or equivalent.
- Fully automated production cycle, reducing sources of variation in production. Manufacturershould have their own in-house solar cell and solar panel manufacturer facility.
- Extremely low failure rate.
- Multi award winning company. (will be preferred)
- Test Standard(s) to which the module has been tested and certified.
    - I-V curve for the solar photovoltaic module/panel.

- Date and year of obtaining IEC PV module standardization qualification certificate.
- Electrical Data at nominal Cell Operating Temperature (NOCT).
- PV Module efficiency at STC.
- Following information should be labeled on the solar panels and should be provided in thedata sheet:
- Test Standards to which the module has been tested and certified.
- IEC PV Module standardization qualification certificate.
- Electrical Data at nominal Standard Testing Conditions (STC)
- Electrical Data at nominal cell operating temperature (NOCT)
- PV module Efficiency.

> Each panel should have factory equipped weather proof terminal junction box having at least IP65 protection with provision of opening for replacement of DC cables, blocking diodes and easy debugging if necessary.

> /25 years performance warranty for 80 % output power.

> Certified with high wind speed. (minimum wind load capacity = 3.8 KPa and snow load capacity of 5.4 KPa)

> Flash test reports from manufacturer for each panel given for sample.

> All information regarding solar panel with above mentioned featured data should be accessible and verifiable online on manufacturer website or verifiable in writing from manufacturer through fast track courier (Note the courier charges etc, for such verificationwill be borne by the supplier.)

2. WATER PUMPING INVERTERS / CONTROLLER:

The solar pump inverter/controller should have built-in MPPT controller, over load protection, Soft start/Soft Stop Features and Variable Frequency Drive (VFD) with integrated Gate Bipolar Transistors. The inverter offered should comply to or Equivalent standards:

> CE/RoHS/international standards (ISO 14001, OHSAS 18001 applicable)

> Low Voltage Directive 2014/35/EU with Supplements

> EMC Directive 2004/108/EC with Supplements

The complete datasheet showing all the electrical parameters like input & output voltage ranges should be provided in the technical bid. All the electrical parameters like input & output voltage ranges, and efficiency should be provided at the time of pre-supply testing and inspection.Efficiency of inverter should be 92% and above.

- Rated output voltage of inverter / Controller shall be pure sine wave AC. Total harmonic distortionin AC output should not exceed 2%.
- Inverter should have at least three (3) years extendable to 10 years performance warranty.
- Inverter circuit must include protection against:

- Over or Low voltages and currents beyond critical level of the inverters circuits.
- Protection against accidental short circuits & reverse polarity connections.
- Protection against lightning induced transients.
- Over load protection.
- Low RPM Protection (i.e: Frequency < 30 Hz) Motor Should Stop.
- Dry run protection.

- dV/dT Filters With Inverter (VFD):
  - The use of load reactors increases the reliability, performance, and efficiency of VFD systems, extends the life of both drives and motors, and reduces the amount of energy consumed by the motor/drive system.
  - Output dV/dT or Sine Filters (between VFD and Motor) of appropriate size should be used where the motor cable length is more than Fifty (50) Feet or as advised / recommendedby the inverter manufacturer in their Technical Documentation.
  - dV/dT Filter should be enclosed in a box.

3. <u>GRID TIE INVERTER</u>

- UL-1741 Certified
- 98% Conversion Efficiency
- Pure Sine wave output
- True three-phase bridge topology for DC/AC output converter− Transformer-less topology
- Each inverter is set on specific grid codes which can be selected in the field
- Detachable wiring box to allow an easy installation
- Wide input voltage range
- Electrolyte-free' power converter to further increase the life expectancy and long term reliability
- Integrated string combiner with different options of configuration which include DC andAC disconnect switch in compliance with international standards (-S2, -S2F and -S2X versions)
- Natural convection cooling for maximum reliability
- Outdoor enclosure for unrestricted use under any environmental conditions
- Availability of auxiliary DC output voltage (24 V, 300 mA)
- Capability to connect external sensors for monitoring environmental conditions.

4. HYBRID /OFF GRID INVERTERS:

i) UL 1741, IEC 61683, IEC 62109-1 and IEC 62109-2, EN 50524, EN 50530.

ii) The DC power produced is fed to inverter for conversion into AC. In a grid interactive systemAC power should be fed to the grid at three phase 415 AC bus.

iii) Power generated from the solar system during the daytime is utilized fully by powering the critical building loads and feeding excess power to the grid as long as grid is available. In cases, where solar power is not sufficient due to more demand or cloud cover etc. the building loads should be served by drawing power from the grid. The inverter should always give preference to the Solar Power and will use Grid/DG power only when the Solar Power is insufficient to meet the load requirement.

iv) The output of the inverter must synchronize automatically its AC output to the exact AC voltage and frequency of the grid.

v) The offered On-Grid Inverter must be of Hybrid type has an ability to synchronize with battery bank as backup system.

vi) Inverter should continuously monitor the condition of the grid and in the event of grid failure; the inverter automatically switches to off-grid supply within 20-50 milliseconds and synchronize with battery bank and fulfil shortcoming from battery bank as PV-Battery hybrid system. The solar system is resynchronized with the grid within two minutes after the restoration of grid or DG set.

vii) Grid voltage should also be continuously monitored and in the event of voltage going below a pre-set value and above a pre-set value, the solar system should be disconnected from the grid within the set time. Both over voltage and under voltage relays should have adjustable voltage (50% to 130%) and time settings (0 to 5 seconds).

viii) Metal Oxide Varistors (MOVs) should also be provided on DC and AC side of the inverter.

ix) The inverter control unit should be so designed so as to operate the PV system near its maximum Power Point (MPP), the operating point where the combined values of the current and voltage of the solar modules result in a maximum power output.

x) The inverter should be a true sine way inverter for a grid interactive PV system.

xi) The degree of protection of the outdoor inverter panel should be at least IP-55.

xii) Typical technical features of the suggested inverters must mention as per following sequence.

- Continuous output power rating (1.1 times for 60seconds)
- Nominal AC output voltage and frequency
- Accuracy of AC voltage control ±1%
- Accuracy of frequency control ±0.5%
- Grid Frequency Control range +/- 3 Hz
- Maximum Input DC Voltage range
- MPPT Range DC
- Ambient temperature -10 deg C to 55 deg C
- Humidity 95 % non- condensing
- Protection of Enclosure IP-55 (minimum)

- Grid Voltage tolerance -20 % and + 15 %
- Power factor control 0.95 inductive to 0.95 capacitive
- No-load losses < 1% of rated power
- Inverter efficiency (minimum) 95%
- TUV certified, Warranty 5 years.
- Liquid crystal display should at least be provided on the inverters front panel or onseparate data logging/display device to display following

  a. DC Input Voltage

  b. DC Input current

  c. AC Power output(kW)

  d. Current time and date

  e. Time active

  f. Time disabled

  g. Time Idle

  h. Temperatures (C)

  i. Converter status

- Following should also be displayed like Protective function limits, Over voltage, AC under voltage, Over frequency, under frequency, ground fault, PV starting voltage, PV stopping voltage, over voltage delay, under voltage delay over frequency, ground fault delay, PV starting delay, PV stopping delay.)

5. <u>Cable and DC Wiring for Water Pumping system:</u>

> The AC / DC cables should be made of 99.9% copper strands and Flexible.

> The DC cable must have double insulation suitable for 1000 V_{DC} transmission.

> DC circuit breakers (not fuse) of at least 800V and suitable ampere rating must be installedbetween PV modules and PV pump controller in order to avoid short circuiting.

> AC Circuit Breaker of suitable rating must be installed between Pump Controller and Motor.

> DC Breaker, AC Breaker and Inverter / Controller should be placed in an enclosure of IP55standard.

> Cables shall be clearly labelled with essential electrical parameters including manufacturername, Voltage Range, standards etc.

> All wiring shall be aesthetically neat and clean, over all wiring/connection losses shall notexceed 1% of the total rated output power.

> All connections/ socket outlet among array, controller, inverters, batteries, and pumping setetc must be made in junction boxes of adequate protection level.

> All wires/cables should be in standard flexible UV-Resistant conduits for outdoor installationand HDPE pipes (3 feet deep) for underground wiring and PVC ducts for indoor installation.

6. Panel Mounting and Structure:

- The panel mounting and structure should be made of hot dipped (80 microns minimum) galvanized steel of minimum thickness of 2.64 mm / 12 Gauge Channel A sketch of the mounting frame (As per Actual Site Requirements) showing dimensions of the frame parts should be provided at the time of supply.
- PV to ground clearance must not be less than 2 feet. The height of the upper edge of the structure should not exceed 10 ft above the ground and 6 Feet for roof.
- To avoid Shading, Distance between two rows of PV panels and from walls should be maintained at a minimum of 1.6 times the height of structure/walls.
- The pit size for concrete works should be minimum 1.5x1.5x2 ft for each leg and the concrete should be extended at least 1 ft above the ground. The concrete ratio should be 1:2:4.
- The Surface azimuth angle of PV Module 180° and the Tilt angle (slope) of PV Module should be 33°.
- The PV modules will be mounted on metallic structures of adequate strength and appropriate design, which can withstand load of modules and high wind velocities up to 150 km per hour.

7. Solar Auto Trackers for Water pumping system:

The solar tracker offered should be fully automatic and intelligent, and must be capable of Single axis tracking (from east to West) and should have its own power supply (PV Panel, Battery and Charge Controllers) other than PV Panel used for Pumping Setup.
Individual Auto-Tracker should not be less than 4kW each.

The auto Tracker should also have manual control mode to adjust the tracking angle manually. Structure Material Should be Hot Dipped Galvanized Steel (Minimum 80 Microns).

All nuts, bolts, washers and other fasteners for mounting structure shall be made of minimum A2 grade stainless steel.

Foundation and other details will be separately provided. 03 years Comprehensive Free Replacement, Repair and maintenance Warranty (Free of Cost) should be provided for all the components of auto Tracker (including Batteries).

8. BATTERIES:

- The battery should be maintenance free, Deep Cycle, Tubular, OPzV Type. (AGM, GEL, LI ion,Lead corban)
- The battery must ensure safe and reliable operation in the whole range of ambienttemperatures from -5° C to + 50° C.
- The maximum permissible self-discharge rate should not be more than 5 percent of ratedcapacity per month at 25° C.
- Cycle life of the battery minimum 3000 @ DOD 80 % for lithium Ion, 1800 @ 30% DoD forGel/AGM and 4000 cycles @ 40% DoD for Lead Carbon & OPzV

- Battery should have maximum discharge rate.
- The battery shall have a certificate of compliances, issued by a recognized laboratory.
- The Batteries should have minimum 5 to 10 years float life.
- The battery shall meet the requirements and recommendations given in IEC 60896 21/22 orequivalent.

9. LED LIGHTS:

- Solar Based LEDs/Light fixtures shall conform to the latest IEC/ISO internationally recognizedstandards.
- LEDs/Light fixtures should not be Chip-on-board (COB) single chip type due to their poor heatdissipation.
- LEDs/Light fixtures shall be modular type with proper heat sinks.
- Solar based lights (LED fixtures etc) should provide at least 100 Lumen/watt.
- LEDs/Light fixtures should be designed to deliver at least 10 years of service.
- Complete lightening unit shall be weather proof (Protection Class IP65).
- The output from the LEDs/Light fixtures should be constant throughout the duty cycle.
- The LED lights should have minimum 10,000 duty hours.

10. Water Pump

Internationally certified. Pump should be supplied having standard ISO-9906 specifications. The pump must be submersible, made of stainless steel. The characteristic curves (Original from Manufacturer) showing the efficiency at duty point and performance of the pump should be provided in the technical proposal and also at the time of pre-supply testing. The quoted pump should be tested for its performance and certified as per ISO-9906 Grade-1 standard. The pump should be suitable for installation and operation in tube wells/dug wells/open well with clear water discharge. Pump shall comprise off bowl assembly and non-return valve as integral part of pump's parts. Pump and motor shall rigidly couple through NEMA standard coupling. Each stage casing must have replaceable wear ring. The impellers shall be secured to the pump shaft with tapered conical sleeves pressed into the taper bore of impeller or impeller secured through chrome plated stainless steel hexagonal sleeves. Suction casing must be between pump and motor with suction strainer as protection of pump against coarse impurities of the liquid handled.

Specification for main components of the Pumps:

S.NO	Components	Specifications
1	Casing/Diffuser	The Casing/Diffuser should be in fabricated stainless steel AISI 304.
2	Impellers	stainless steel AISI 304
3	Driving Shaft	Stainless steel 304/420
4	Sleeves	Stainless steel AISI 329/ 304
5	Gaskets	Rubber Gaskets
6	Bearings	AISI 304/316/329/420
7	Coupling & Screen + Cable Guard	Stainless steel AISI 316/319/304/420
8	Non-Return Valve / Sluice Valve	As per British standard specifications (BSS), Minimum 16 bar pressure sustaining design
9	Pressure Gauge	As per British standard specifications (BSS), having PSI or Bar scale
10	Clamps	Steel – Pressed
11	Pump Efficiency	Minimum efficiency of the pump should be 70% ensured at duty point (it's Not applicable for Less than 2800 IGPH). (Duty Point of the Pump should always be selected to the right of Pump Peak efficiency Point)

11. Water Motor

Internationally certified. The winding material should be 99.99% copper. The motor should have wet type, water cool rewind-able/repairable stator. The motor should have non-disposable/non- hermetically sealed winding. The insulation class of the winding material should be mentioned. For each model quoted, all the technical parameters such as rated voltage, power factor, efficiency, full load ampere, speed and other similar parameters should be provided at the time of pre-supply testing. The testing report with all basic parameters should also be provided at the time of pre-supply testing.

The motor shall be manufactured in compliance with National Electrical Manufacturer Association (NEMA) standards. The motor shall be three-phase submersible and shall be capable of operating at rated voltage of 380 Volts at 50 Hz. The motor should be capable of operating with variable speed through V/F control. Winding of the motor shall of rewind able type with class - IC40 insulation and IP68 protection. The synchronous speed should be 2850-2950 RPM. Motor shall be capable of operating in well water with temperature normally start from 40C. Motor should be designed for continuous operation. Motor must be filled with water without any chemical additives hazards to health for cooling. The motor must be properly protected against the entry of well water sand etc by double mechanical seal one is rotating and other stationary and must be

made of Silicon carbide/ Tungsten carbide and must be protected with sand protection guards. All supports shall be high grade cast iron and stator outer side jacket body should be in stainless steel in AISI 304. The excessive pressure due to heating up of the filled water must be compensated by a pressure equalizing rubber diaphragm in the lower part of the motor. The axial thrust of the pump shall be countered by oscillating sliding block type thrust bearing. The thrust bearing of the motor should be able to bear a download thrust force from the water pump and the upward thrust force produced while starting the water pump. Motor shall be capable of maximum of 20 starts in an hour. Motor efficiency above 7.5 HP should not be less than 75% for and less than 7.5 HP should not be less than 70% at Motor Rated Voltage.

Technical specification of rewind-able wet stators, three phase squirrel cage water filled submersiblemotor.

S.No	Components	Specific ation
1.	Winding	Made of pure electrolyte copper a non-hygroscopic poly vinyl chloride for normal temperature and must full fill resistant tests
2.	Stator	Energy efficient low-losses electrical magnetic sheet should be fixed in stainless steel casing. M800 or M600 magnetic sheet arepreferable to
3.	Rotor	Energy efficient low-losses electrical magnetic sheet fixed with high grade copper bars. M800 or M600 magnetic sheets are preferable to
4.	Spline Shaft	AISI 420 stainless steel, flange dimension according to NEMAstandard, over size design to ensure stiffness in severs condition.
5.	Shaft bearing	Water lubricated guide/general bearings fixed in upper and lower brackets should be made of metal impregnated carbon.
6.	Lower thrust bearing	Thrust sliding block bearings, self-aligning Mitchell type, should be able withstand 15500N/20000N axial load.
7.	Mechanical Seal (Stationary & Rotary	Silicon carbide or tungsten carbide mechanical seal.
9.	Cooling filling fluid	Water mixed with non-toxic anti-freeze provides cooling and lubrication also protects and prevent inside parts from corrosion.
11.	Degree of protection	IP68
12.	Insulation of Class	With winding wire poly vinyl chloride up to 70 degree C with windingwire polyethylene up to 95 degree C.
13.	Voltage Tolerance	-6% to -10%
14.	Mounting position	Vertical horizontal
15.	Class	IC40
16.	Maximum Immersion	150 Meters
17.	Stating per hour	20

12. SUBMERSIBLE FLATE ELECTRIC CABLE:

The submersible cable should be made of 99.9% copper strands with double PVC insulation for 1000Vac, should be adequately flexible and environment friendly. Stranded and flexible insulated copper wires and cables must be used for all outdoor and indoor installations. The wiring that leads
into the building shall be protected in a conduit. The cable must have undergone qualitytests as per BSS standards. Following lab tests are mandatory.

- Conductor resistance test.
- Insulation resistance test.
- Pressure test.
- Spark test.
- Note: The Supplier should provide the quality tests certificates at the time of pre-supply testing and inspection.

13. COLUMN PIPE:

The column pipe shall be flanged ERW steel pipes confirming to ASTM designation A-53 with a minimum thickness of 3.5 mm and shall be painted with corrosion resistance paint of suitable thickness. Flanges thickness of 20 mm shall have grooves for cable passage. Each column pipe shall be complete with gaskets, bolts/studs, washers and nuts. All nuts, bolts, and washers shall be made of minimum A2 grade stainless steel.

The column pipe shall be supplied in interchangeable section having an approximate length of 10 feet column pipe shall be flanged perpendicular to the axis of pipe.
HDPE Pipe of 1 or 0.75 Inch diameter conforming to ASTM F-2160 Standard without Joints to be installed/included along with and equal to Column pipe for confirming Water Level testingpurpose.

FEATURES:

- Manufacturer’s pipes should meet international standards like BSEN 10255 & ASTMA53.
- Dimensional accuracy circularity and plan end cut should be observed,
- Weld strength of pipe and mechanical properties or raw material should be tested asper manufacturing standards.
- Pipes should be NDT tested (Non-destructive - Eddy current)
- Pipes should be hydrostatically pressure as per manufacturing standard.
- Pipes should be gone through straightening process to remove bendiness.

14. TOPSET Water Pumping system:

Top set shall comprise of Bore covers plate, (covering bore hole completely and securely), installation/suspension clamps, sluice valve, reflex valve, Washout Valve 4 feet above the

ground (T-Connection For Testing Pump's discharge), connector and cable jointing material (Cable connection from motor to switching device shall be joint free) pressure gauge and cable ties. Bore Cover Plate should have provision for water level testing facility (i.e: Hole for Sonic Water Level Meter / HDPE Pipe insertion)

For Cleaning of solar Panels, Plastic pressure pipe should be provided of suitable length to reach the furthest / last Solar Panel.

Every Water Supply Scheme should have a non-removable name plate fitted at inverter box having essential information and bearing the name of supplier and client.

15. DC Solar Water Pump:

The equipment must be internationally certified. DC motor brushless, Built inside a cast stainless steel housing. High power rare earth (neodymium) permanent magnets to provide high torque for maximum performance. Driven by a PWM signal from the controller. The PWM signal ensures a soft start and infinite speed control of the motor. Only non-corrodible materials are used, motor windingsare cast in resin to provide a very long life, even in difficult conditions.
Control equipment must:

- be separate from the other system components.
- provide direct solar connection as standard.
- have the ability to add on an optional power pack if required in the future.
- provide diagnostic indicators to show status
- have provision for continuous performance measurement
- have provision for continuous performance measurement.

Control equipment includes monitoring, power conversion, MPPT (Maximum PowerPoint Tracking) sensors, Software base commission, Mobile Software, Storage data option, frequency control and other equipment related to the solar pumping system.

16. LED SOLAR STREET LIGHTNING SYSTEM:

- Must be certified internationally.
- The W-LED solar lightning system should be designed to operate from dusk to dawn (morethan 14 hours)
- The Light source should be white type.
- Color LED used in the system should be in the range of 5500 K to 6500 K (Cool White)
- LED emits ultra violet light is not permitted.
- The light output source should be constant.
- Luminous flux should be 4000 lumens with permissible allowance of 10 %.
- The outdoor housing or luminaries should be all weather proof.
- Heat sink temperature should not increase more than 20 degree centigrade above ambient temperature.
- The charge controller must ensure safe and reliable operation in the whole range of ambienttemperature from -20 to +50 degree centigrade.
- The make, model number and country of origin should be mentioned.

- The performance warranty should cover at least 3 years for replacement upon defect/ malfunctioning.

17. SMD LIGHTS

Must be internationally certified. Modular design, matrix array, light uniformity. Excellent heat dissipation performance, guarantee lamp long lifespan. Light effect soft and comfortable, no glare.

Original chip, high luminous efficiency, long lifespan, good stability, high reliability. No mercury, lead and other hazardous materials, RoHs compliant. Support several intelligent dimming modes, energy conservation. Be used on corridors, inside rooms etc.

- A unique, modular design with enhanced optic-lense makes this IP66-rated area luminaire the most versatile to date, providing exceptional lighting performance and reduced total cost of ownership in variety of applications. The modular design accommodates up LEDs to allow for customization of illumination and economic performance for a wide range of applications. Theadvanced thermal management system contributes to unparalleled lumen maintenance.

18. Solar Charge Controller:

The product must have certification of CE, LVD, EMC, ISO 9001, ISO 14001 and ROHS.Certificates must be attached.

- Charge controller must have MPPT technology.
- Must have minimum 98 % tracking efficiency.
- Conversion efficiency minimum 95 %.
- Controller must have user time function to control the working hours of the
- light.
- Must have load control.
- Must have heat sink to dissipate excessive heat.
- Must have temperature compensation for charging batteries in higher
- temperatures.
- The charge controller must have protection for reverse flow of current through
- the PV modules.
- Charge controller must have PV short circuit, PV reverse polarity, PV over
- voltage, PV

  over current, battery over charging, battery over discharging, battery reversepolarity, load short circuit and load over protection.

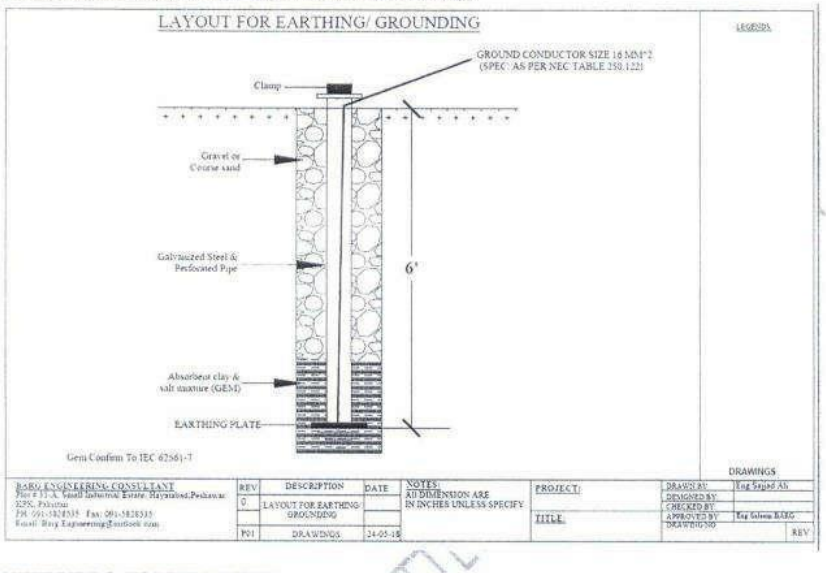
19. Energy Efficient Fans: Must be internationally certified. ISO/IEC/ or equivalent.

20. LIST OF APPROVED LABORITERIES:

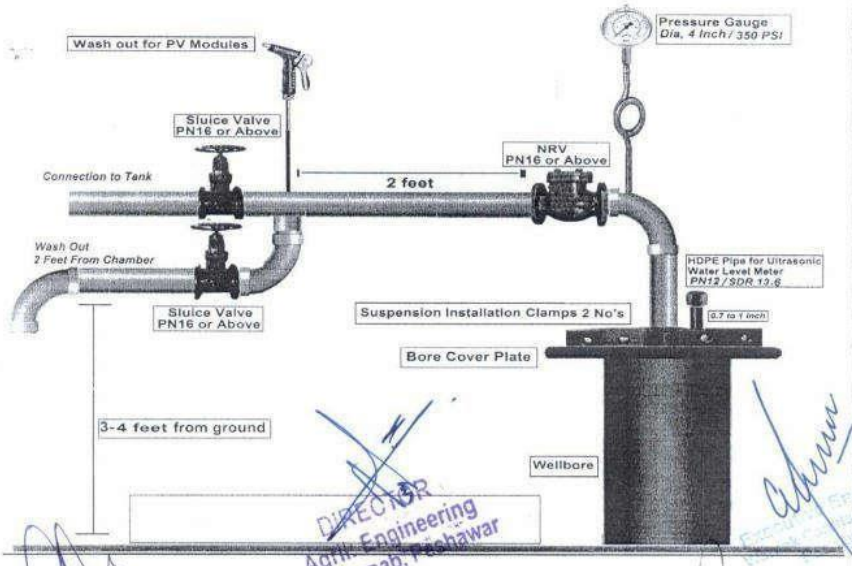
- Fraunhofer ISE (Freiburg Germany)
- European Solar Test installation Renewable Energies Unit Institute for Environmental andSustainability-JRC (Italy)
- NREL –National Renewable Energy Laboratory (USA)
- Arizona State University Photovoltaic Testing Laboratory (USA)
- Centro de Investigaciones Energeticas medio ambientales y technologic as Centro de La (Madrid Espain)
- TUV Rheinland/SUD/Nord Product safety Gmbh (Germany)
- Post and Telecommunications Industry Products Quality surveillance and inspection centerPTPIC (Beijing China)

21. The authorized dealer must attach List of clients/customers towhom the equipment delivered.

ANNEXURE-2 (EARTHING / GROUNDING DRAWING)



ANNEXURE-3 TOPSET LAYOUT:



DIRECTOR
Agriculture Engineering
KPK Tarnab, Peshawar

Deputy Secretary (Tech)
Public Health Engg: Department
Khyber Pakhtunkhwa

16/01/2019

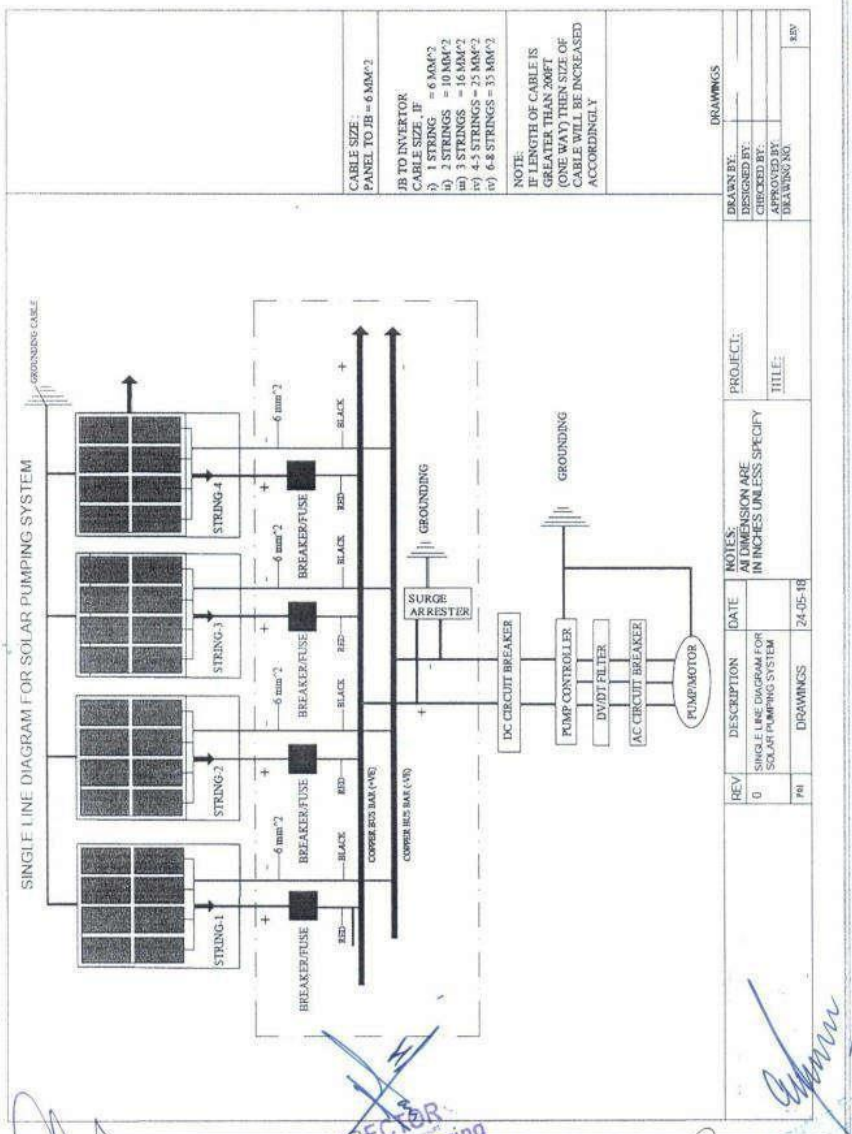
SE(HQ)

PDA

16/01/2019

XEN

ANNEXURE-4 (SYSTEM SINGLE LINE DIAGRAM-PUMPING)



DIRECTOR
Agril: Engineering
PARK Tarnab, Peshawar

Deputy Secretary (Tech:)
Public Health Engg: Department
Khyber Pakhtunkhwa

16/01/2019

DRAWINGS

(To be prepared and incorporated by the Employer)

BILL OF QUANTITIES

Bill of Quantities

Name of Work: **Solarization of Existing Irrigation Tube Wells in Tribal Districts [MA] (ADP No. 2154/192017-190092/2023-24)**

Sub Work: Solarization of Existing Irrigation Tube Well at Shahkass Area Tehsil Jamrud District Khyber

Estimated Cost: **4.652 Million** **Bid Security:** **93040/-**

1	Solarization of Existing Irrigation Tube Well at Shahkass Area Tehsil Jamrud District Khyber	Discharge (I-GPH)	6000	Head:	530 feet	P/S =	510 feet

S.#	MRS 2022	Description.	Unit	Quantity	Rate	Amount (Rs.)
1	26-01-d-01	Supply & Erection of Solar PV module (Solar Panel) Mono-crystalline A-Grade (Per Watt) (as per approved specification)	Watt	21000.00	104.17	2187570
2	26-01-b-02	Supply & Erection of PVC flexible pipe "1.5 i/d.	M	30.00	363.34	10900
3	26-01-g-04	Supply & Erection 1X10 sq. mm flexible copper cable	M	165.00	460.93	76053
4	26-01-h-01	Supply & Erection MC4 connector (TUV approved)	Pair	10.00	342.92	3429
5	26-01-i-04	Supply and Erection of 3 Phase 220/380V Solar Pump inverter (MPPT) 7.5 KW and above	Watt	21000.00	20.39	428190
6	26-01-m-01	Supply & Erection of hot dipped (80 microns Average) galvanized steel of minimum thickness of 12 SWG/2.64 mm channel/pipe or 8 SWG/4.06 mm angle.	Watt	21000.00	22.19	465990
7	26-01-n-02	Supply & Erection of 1x1 ft 4 mm Copper Earthing Plate	Watt	21000.00	3.92	82320
8	26-01-n-03	Supply & Erection of stainless steel nuts & bolts	M^2	21000.00	3.92	82320
9	24-50-a-03	Supply & Installation, testing and commissioning of Submersible Pump (ISO – 9906 Certified) Coupled with Submersible rewind-able Electric Motor with AC winding and all accessories like Motor Control Unit (equipped with UV/OV, dry run protection device, surge protection, phase reverse indicator) Complete in all accessories including NRV, Pressure Gauge, Sluice valve except column pipe and power cable with appropriate Head and Discharge : 25 HP	Set	1.00	416067.41	416067
10	24-50-c-02	Supply and installation of Submersible Flat Cable made of 99.9% copper, coated with double PVC as per BSS Standards, 3x16 mm2	M	165.00	944.63	155864
11	24-56-b	Supply & Fixing MS Column Pipe with flanges for Submersible Pump 3" (75 mm) Nominal Pipe Size 3/16" thick, 10' length	M	165.00	2858.78	471699

12	24-30-c-06	Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE) Din-8074/Din-8075/ISO-4427 in trenches, complete in all respects except excavation. (63 mm dia) PN-12.5	M	165.00	397.12	65525
13	24-30-c-03	Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE) Din-8074/Din-8075/ISO-4427 in trenches, complete in all respects except excavation. (32 mm dia) PN-12.5	M	165.00	132.88	21925
14	03-25-c	Excavation in foundation of building, bridges etc: complete : complete in hard soil or soft murum	M^3	11.15	330.13	3681
15	06-05-f	Plain Cement Concrete (PCC) including placing, compacting, finishing and curing (Ratio 1:2:4).	M^3	9.557	9299.67	88877
		Total				**4560411**
		Add 2% A.C.F from item				**91208**
		G.Total:-				**4651619**
		In Million:				**4.652**
		Note : Following Information to be provided by the bidder otherwise bid shall be declared as non-responsive (must be duly supported by evidence of exemption)				
		Amount chargeable to % from Federal GST (PKR)				
		Federal GST (PKR)				
		Amount chargeable to % Federal (FBR) Sale Tax on goods (PKR)				
		Federal (FBR) Sale Tax on goods @ % (PKR)				
		Amount chargeable to % Provincial (KPPRA) Sale Tax on Services (PKR)				
		Provincial (KPPRA) Sale Tax on Services @ % (PKR)				
		Any other applicable tax				
		Total Amount (Rs.):-				

Bill of Quantities

Name of Work: **Solarization of Existing Irrigation Tube Wells in Tribal Districts [MA] (ADP No. 2154/192017-190092/2023-24)**

Sub Work: Solarization of Existing Irrigation Tube Well at Shahkass / Katia Khel Area Tehsil Jamrud District Khyber

Estimated Cost: **4.627 Million** **Bid Security:** **92540/-**

1	Solarization of Existing Irrigation Tube Well at Shahkass / Katia Khel Area Tehsil Jamrud District Khyber	Discharge (I-GPH)	6000	Head:	530 feet	P/S =	510 feet

S.#	MRS 2022	Description.	Unit	Quantity	Rate	Amount (Rs.)
1	26-01-d-01	Supply & Erection of Solar PV module (Solar Panel) Mono-crystalline A-Grade (Per Watt) (as per approved specification)	Watt	21000.00	104.17	2187570
2	26-01-b-02	Supply & Erection of PVC flexible pipe "1.5 i/d.	M	30.00	363.34	10900
3	26-01-g-04	Supply & Erection 1X10 sq. mm flexible copper cable	M	160.00	460.93	73749
4	26-01-h-01	Supply & Erection MC4 connector (TUV approved)	Pair	10.00	342.92	3429
5	26-01-i-04	Supply and Erection of 3 Phase 220/380V Solar Pump inverter (MPPT) 7.5 KW and above	Watt	21000.00	20.39	428190
6	26-01-m-01	Supply & Erection of hot dipped (80 microns Average) galvanized steel of minimum thickness of 12 SWG/2.64 mm channel/pipe or 8 SWG/4.06 mm angle.	Watt	21000.00	22.19	465990
7	26-01-n-02	Supply & Erection of 1x1 ft 4 mm Copper Earthing Plate	Watt	21000.00	3.92	82320
8	26-01-n-03	Supply & Erection of stainless steel nuts & bolts	M^2	21000.00	3.92	82320
9	24-50-a-03	Supply & Installation, testing and commissioning of Submersible Pump (ISO – 9906 Certified) Coupled with Submersible rewind-able Electric Motor with AC winding and all accessories like Motor Control Unit (equipped with UV/OV, dry run protection device, surge protection, phase reverse indicator) Complete in all accessories including NRV, Pressure Gauge, Sluice valve except column pipe and power cable with appropriate Head and Discharge : 25 HP	Set	1.00	416067.41	416067
10	24-50-c-02	Supply and installation of Submersible Flat Cable made of 99.9% copper, coated with double PVC as per BSS Standards, 3x16 mm2	M	160.00	944.63	151141
11	24-56-b	Supply & Fixing MS Column Pipe with flanges for Submersible Pump 3" (75 mm) Nominal Pipe Size 3/16" thick, 10' length	M	160.00	2858.78	457405

12	24-30-c-06	Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE) Din-8074/Din-8075/ISO-4427 in trenches, complete in all respects except excavation. (63 mm dia) PN-12.5	M	160.00	397.12	63539
13	24-30-c-03	Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE) Din-8074/Din-8075/ISO-4427 in trenches, complete in all respects except excavation. (32 mm dia) PN-12.5	M	160.00	132.88	21261
14	03-25-c	Excavation in foundation of building, bridges etc: complete : complete in hard soil or soft murum	M^3	11.15	330.13	3681
15	06-05-f	Plain Cement Concrete (PCC) including placing, compacting, finishing and curing (Ratio 1:2:4).	M^3	9.557	9299.67	88877
		Total				**4536439**
		Add 2% A.C.F from item				**90729**
		G.Total:-				**4627168**
		In Million:				**4.627**
		Note : Following Information to be provided by the bidder otherwise bid shall be declared as non-responsive (must be duly supported by evidence of exemption)				
		Amount chargeable to % from Federal GST (PKR)				
		Federal GST (PKR)				
		Amount chargeable to % Federal (FBR) Sale Tax on goods (PKR)				
		Federal (FBR) Sale Tax on goods @ % (PKR)				
		Amount chargeable to % Provincial (KPPRA) Sale Tax on Services (PKR)				
		Provincial (KPPRA) Sale Tax on Services @ % (PKR)				
		Any other applicable tax				
		Total Amount (Rs.):-				

Bill of Quantities

Name of Work: **Solarization of Existing Irrigation Tube Wells in Tribal Districts [MA] (ADP No. 2154/192017-190092/2023-24)**

Sub Work: Solarization of Existing Irrigation Tube Well at Mukha Kally Draghay Dhand Narai Karawal MDK Bara Tehsil District Khyber

Estimated Cost: **3.798 Million** **Bid Security:** **75960/-**

1	Solarization of Existing Irrigation Tube Well at Mukha Kally Draghay Dhand Narai Karawal MDK Bara Tehsil District Khyber	Discharge (I-GPH)	5600	Head:	410 feet	P/S =	390 feet

S.#	MRS 2022	Description.	Unit	Quantity	Rate	Amount (Rs.)
1	26-01-d-01	Supply & Erection of Solar PV module (Solar Panel) Mono-crystalline A-Grade (Per Watt) (as per approved specification)	Watt	16980.00	104.17	1768807
2	26-01-b-02	Supply & Erection of PVC flexible pipe "1.5 i/d.	M	30.00	363.34	10900
3	26-01-g-04	Supply & Erection 1X10 sq. mm flexible copper cable	M	120.00	460.93	55312
4	26-01-h-01	Supply & Erection MC4 connector (TUV approved)	Pair	10.00	342.92	3429
5	26-01-i-04	Supply and Erection of 3 Phase 220/380V Solar Pump inverter (MPPT) 7.5 KW and above	Watt	16980.00	20.39	346222
6	26-01-m-01	Supply & Erection of hot dipped (80 microns Average) galvanized steel of minimum thickness of 12 SWG/2.64 mm channel/pipe or 8 SWG/4.06 mm angle.	Watt	16980.00	22.19	376786
7	26-01-n-02	Supply & Erection of 1x1 ft 4 mm Copper Earthing Plate	Watt	16980.00	3.92	66562
8	26-01-n-03	Supply & Erection of stainless steel nuts & bolts	M^2	16980.00	3.92	66562
9	24-50-a-03	Supply & Installation, testing and commissioning of Submersible Pump (ISO – 9906 Certified) Coupled with Submersible rewind-able Electric Motor with AC winding and all accessories like Motor Control Unit (equipped with UV/OV, dry run protection device, surge protection, phase reverse indicator) Complete in all accessories including NRV, Pressure Gauge, Sluice valve except column pipe and power cable with appropriate Head and Discharge : 25 HP	Set	1.00	416067.41	416067
10	24-50-c-02	Supply and installation of Submersible Flat Cable made of 99.9% copper, coated with double PVC as per BSS Standards, 3x16 mm2	M	120.00	944.63	113356
11	24-56-b	Supply & Fixing MS Column Pipe with flanges for Submersible Pump 3" (75 mm) Nominal Pipe Size 3/16" thick, 10' length	M	120.00	2858.78	343054

12	24-30-c-06	Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE) Din-8074/Din-8075/ISO-4427 in trenches, complete in all respects except excavation. (63 mm dia) PN-12.5	M	120.00	397.12	47654
13	24-30-c-03	Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE) Din-8074/Din-8075/ISO-4427 in trenches, complete in all respects except excavation. (32 mm dia) PN-12.5	M	120.00	132.88	15946
14	03-25-c	Excavation in foundation of building, bridges etc: complete : complete in hard soil or soft murum	M^3	11.15	330.13	3681
15	06-05-f	Plain Cement Concrete (PCC) including placing, compacting, finishing and curing (Ratio 1:2:4).	M^3	9.557	9299.67	88877
		Total				**3723214**
		Add 2% A.C.F from item				**74464**
		G.Total:-				**3797678**
		In Million:				**3.798**
		Note : Following Information to be provided by the bidder otherwise bid shall be declared as non-responsive (must be duly supported by evidence of exemption)				
		Amount chargeable to % from Federal GST (PKR)				
		Federal GST (PKR)				
		Amount chargeable to % Federal (FBR) Sale Tax on goods (PKR)				
		Federal (FBR) Sale Tax on goods @ % (PKR)				
		Amount chargeable to % Provincial (KPPRA) Sale Tax on Services (PKR)				
		Provincial (KPPRA) Sale Tax on Services @ % (PKR)				
		Any other applicable tax				
		Total Amount (Rs.):-				