

UNIVERSITY OF LORALAI

SUPPLY, INSTALLATION AND COMMISSIONING OF 1000 Kva BI-DIRECTIONAL DISTRIBUTION TRANSFORMER & 11Kv BI-DIRECTIONAL IMPORT/EXPORT HT PANEL TO ENERGIZE THE SOLAR SYSTEM AT UNIVERSITY OF LORALAI

Bid Ref: 002/UoLi/2025

TENDER DOCUMENTS

August 2025



Submission Deadline
2:30 pm on September 02, 2025

Bids Submission:
Office of the Director Planning & Projects

Opening
3:00 pm, on September 02, 2025

Vanure of Bids Opening:
Syndicate Hall, Admin Block

Procedure:
Single Stage Two Envelope

UNIVERSITY OF LORALAI

Email: director.pandp@uoli.edu.pk Cell: 0333-2473230

University of Loralai Zarh Karaiz, Quetta Loralai road Loralai

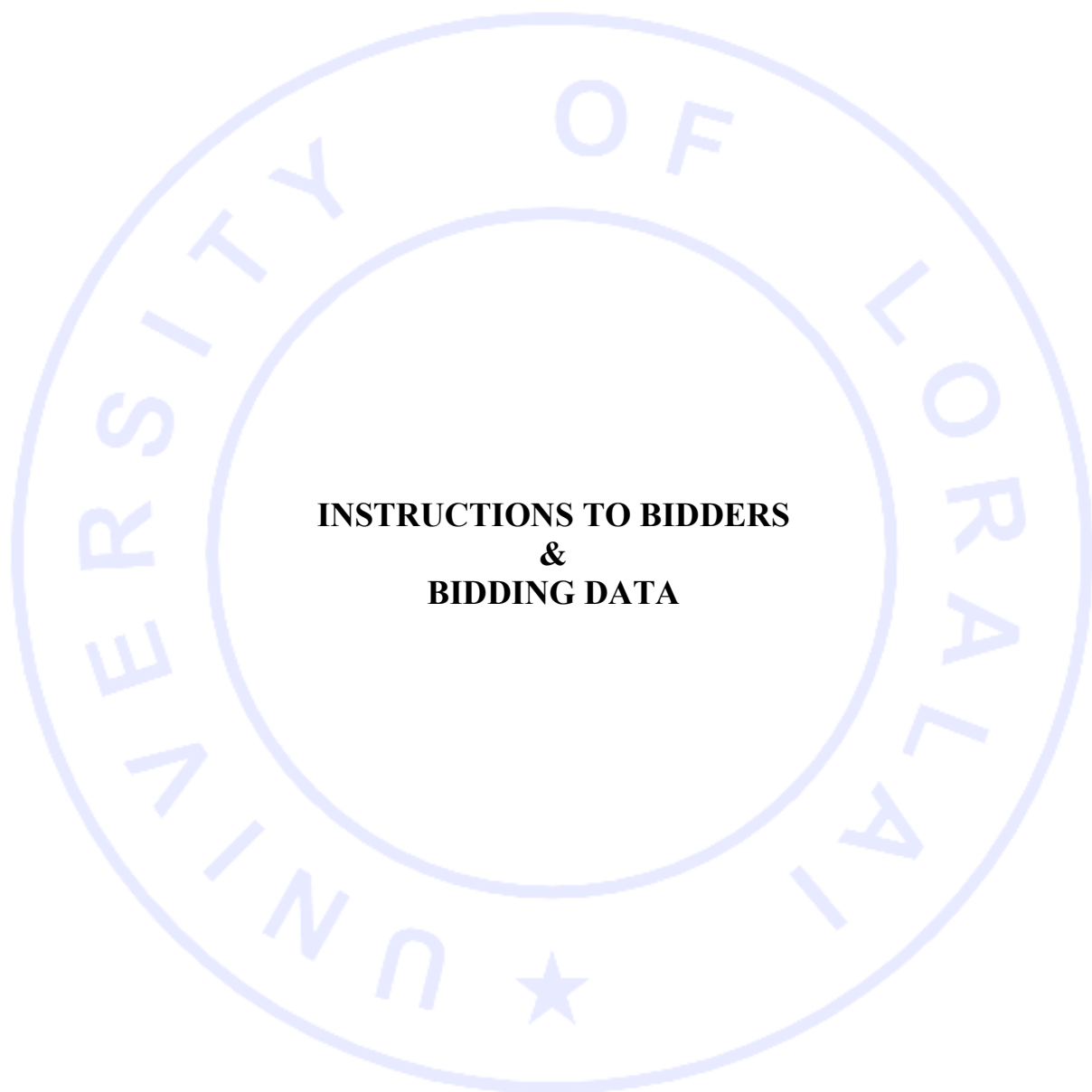


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INSTRUCTIONS TO BIDDERS

(Note: These Instructions to Bidders (IB) along with Bidding Data will not be part of Contract and will cease to have effect once the Contract is signed).

A. GENERAL

IB.1 Scope of Bid & Source of Funds

1.1 Scope of Bid

The Director Planning & Projects University of Loralai hereinafter called “the Employer” wishes to receive Bids for Supply, Installation And Commissioning Of 1000 Kva Bi-Directional Distribution Transformer & 11kv Bi-Directional Import/Export HT Panel To Energize the Solar System at University of Loralai as summarized in the Bidding Data (hereinafter referred to as “the Works”).

Bidders must quote for the complete scope of work. Any Bid covering the partial scope of work will be rejected as non-responsive.

1.2 Source of Funds

Higher Education Commission, (HEC) Islamabad, Pakistan

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 C-5 or above category must having specialized code **EE05 (High Voltage Installation)** High Voltage Installation
- b) Must be registered with tax authorities, NTN, GST, BSTS.
- c) WAPDA approved manufacturer/Supplier/Contractor

2.2 JVs are not allowed.

IB.3 Cost of Bidding

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

B. BIDDING DOCUMENTS

IB.4 Contents of Bidding Documents

- 4.1 In addition to Invitation for Bids, the Bidding Documents are those stated below and should be read in conjunction with any Addendum issued in accordance with Sub-Clause IB.6.1.
1. Instructions to Bidders & Bidding Data
 2. Form of Bid & Schedules to Bid
Schedules to Bid comprise the following:
 - (i) Schedule A: Qualification Criteria
 - (ii) Schedule B: Schedule of Prices
 - (iii) Schedule C: Specific Works Data
 - (iv) Schedule D: Works to be Performed by Subcontractors
 - (v) Schedule E: Proposed Programme of Works
 - (vi) Schedule F: Method of Performing Works
 - (vii) Schedule G: Integrity Pact
 3. Conditions of Contract & Contract Data
 4. Standard Forms:
 - (i) Form of Bid Security
 - (ii) Form of Performance Security
 - (iii) Form of Contract Agreement
 5. Specifications
 6. Drawings, if any

IB.5 Clarification of Bidding Documents

- 5.1 A prospective bidder requiring any clarification(s) in respect of the Bidding Documents may notify the Engineer/Employer at the Employer's/Engineer's address indicated in the Bidding Data.
- 5.2 The Engineer/Employer will respond to any request for clarification which it receives earlier than seven (7) days prior to the deadline for the submission of Bids. Copies of the Engineer/Employer's response will be forwarded to all prospective bidders, at least three (3) days prior to the deadline for submission of Bids, who have received the Bidding Documents including a description of the inquiry but without identifying its source.
- 5.3 If indicated **in the BDS**, the bidder's designated representative is invited at the bidder's cost to attend a pre-bid meeting at the place, date and time mentioned in the **BDS**. During this pre-bid meeting, prospective bidders may request clarification of the schedule of

requirement, the evaluation criteria or any other aspects of the bidding documents.

Minutes of the pre-bid meeting, if applicable, including the text of the questions asked by bidders, including those during the meeting (without identifying the source) and the responses given, together with any responses prepared after the meeting will be transmitted promptly to all prospective bidders who have obtained the bidding documents. Any modification to the bidding documents that may become necessary as a result of the pre-bid meeting shall be made by the Procuring agency/Employer exclusively through the use of an Addendum pursuant to **IB 6**. Non-attendance at the pre-bid meeting will not be a cause for disqualification of a bidder.

The bidder is advised to visit and examine the Site of Works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the bid and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the bidder's own expense.

IB.6 Amendment of Bidding Documents

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

C. PREPARATION OF BIDS

IB.7 Language of Bid

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

IB.8 Documents Comprising the Bid

8.1 The bid prepared by the bidder shall comprise the following components:

- (a) Covering Letter
- (b) Form of Bid duly filled, signed and sealed, in accordance with Sub-Clause IB.14.3.
- (c) Schedules (A to G) to Bid duly filled and initialed, in accordance with the instructions contained therein & in accordance with Sub-Clause IB14.3.
- (d) Bid Security furnished in accordance with Clause IB.13.
- (e) Power of Attorney in accordance with Sub-Clause IB 14.5.
- (f) Documentary evidence in accordance with Clause IB.11
- (g) Documentary evidence in accordance with Clause IB.12.

IB.9 Sufficiency of Bid

9.1 Each bidder shall satisfy himself before Bidding as to the correctness and sufficiency of his Bid and of the rates and prices entered in the Schedule of Prices, which rates and prices shall except in so far as it is otherwise expressly provided in the Contract, cover all his obligations under the Contract and all matters and things necessary for the proper completion of the Works.

- 9.2 The bidder is advised to obtain for himself at his own cost and responsibility all information that may be necessary for preparing the bid and entering into a Contract for the execution of the Works.

IB.10 Bid Prices, Currency of Bid and Payment

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

IB.11 Documents Establishing Bidder's Eligibility and Qualifications

- 11.1 Pursuant to Clause IB.8, the bidder shall furnish, as part of its bid, documents establishing the bidder's eligibility to bid and its qualifications to perform the Contract if its bid is accepted.
- 11.2 Bidder/Manufacturer must possess and provide evidence of its capability and the experience as stipulated in Bidding Data and the Qualification Criteria stipulated in the Bidding Documents.

IB.12 Documents Establishing Works' Conformity to Bidding Documents

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

IB.13 Bid Security

- 13.1 Each bidder shall furnish, as part of his bid, at the option of the bidder, a Bid Security in the amount stipulated in Bidding Data in Pak. Rupees in the form of Deposit at Call or a Bank Guarantee issued by a Scheduled Bank in Pakistan only, in favor of the Employer valid for a period up to twenty-eight (28) days beyond the bid validity date.
- 13.2 Any bid not accompanied by an acceptable Bid Security shall be rejected by the Employer

as non-responsive.

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

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

- 14.1 Bids shall remain valid for the period stipulated in the Bidding Data after the date of bid opening.
- 14.2 All Schedules to Bid are to be properly completed and signed.
- 14.3 No alteration is to be made in the Form of Bid except in filling up the blanks as directed. If any alteration is made or if these instructions were not fully complied with, the bid may be rejected.
- 14.4 Each bidder shall prepare Original and a number of copies specified in the Bidding Data of the documents comprising the bid as described in Clause IB.8 and clearly mark them "ORIGINAL" and "COPY" of Technical as well as Financial proposals as appropriate. In the event of a discrepancy between them, the original shall prevail.
- 14.5 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 authorizing the signatory of the bidder to act for and on behalf of the bidder. All pages of the bid shall be initialed and the official seal shall be affixed by the person or persons signing the bid.

- 14.6 The Bid shall be delivered in person or sent by registered mail at the address to Employer as given in Bidding Data.

D. SUBMISSION OF BID

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

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

E. BID OPENING AND EVALUATION

IB.16 Bid Opening, Clarification and Evaluation

- 16.1 The Employer will open the bids, in the presence of bidders' representatives who choose to attend, at the time, date and location stipulated in the Bidding Data.
- 16.2 The bidder's name, Bid Prices, any discount, the presence or absence of Bid Security, and such other details as the Employer at its discretion may consider appropriate, will be announced by the Employer at the bid opening. The Employer will record the minutes of the bid opening. Representatives of the bidders who choose to attend shall sign the attendance sheet.

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 the bid.

- 16.3 To assist in the examination, evaluation, and comparison of Bids the Engineer/Employer 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.

- 16.4 (a) Prior to the detailed evaluation, pursuant to Sub-Clauses IB.16.7 to 16.9, the Engineer/Employer will determine the substantial responsiveness of each bid to the Bidding Documents. For the purpose of these Clauses, a substantially responsive bid is one which conforms to all the terms and conditions of the Bidding Documents without material deviations. It will include determining the requirements listed in Bidding Data.
- (b) 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 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 will be forfeited.
- 16.5 A Bid determined as substantially non-responsive will be rejected and will not subsequently be made responsive by the bidder by correction of the non-conformity.
- 16.6 Any minor informality or non-conformity or irregularity in a Bid which does not constitute a material deviation may be waived by Employer, provided such waiver does not prejudice or affect the relative ranking of any other bidders.
- 16.7 The Engineer/Employer will evaluate and compare only the bids previously determined to be substantially responsive pursuant to Sub-Clauses IB.16.4 to 16.6 as per requirements are given hereunder. Bids will be evaluated for the complete scope of works. The prices will be compared on the basis of the Evaluated Bid Price pursuant to Sub-Clause 16.8 hereinbelow.
- (a) Technical Evaluation
- It will be examined in detail whether the Works offered by the bidder complies with the Technical Provisions of the Bidding Documents. For this purpose, the bidder's data submitted with the bid in Schedule A, C, E, F & G to Bid will be compared with technical features/criteria (laid down in Schedule A to Bid) of the Works detailed in the Technical Provisions. Other technical information submitted with the bid regarding the Scope of Work will also be reviewed.

(b) 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 material deviation/stipulation shall be taken by the bidders.

16.8 Evaluated Bid Price

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

- (i) making any correction for arithmetic errors pursuant to Sub-Clause 16.4 hereof.
- (ii) making an appropriate price adjustment for any other acceptable variation or deviation.
- (iii) making an appropriate price adjustment for Deviations in terms of Payments (if any and acceptable to the Employer).
- (iv) discount, if any, offered by the bidders as also read out and recorded at the time of bid opening.

16.9 Evaluation Methods

Pursuant to Sub-Clause 16.8, Para (ii), and (iii) following evaluation methods for price adjustments will be followed:

(i) 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 the corresponding item. In the case of nonavailability of price from other bidders, the price will be estimated by the Engineer/Employer.

(ii) 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/Employer will be added to the Corrected Total Bid Price for comparison purpose only. Adjustment for commercial compliance will be added to the Corrected Total Bid Prices.

(iii) Price Adjustment for Deviation in Terms of Payments

Refer to Bidding Data

IB.17 Process to be Confidential

- 17.1 Subject to Sub-Clause IB.16.3 heretofore, no bidder shall contact Engineer/Employer on any matter relating to its Bid from the time of the Bid opening to the time the bid evaluation result is announced by the Employer. The evaluation result shall be announced at least ten (10) days prior to the award of Contract. The announcement to all bidders will include table(s) comprising readout prices, discounted prices, price adjustments made, final evaluated prices and recommendations against all the bids evaluated.
- 17.2 Any effort by a bidder to influence Engineer/Employer in the Bid evaluation, Bid comparison or Contract Award decisions may result in the rejection of his Bid. Whereas, any bidder feeling aggrieved may lodge a written complaint not later than fifteen (15) days after the announcement of the bid evaluation result, however, mere fact of lodging a complaint shall not warrant suspension of the procurement process.

F. AWARD OF CONTRACT

IB.18. Post Qualification

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

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

- 18.2 The determination will take into account the bidder's financial and technical capabilities. It will be based upon an examination of the documentary evidence of the bidders' qualifications submitted under Clause IB.11, as well as such other information required in the Bidding Documents.

IB.19 Award Criteria & Employer's Right

- 19.1 Subject to Sub-Clause IB.19.2, the Employer will award the Contract to the bidder whose bid has been determined to be substantially responsive to the Bidding Documents and who has offered the lowest evaluated Bid Price, provided that such bidder has been determined to be qualified to satisfactory perform the Contract in accordance with the provisions of Clause IB.18.
- 19.2 Notwithstanding Sub-Clause IB.19.1, the Employer reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids, at any time prior to award of

Contract, without thereby incurring any liability to the affected bidders or any obligation to inform the affected bidders of the grounds for the Employer's action except that the grounds for its rejection of all bids shall upon request be communicated, to any bidder who submitted a bid, without justification of the grounds. Notice of the rejection of all the bids shall be given promptly to all the bidders.

IB.20 Notification of Award & Signing of Contract Agreement

- 20.1 Prior to the expiration of the period of bid validity prescribed by the Employer, the Employer will notify the successful bidder in writing ("Letter of Acceptance") that his bid has been accepted.
- 20.2 Within seven (7) days from the date of furnishing of acceptable Performance Security under the Conditions of Contract, the Employer will send the successful bidder the Form of Contract Agreement provided in the Bidding Documents, incorporating all agreements between the parties.
- 20.3 The formal Agreement between the Employer and the successful bidder shall be executed within seven (7) days of the receipt of Form of Contract Agreement by the successful bidder from the Employer.

IB.21 Performance Security

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

IB.22 Integrity Pact

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



BIDDING DATA

Instructions to Bidders:

Clause Reference IB.5

Clarification of Bidding Documents

Sub Clause 5.1

1.1 Name of the Employer:

Engr. Attaullah Tareen, Director Planning & Projects, University of Loralai

Brief Description of Works

5.1 (a) Employer's address:

Office of the Director Planning & Projects, University of Loralai at Loralai.

Cell: 0333-2473230, 0310-8167790

10.3 Bid shall be quoted entirely in Pak. Rupees. The payment shall be made in Pak. Rupees.

11.2 The bidder/manufacturer has the financial, technical and production capability necessary to perform the Contract as follows:

Supply, Installation And Commissioning Of 1000 Kva Bi-Directional Distribution Transformer & 11kv Bi-Directional Import/Export HT Panel To Energize the Solar System at University of Loralai

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

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

13.1 Amount of Bid Security:

2% of the bid price

14.1 Period of Bid Validity:

Sixty days (60)

14.4 Number of Copies of the Bid to be Submitted

One Original + One Copy.

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

Office of the Director Planning & Projects, University of Loralai at Loralai

15.1 Deadline for Submission of Bids

2:30PM on September 02, 2025

16.1 Venue, Time, and Date of Bid Opening

(a) Technical Bid Opening:

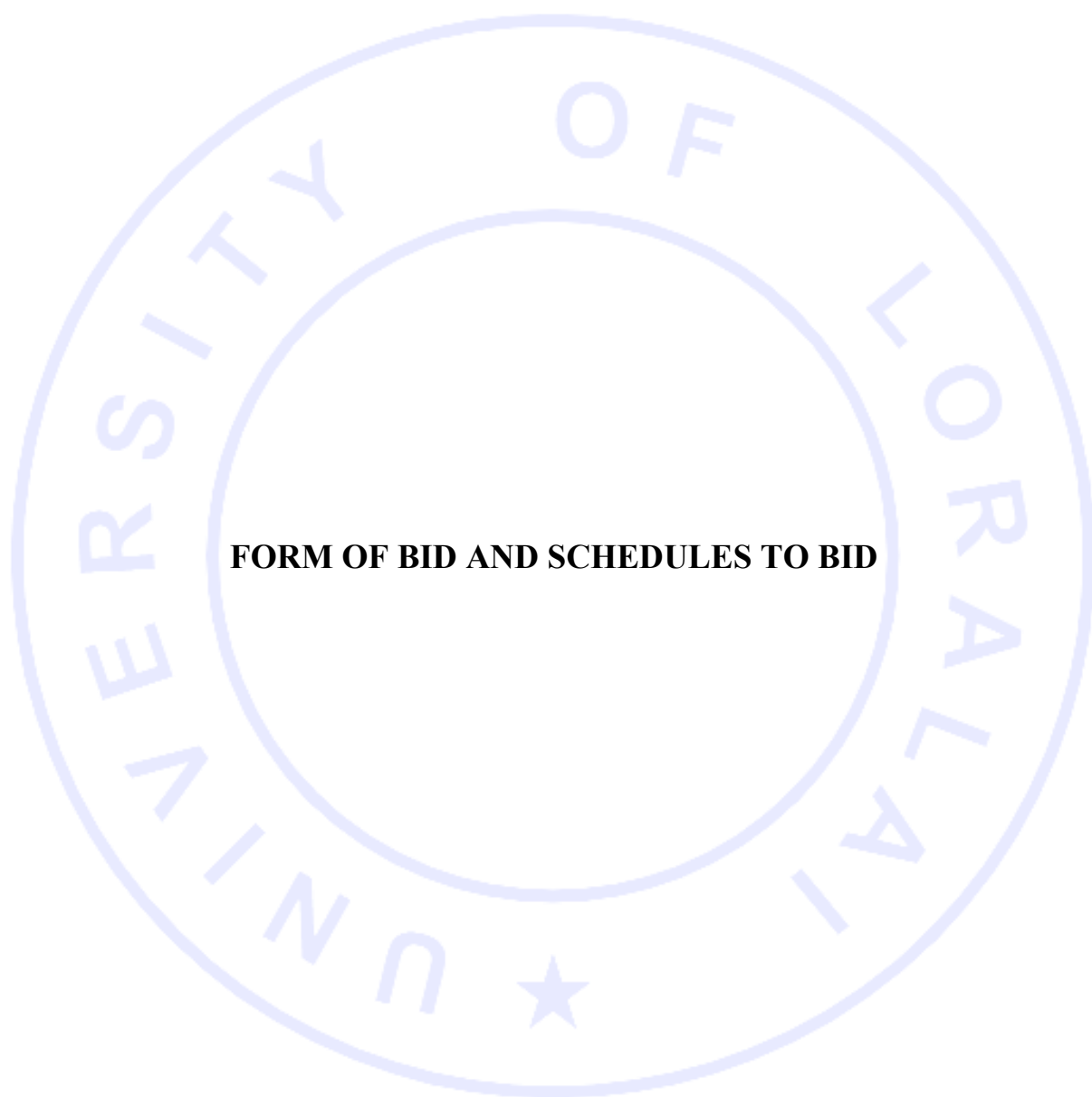
Venue: Syndicate Hall, Admin Block, University of Loralai

Time: 3:00 PM

Date: September 02, 2025

(b) Financial Bid

Only technically qualified bidders shall participate in Financial bids opening at the date, venue and time specified by the Employer to the address of technically qualified bidders in a written notification prior to Financial bids opening



FORM OF BID AND SCHEDULES TO BID

FORM OF BID

(LETTER OF OFFER)

Bid Reference No. 002/UoLi/2025

To:

The Director Planning & Projects,
University of Loralai at Loralai
Cell: 0333-2473230

Gentlemen,

1. Having examined the Bidding Documents including Instructions to Bidders, Bidding Data, Conditions of Contract, Contract Data, Specifications, Drawings, if any, 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 Pakistan hereby offer to execute and complete such Works and remedy any defects therein in conformity with the said Documents including Addenda thereto for the Total Bid Price of Rs _____ (Rupees _____) 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 of 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 Works comprised in the Contract within the time(s) stated in Contract Data.
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 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.

Dated this _____ day of _____, 2025

Signature _____

in the capacity of _____ duly authorized to sign bid for and on behalf of

(Name of Bidder in Block Capitals)

(Seal)

Address

Witness:

(Signature) _____

Name:

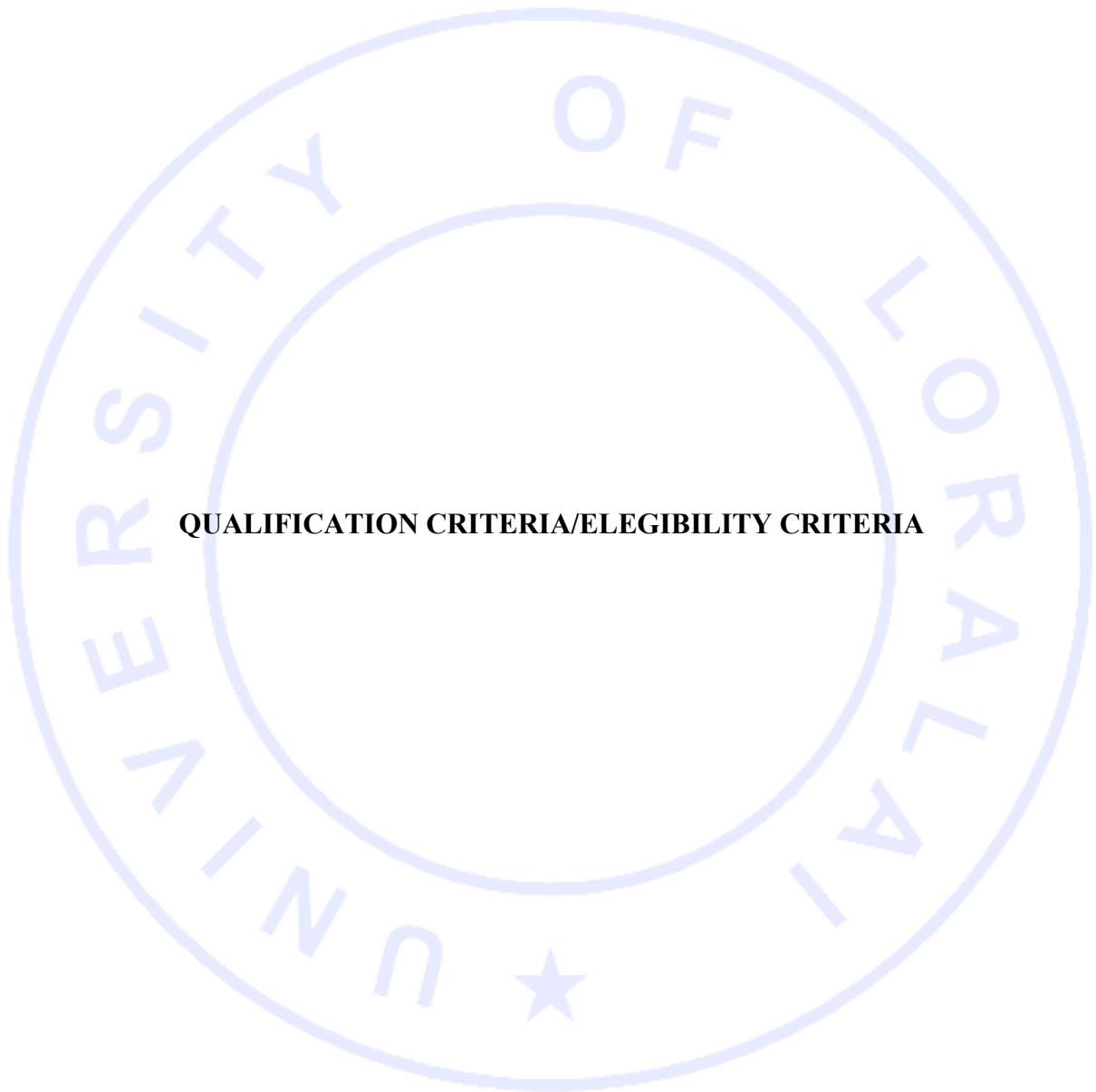
Address:

SCHEDULES TO BID INCLUDE THE FOLLOWING:

- Schedule A: Qualification Criteria
- Schedule B: Schedule of Prices
- Schedule C: Specific Works Data
- Schedule D: Works to be Performed by Subcontractors
- Schedule E: Proposed Programme of Works
- Schedule F: Method of Performing Works
- Schedule G: Integrity Pact



SCHEDULE – A TO BID



QUALIFICATION CRITERIA/ELEGIBILITY CRITERIA

Qualification Criteria

Note: No separate “Qualification Criteria” shall apply for this procurement. Instead, the requirements defined under *Eligibility Criteria* shall be considered in accordance with Clause IB.2 of the *Instructions to Bidders*..



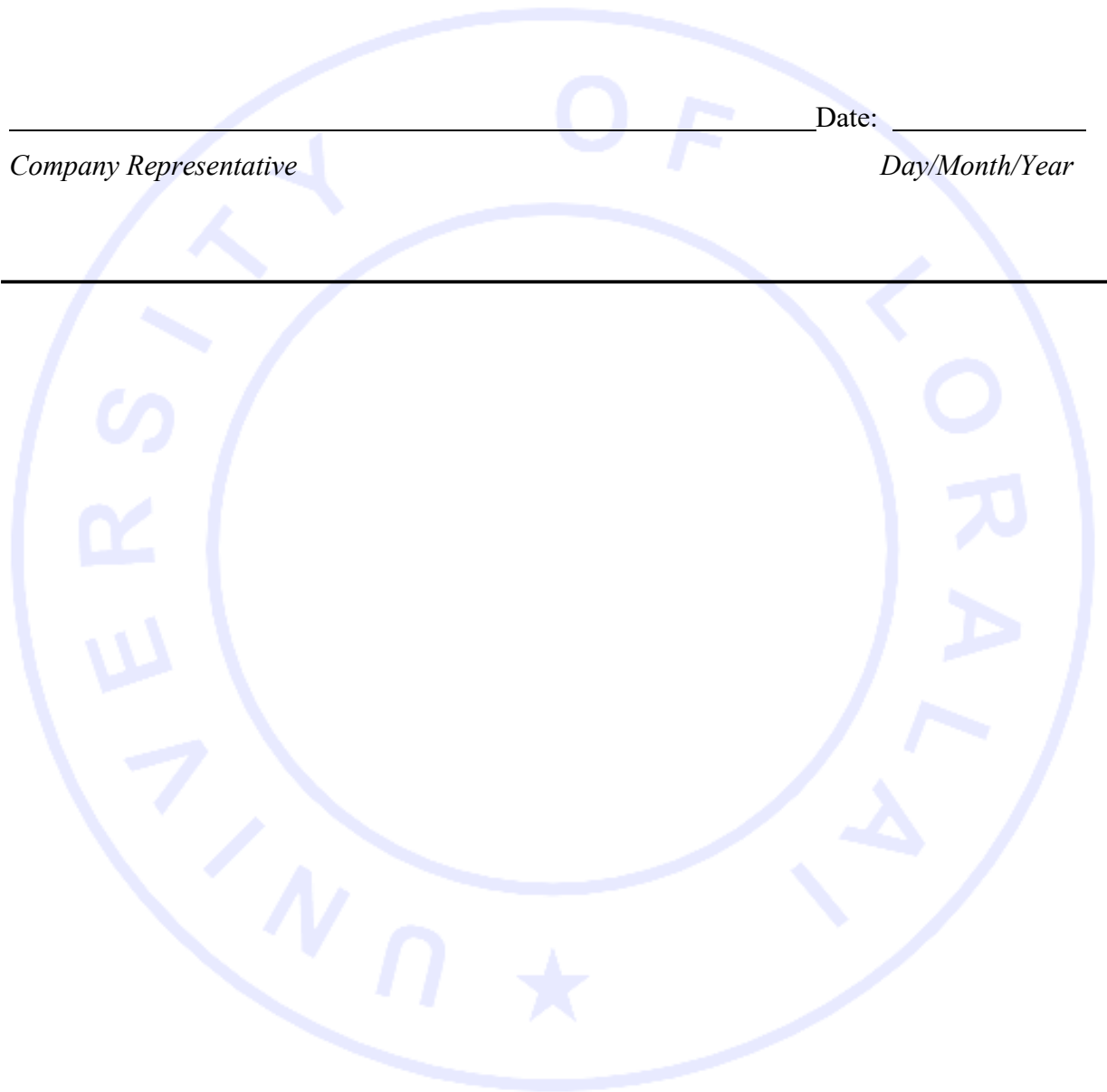
5. Certification:

I, the undersigned, certify that to the best of my knowledge and belief that information provided in the attached documents is correct. I understand that any willful misstatement described herein may lead to my disqualification or dismissal, if engaged.

Company Representative

Date:

Day/Month/Year



PREAMBLE

1. General

- 1.1 The tenders are invited on an item rate basis
- 1.2 The short descriptions of items are given in a bill of quantities. Bill of Quantities or Schedule of Prices shall be read in conjunction with the Conditions of Contract, Contract Data together with the Specifications and Drawings, if any.

2. Description

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

3. Units & Abbreviations

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

Unit	Abbreviation
Running feet	Rft
Running meter	M
Killometer	Km
Per Number	Each
Square feet	Sft
Square meter	M ²
Cubic feet	Cft
Cubic meter	M ³
Ton (1000 Kg)	M. Ton
Lump sum	L.S
Number	No
Job	Complt Job

4. Rates and Prices

- 4.1 Except as otherwise expressly provided under the Conditions of Contract, the rates and amounts entered in the Bill of Quantities or Schedule of Prices shall be the rates at which the Contractor shall be paid and shall be the full inclusive value of the works set forth or implied in the Contract; except for the amounts reimbursable, if any to the Contractor under the Contract.
- 4.2 Unless otherwise stipulated in the Contract Data, the rates and prices entered by the bidder shall not be subject to adjustment during the

performance of the Contract.

- 4.3 All duties, taxes and other levies payable by the Contractor shall be included in the rates and prices.
- 4.4 The whole cost of complying with the provisions of the Contract shall be included in the items provided in the Schedule of Prices, and where no items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related items of the Works and no separate payment will be made for those items.

The rates, prices, and amounts shall be entered against each item in the Schedule of Prices or Bill of Quantities. Any item against which no rate or price is entered by the bidder will not be paid for by the Employer when executed and shall be deemed covered by the rates and prices for other items in the Schedule of Prices.

- 4.5 (a) The bidder shall be deemed to have obtained all information as to and all requirements related thereto which may affect the bid price.
- (b) The Contractor shall be responsible to make complete arrangements for the transportation, Installation, Fixing and construction materials to the Site complete in all respect.
- 4.6 The Contractor shall provide for all parts of the Works to be completed in every respect. Notwithstanding that any details, accessories, etc. required for the complete installation and satisfactory operation of the Works, are not specifically mentioned in the Specifications, such details shall be considered as included in the Contract Price.

5. Bid Prices

5.1 Break-up of Bid Prices

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

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

5.2 Total Bid Price

The total of bid prices in the Schedule of Price/Bill of Quantities shall be entered in the Summary of Bid Prices.

6. Provisional Sums

6.1 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. The Contractor will only receive payment in respect of Provisional Sums if he has been instructed by the Employer to utilize such sums.



SCHEDULE OF PRICES/BILL OF QUANTITIES
SUMMARY OF BID PRICES

S.N	Description	Total Amount (Rs)
	SUPPLY, INSTALLATION AND COMMISSIONING OF 1000 KVA BI-DIRECTIONAL DISTRIBUTION TRANSFORMER & 11KV BI-DIRECTIONAL IMPORT/EXPORT HT PANEL TO ENERGIZE THE SOLAR SYSTEM AT UNIVERSITY OF LORALAI	
Total Bid Price: (In words)		

SCHEDULE – B TO BID

BILL OF QUANTITIES

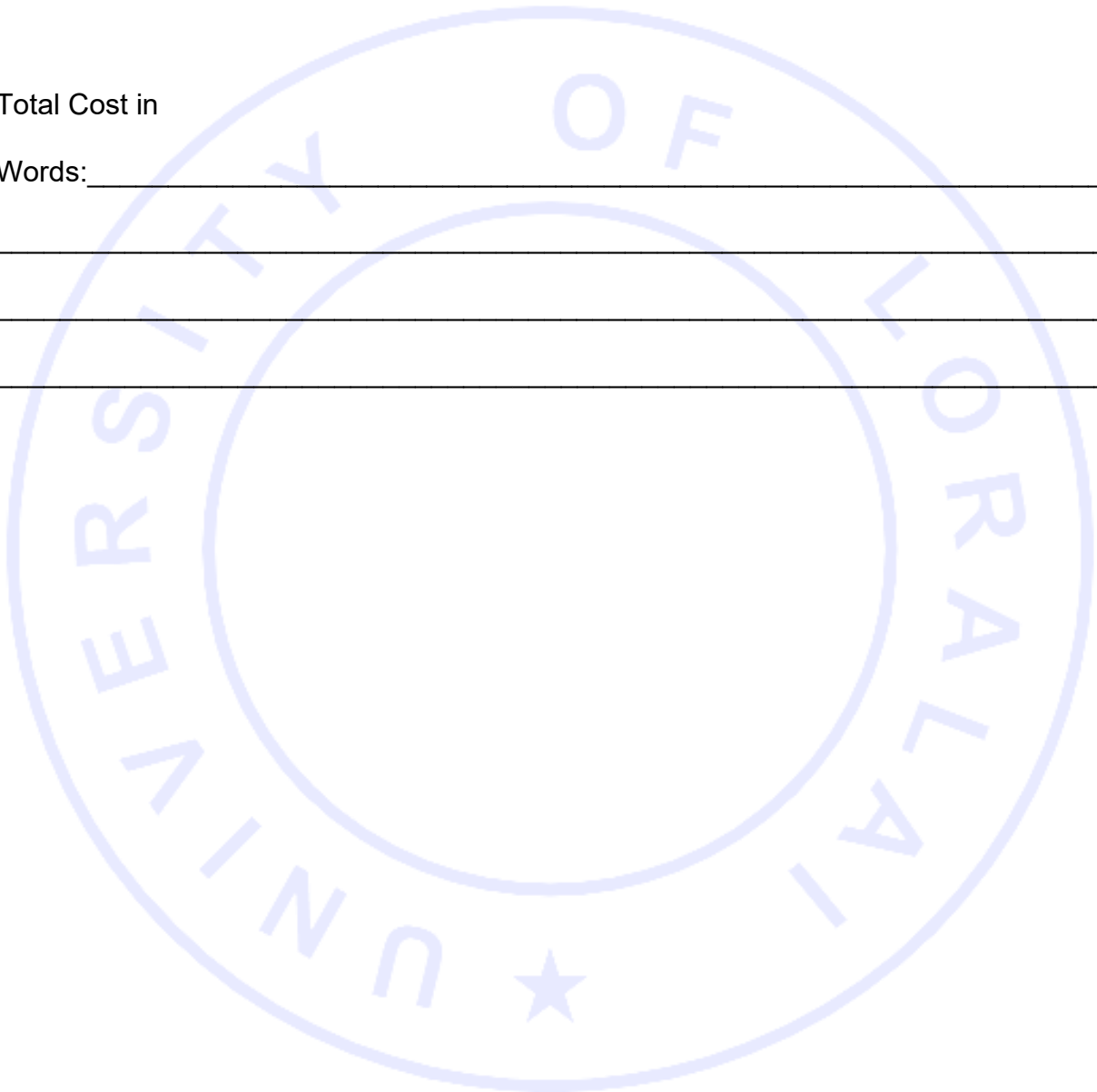
S No	Item Name	Details	Qty	Unit	Unit Rate (Rs)	Total Cost (Rs)
1	1000 kVA bi-directional (Step-Up-Step Down) Distribution Transformer	1000 kVA Step-Up-Step Down, bi-directional Distribution Transformer – 0.4 kV to 11 kV, Electrostatic shielding, special design for harmonic loads, Oil Natural Air Natural cooling, Dyn-11 vector group, complete with mineral oil (IEC 60296), corrugated fin-wall tank, HV/LV terminals, Buchholz relay, oil/temperature indicators, pressure relief device, marshalling box, RCC foundation making, cables up to required length for connection & energizing and all accessories as specified. Complete in all respect and as per standard/brand approved by the WAPDA/NEPRA	01	No		
2	11 kV Medium Voltage Import/Export HT Panel	11 kV Medium Voltage Import/Export Switchgear Panel – VCB (IEC 62271-100) 25kA, motorized mechanism 110VAC, shunt trip & closing coil 110VDC, type-tested, including all protection relays, CTs/PTs (triple core, burden & accuracy as per specs), surge arrestors, earth switch, metering (digital ammeter, voltmeter, PF meter, bi-directional energy meter), heater with humidity sensor, copper busbars (99.99% purity), IP-4X enclosure, RAL 7032/7035 powder coating. complete in all respects, including: Protection Relays – As per	01	No		

		<p>specifications</p> <p>Potential Transformers (PTs)</p> <p>– Triple core, burden 100 VA, accuracy class 0.5, type tested</p> <p>Current Transformers (CTs)</p> <p>– Metering core (10 VA, 0.5M10) & protection core (15 VA, 5P20), type tested</p> <p>Surge Arrestors – 12 kV, 10 kA, heavy-duty type for medium voltage</p> <p>Earthing Switch – As per specifications</p> <p>Metering Instruments –</p> <p>Digital ammeter, voltmeter, power factor meter, bi-directional energy meter</p> <p>Environmental Controls –</p> <p>Heater with humidity sensor</p> <p>Busbars – Copper, 99.99% purity</p> <p>Enclosure – IP-4X, RAL 7032/7035 powder-coated finish</p> <p>Complete in all respect and as per approved/brand approved by the WAPDA/NEPRA</p>				
3	Earthing System	<p>Earthing System –</p> <p>Copper earthing strips, earth pits, and interconnections as per standards for transformer & panel earthing.</p> <p>Complete in all respect as per specification and directions of the Engineer Incharge</p>	01	Job		
4	Installation, Testing & Commissioning	<p>Installation, Testing & Commissioning –</p> <p>Complete works for transformer, panel, RCC foundation works, and accessories, including all pre-commissioning tests, oil filling, insulation resistance test, ratio test, functional tests, and final handover to the University for energizing</p>	01	Job		

		the solar system.				
	Total Cost (PKR)					

Total Cost in

Words: _____



SCHEDULE – C TO BID

SPECIFIC WORKS DATA

SCOPE OF WORK / TERMS OF REFERENCE

- 1 Price to be quoted on **Pak Rupee on free home delivery (F.O.R.)** basis for all items including all expenses, taxes, documentation, etc.
- 2 The advance payment will not be allowed.
- 3 Payment shall be made by crossed cheque upon submission of the bill in duplicate and on verification of the quality & satisfactory report of the, concerned / Purchase & Procurement Committee expert representative of the purchase & Procurement Committee and on completion of all formalities.
- 4 The University authorities reserve the right to fully or partially, change / forgo the requirement of any item/work and/or amend the specifications & quantity at any stage before awarding of the contract.
- 5 In case of any holiday or any disturbance, the tender will be opened on the next working day as per schedule.
- 6 The quantity shown in the tender are approximate and no claim shall be entertained for the quantity of work being executed **15%** more or less than those entered in the tender or estimate.
- 7 No compensation shall be allowed for any delay in the execution of the work.
- 8 The interested parties may visit the site of the University at 10:00 am to 5:00 pm for information, measurements, dimensions, and capacities, etc.
- 9 Design and working plan shall be submitted by the bidders in bidding documents.
- 10 Complete Proposed Diagram of of the system must be attached with the bid. The tender awarded party shall also observe the instruction mentioned in the tender documents and supply the material genuine, originally made of the country, under standard/sub-standard material shall not be accepted at any cost.
- 11 Material quality tests shall be taken from the independent party, and expenditure shall be borne by the supplier/bidder/contractor

- 12 The work shall be completed in all respect in accordance with drawings, specification, and instruction of the Director Planning and Projects.
- 13 The contractor has to submit the samples of the material to the Engineer Incharge for approval after the work/contract award but before the execution of the works



WORKS 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 Works to be Sub-Contracted	Name and address of Sub-Contractors	Statement of similar works previously executed (attach_ evidence)
--	--	--

(NOT ALLOWED)

Note:

1. No change of Sub-Contractors 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 works, year completed and name & address of the clients.

PROPOSED PROGRAMME OF WORKS

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



METHOD OF PERFORMING WORKS

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

- 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 erectional plant, tools and vehicles proposed to be used in delivering/carrying out the Works at Site
- The procedure for installation of equipment and transportation of equipment and materials to the site.
- Organization chart indicating head office & field office personnel involved in management, supervision, and engineering of the Works to be done under the Contract.

(INTEGRITY PACT)

**DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC.
PAYABLE BY THE SUPPLIERS OF GOODS, SERVICES & WORKS IN
CONTRACTS**

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 Jointdefeat 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 another 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:

Signature:

[Seal]

Name of Seller/Supplier:

Signature:

[Seal]



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CONDITIONS OF CONTRACT

1. GENERAL PROVISIONS

1.1 Definitions

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

The Contract

- 1.1.1 “Contract” means the Contract Agreement and the other documents listed in the Contract Data.
- 1.1.2 “Specifications” means the document as listed in the Contract Data, including Employer’s requirements in respect of design to be carried out by the Contractor (if any), and any Variation to such document.
- 1.1.3 “Drawings” means the Employer’s drawings of the Works as listed in the Contract Data and any Variation to such drawings.

Persons

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

Dates, Times and Periods

- 1.1.7 “Commencement Date” means the date fourteen (14) days after the date the Contract comes into effect or any other date named in the Contract Data.
- 1.1.8 “Day” means a calendar day
- 1.1.9 “Time for Completion” means the time for completing the Works as stated in the Contract Data (or as extended under Sub-Clause 7.3), calculated from the Commencement Date.

Money and Payments

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

Other Definitions

- 1.1.11 “Contractor’s Equipment” means all machinery, apparatus and other things required for the execution of the Works but does not include Materials or Plant intended to form part of the Works.
- 1.1.12 “Country” means the Islamic Republic of Pakistan.
- 1.1.13 “Employer’s Risks” means those matters listed in Sub-Clause 6.1.
- 1.1.14 “Force Majeure” means an event or circumstance which makes the performance of a Party’s obligations illegal or impracticable and which is beyond that Party’s reasonable control.
- 1.1.15 “Materials” means things of all kinds (other than Plant) to be supplied and incorporated in the Works by the Contractor.
- 1.1.16 “Plant” means the machinery and apparatus intended to form or forming part of the Works.
- 1.1.17 “Site” means the places provided by the Employer where the Works are to be executed, and any other places specified in the Contract as forming part of the Site.
- 1.1.18 “Variation” means a change which is instructed by the Engineer/Employer under Sub-Clause 10.1.
- 1.1.19 “Works” means any or all the works whether Supply, Installation, Construction, etc. and design (if any) to be performed by the Contractor including temporary works and any variation thereof.
- 1.1.20 “Engineer” means the person notified by the Employer to act as Engineer for the purpose of the Contract and named as such in Contract Data.

1.2 Interpretation

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

1.3 Priority of Documents

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

1.4 Law

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

1.5 Communications

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

1.6 Statutory Obligations

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

2. THE EMPLOYER

2.1 Provision of Site

The Employer shall provide the Site and right of access thereto at the times stated in the Contract Data.

2.2 Permits etc.

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

2.3 Engineer's/Employer's Instructions

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

2.4 Approvals

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

3. ENGINEER'S/EMPLOYER'S REPRESENTATIVES

3.1 Authorised Person

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

3.2 Engineer's/Employer's Representative

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

4. THE CONTRACTOR

4.1 General Obligations

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

4.2 Contractor's Representative

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

4.3 Subcontracting

The Contractor shall not subcontract the whole of the Works. The Contractor shall not subcontract any part of the Works without the consent of the Employer.

4.4 Performance Security

The Contractor shall furnish to the Employer within fourteen (14) days after receipt of Letter of Acceptance a Performance Security at the option of the bidder, in the form of Bank Draft or Bank Guarantee or an insurance company having at least AA rating from PACRA/JCR for the amount and validity specified in Contract Data.

5. DESIGN BY CONTRACTOR

5.1 Contractor's Design

The Contractor shall carry out design to the extent specified, as referred to in the Contract Data. The Contractor shall promptly submit to the Engineer/Employer all designs prepared by him. Within fourteen (14) days of receipt the Engineer/Employer shall notify any comments or, if the design submitted is not in accordance with the Contract, shall reject it stating the reasons. The Contractor shall not construct an element of the Works designed by him within fourteen (14) days after the design has been submitted to the Engineer/Employer or which has been rejected. Design that has been rejected shall be promptly amended and resubmitted. The Contractor shall resubmit all designs commented on taking these comments into account as necessary.

5.2 Responsibility for Design

The Contractor shall remain responsible for his bided design and the design under

this Clause, both of which shall be fit for the intended purposes defined in the Contract and he shall also remain responsible for any infringement of any patent or copyright in respect of the same. The Engineer/Employer shall be responsible for the Specifications and Drawings.

6. EMPLOYER'S RISKS

6.1 The Employer's Risks

The Employer's Risks are:-

- a) war, hostilities (whether war be declared or not), invasion, the act of foreign enemies, within the Country;
- b) rebellion, terrorism, revolution, insurrection, military or usurped power, or civil war, within the Country;
- c) riot, commotion or disorder by persons other than the Contractor's personnel and other employees including the personnel and employees of Sub-Contractors, affecting the Site and/or the Works;
- d) ionising radiations, or contamination by radioactivity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuel, radio-active toxic explosive, or other hazardous properties of any explosive nuclear assembly or nuclear component of such an assembly, except to the extent to which the Contractor/Sub-Contractors may be responsible for the use of any radioactive material;
- e) Pressure waves caused by aircraft or other aerial devices traveling at sonic or supersonic speeds;
- f) use or occupation by the Employer of any part of the Works, except as may be specified in the Contract;
- g) late handing over of sites, anomalies in drawings, late delivery of designs and drawings of any part of the Works by the Employer's personnel or by others for whom the Employer is responsible;
- h) a suspension under Sub-Clause 2.3 unless it is attributable to the Contractor's failure; and
- i) physical obstructions or physical conditions other than climatic conditions, encountered on the Site during the performance of the Works, for which the Contractor immediately notified the Employer and accepted by the Employer.

7. TIME FOR COMPLETION

7.1 Execution of the Works

The Contractor shall commence the Works on the Commencement Date and shall

proceed expeditiously and without delay and shall complete the Works, subject to Sub-Clause 7.3 below, within the Time for Completion.

7.2 Programme

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

7.3 Extension of Time

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

the Employer shall extend the Time for Completion as determined.

7.4 Late Completion

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

8. TAKING-OVER

8.1 Completion

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

8.2 Taking-Over Notice

Within fourteen (14) days of the receipt of the said notice of completion from the Contractor, the Employer/Engineer shall either take over the completed Works and issue a Certificate of Completion to that effect or shall notify the Contractor his reasons for not taking over the Works. While issuing the Certificate of Completion as aforesaid, the Employer/Engineer may identify any outstanding items of work which the Contractor shall undertake during the Maintenance Period.

9. REMEDYING DEFECTS

9.1 Remedying Defects

The Contractor shall for a period stated in the Contract Data from the date of issue

of the Certificate of Completion carry out, at no cost to the Employer, repair and rectification work which is necessitated by the earlier execution of poor quality of work or use of below specifications material in the execution of Works and which is so identified by the Employer/Engineer in writing within the said period. Upon expiry of the said period, and subject to the Contractor's faithfully performing his aforesaid obligations, the Employer/Engineer shall issue a Maintenance Certificate whereupon all obligations of the Contractor under this Contract shall come to an end.

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

9.2 Uncovering and Testing

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

10. VARIATIONS AND CLAIMS

10.1 Right to Vary

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

10.2 Valuation of Variations

Variations shall be valued as follows:

- a) at a lump sum price agreed between the Parties, or
- b) where appropriate, at rates in the Contract, or
- c) in the absence of appropriate rates, the rates in the Contract shall be used as the basis for valuation or failing which
- d) at appropriate new rates, as may be agreed or which the Engineer/Employer considers appropriate, or
- e) if the Engineer/Employer so instructs, at day work rates set out in the Contract Data for which the Contractor shall keep records of hours of labor and Contractor's Equipment, and of Materials, used.

10.3 Early Warning

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

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

10.4. Valuation of Claims

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

10.5 Variation and Claim Procedure

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

11. CONTRACT PRICE AND PAYMENT

11.1 (a) Terms of Payments

The amount due to the Contractor under any Interim Payment Certificate issued by the Engineer pursuant to this Clause, or to any other terms of the Contract, shall, subject to Clause 47, 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 60.8, 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. In the event of the failure of the Employer to make payment within the times stated, the Employer shall pay to the Contractor compensation at the 28 days rate of KIBOR+2% per annum in local currency and LIBOR+1% for foreign currency, upon all sums unpaid from the date by which the same should have been paid. The provisions of this Sub-Clause are without prejudice to the Contractor's entitlement under Clause 69.

(b) Valuation of the Works

The Works shall be valued as provided for in the Contract Data, subject to Clause 10.

11.2 Monthly Statements

The Contractor shall be entitled to be paid at monthly intervals:

- a) the value of the Works executed; and
- b) The percentage of the value of Materials and Plant reasonably delivered to the Site, as stated in the Contract Data, subject to any additions or deductions which may be due.

The Contractor shall submit each month to the Engineer/Employer a statement showing the amounts to which he considers himself entitled.

11.3 Interim Payments

Within a period not exceeding seven (7) days from the date of submission of a statement for interim payment by the Contractor, the Engineer shall verify the same and within a period not exceeding thirty (30) days from the said date of submission by the Contractor, the Employer shall pay to the Contractor the sum verified by the Engineer less retention money at the rate stated in the Contract Data.

11.4 Retention

Retention money shall be paid by the Employer to the Contractor within fourteen (14) days after either the expiry of the period stated in the Contract Data, or the remedying of notified defects, or the completion of outstanding work, all as referred to in Sub-Clause 9.1.

11.5 Final Payment

Within twenty-one (21) days from the date of issuance of the Maintenance Certificate the Contractor shall submit a final account to the Engineer to verify and the Engineer shall verify the same within fourteen (14) days from the date of submission and forward the same to the Employer together with any documentation reasonably required to enable the Employer to ascertain the final contract value.

Within sixty (60) days from the date of receipt of the verified final account from the Engineer, the Employer shall pay to the Contractor any amount due to the Contractor. While making such payment the Employer may, for reasons to be given to the Contractor in writing, withhold any part or parts of the verified amount.

11.6 Currency

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

12. DEFAULT

12.1 Default by Contractor

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

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

12.2 Default by Employer

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

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

12.3 Insolvency

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

12.4 Payment upon Termination

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

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

- d) if the Contractor has terminated under Sub-Clause 12.2 or 12.3, the Contractor shall be entitled to the cost of his demobilization together with a sum equivalent to ten percent (10%) of the value of parts of the Works not executed at the date of termination.

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

13. RISKS AND RESPONSIBILITIES

13.1 Contractor's Care of the Works

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

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

13.2 Force Majeure

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

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

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

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

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

14. INSURANCE

14.1 Arrangements

The Contractor shall, prior to commencing the Works, effect insurances of the

types, in the amounts and naming as insured the persons stipulated in the Contract Data except for items (a) to (e) and (i) of the Employer's Risks under Sub-Clause 6.1. The policies shall be issued by insurers and in terms approved by the Employer. The Contractor shall provide the Engineer/Employer with evidence that any required policy is in force and that the premiums have been paid.

14.2 Default

If the Contractor fails to effect or keep in force any of the insurances referred to in the previous Sub-Clause, or fails to provide satisfactory evidence, policies or receipts, the Employer may, without prejudice to any other right or remedy, effect insurance for the cover relevant to such as a default and pay the premiums due and recover the same plus a sum in percentage given in Contractor Data from any other amounts due to the Contractor.

15. RESOLUTION OF DISPUTES

15.1 Engineer's Decision

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

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

15.2 Notice of Dissatisfaction

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

15.3 Arbitration

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

16 INTEGRITY PACT

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

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

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

CONTRACT DATA

Sub-Clauses of Conditions of Contract

1.1.3 Employer's Drawings, if any

1.1.4 **The Employer means:**

Director Planning & Projects University of Loralai

1.1.5 **The Contractor means:**

A person or firm that undertakes a contract to provide materials and labor to perform a service or do a job under specific rules.

1.1.7 **Commencement Date** means the date of issue of Engineer's Notice to Commence which shall be issued within fourteen (14) days of the signing of the Contract Agreement.

1.1.9 **Time for Completion of** 60 days (2 months)

1.1.20 **Engineer:**

The employer representative shall act as Engineer

1.3 **Documents forming the Contract listed in the order of priority:**

- (a) The Contract Agreement
- (b) Letter of Acceptance
- (c) The completed Form of Bid
- (d) Contract Data
- (e) Conditions of Contract
- (f) The completed Schedules to Bid including Schedule of Prices
- (g) The Drawings, if any
- (h) The Specifications

2.1 **Provision of Site:** On the Commencement Date

3.1 **Authorised person:** Director Planning & Projects, University of Loralai

3.2 **Name and address of Engineer's/Employer's representative**

Office of the Director Planning & Projects University of Loralai at Loralai

Cell: 0333-2473230 & 0310-8167790

4.4 **Performance Security:** Performance security in shape of bank guarantee from a

scheduled bank of Pakistan of an amount equal to 10% of the contract price as stated in the letter of acceptance.

In the form of an insurance company having at least AA rating from PACRA/JCR of an amount equal to 10% of the Contract Price stated in the Letter of Acceptance.

Validity: One month after completion of the Defect Liability Period.

7.2 Programme:

Time for submission: Within fourteen (14) days of the Commencement Date.

Form of the program: Bar Chart/CPM/PERT or other

7.4 Liquidated Damages: Amount payable due to failure to complete the contract shall be 0.1% per day up to a maximum of (10%) of the sum stated in the Letter of Acceptance.

9.1 Period for remedying defects: 12 months

11.1 (a) Terms of Payments

Payment of Contract Price shall be made in the following manners:

- i) Seventy-five (75%) shall be paid in accordance with Clause 11.2 & 11.3 of Conditions of Contract,
- ii) Ten percent (10%) shall be paid on the date of issuance of Certificate of Completion as per Clause 8.2 of Conditions of Contract, and
- iii) Five percent (5%) shall be paid in accordance with Clause 11.4 of Conditions of Contract.

(b) The minimum amount of IPC: 50% of the Total Cost

11.3 Percentage of retention: @ 7% shall be deducted from each IPC

11.6 Currency of payment: Pak. Rupees



FORM OF BID SECURITY
(Bank Guarantee)

Guarantee No. _____
Executed on _____

(Letter by the Guarantor to the Employer)

Name of Guarantor (Scheduled Bank in Pakistan) with
address: _____

Name of Principal (Bidder) with
address: _____

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

Bid Reference No. _____ Date of Bid _____

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

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

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

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

the entire sum shall be paid immediately to the said Employer for delayed completion and not a penalty for the successful bidder's failure to perform.

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

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

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

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

Guarantor (Bank)

Witness:

1. Signature _____

1. _____

2. Name _____

Corporate Secretary (Seal)

3. Title _____

2. _____

(Name, Title & Address)

Corporate Guarantor (Seal)

**FORM OF PERFORMANCE SECURITY
(Bank Guarantee)**

Guarantee No. _____
Executed on _____

(Letter by the Guarantor to the Employer)

Name of Guarantor (Scheduled Bank in Pakistan) with
address: _____

Name of Principal (Contractor) with
address: _____

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

Letter of Acceptance No. _____ Dated _____

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

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

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

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

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

PROVIDED ALSO THAT the Employer shall be the sole and final judge for deciding whether the Principal (Contractor) has duly performed his obligations under the Contract or has defaulted in fulfilling said obligations and the Guarantor shall pay without objection any sum or sums up to the amount stated above upon first written demand from the Employer forthwith and without any reference to the Principal or any other person.

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

Witness:

1. _____

Corporate Secretary (Seal)

2. _____

(Name, Title & Address)

Guarantor (Bank)

1. Signature _____

2. Name _____

3. Title _____

Corporate Guarantor (Seal)

FORM OF CONTRACT AGREEMENT

THIS CONTRACT AGREEMENT (hereinafter called the “Agreement”) made on the _____ day of _____ 200 _____ between _____ (hereinafter called the “Employer”) of the one part and _____ (hereinafter called the “Contractor”) of the other part.

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

NOW this Agreement 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 Letter of Acceptance;
 - (b) The completed Form of Bid along with Schedules to Bid;
 - (c) Conditions of Contract & Contract Data;
 - (d) The priced Schedule of Prices;
 - (e) The Specifications; and
 - (f) The Drawings
3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy defects therein in conformity and in all respects within the provisions of the Contract.
4. The Employer hereby covenants to pay the Contractor, in consideration of the execution and completion of the Works as per provisions of the Contract, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

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

Signature of the Contactor

(Seal)

Signature of the Employer

(Seal)

Signed, Sealed and Delivered in the presence of:

Witness:

(Name, Title, and Address)

Witness:

(Name, Title, and Address)



1000 kVA Bi-Directional Step-Up Distribution Transformer

Specially designed oil-immersed step-up transformer for solar power distribution, incorporating electrostatic shielding and a design optimized for non-linear loads with harmonics.

1. Standards Compliance

The transformer shall be manufactured, tested, and supplied in accordance with the latest editions of the following standards (or equivalent):

- IEC 60076 series (Power Transformers)
- IEC 60296 (Mineral Insulating Oils)
- IEC 60076-5 (Ability to withstand short-circuit)
- IEC 60076-10 (Sound levels)
- IEC 60076-18 (Measurement of frequency response)
- IEC 60076-22 (Accessories for transformers) In case of conflict between this

specification and the above standards, this specification shall prevail.

2. Service Conditions

- Installation altitude: ≤ 1000 m above sea level
- Maximum ambient temperature: 50°C
- Relative humidity: up to 95% (non-condensing)
- Outdoor installation under tropical environmental conditions

3. Electrical & Mechanical Characteristics

No.	Parameter	Specification
1	Rated Capacity	1000 kVA
2	Transformer Type	Step-Up, oil-immersed, with: a) Electrostatic shielding b) Special design for non-linear loads with harmonics
3	Application	Solar Power Distribution
4	Insulation Class	Class A
5	Cooling Method	ONAN — Oil Natural Air Natural
6	Rated Frequency	50 Hz
7	High Voltage (HV)	11 kV
8	Low Voltage (LV)	0.4 kV
9	Vector Group	Dyn-11
10	Temperature Rise	Oil: 50°C Winding: 50/55
11	Tank Construction	Corrugated fin-wall type
12	Terminals	HV: 3 Nos. LV: 4 Nos.
13	Transformer Oil	Mineral oil as per IEC 60296
14	Sound Level	\leq IEC 60076-10 specified limits
15	Efficiency	To meet or exceed IEC loss caps for this rating

4. Accessories (Mandatory)

The transformer shall be supplied complete with:

1. Oil level indicator with alarm contacts
2. Oil temperature indicator with alarm contacts
3. Pressure relief device with alarm contacts
4. Buchholz relay with alarm and trip contacts

5. Marshalling box with space heaters
6. Lifting lugs and jacking pads
7. Drain valve with sampling point
8. Earthing terminals (minimum 2 nos.)

5. Painting & Corrosion Protection

- All external surfaces to be grit-blasted, epoxy-primed, and finished with UV-resistant polyurethane paint suitable for outdoor coastal/tropical conditions.
- Minimum dry film thickness: 120 microns.

6. Testing & Inspection

1. Factory Acceptance Tests (FAT):
Shall include but not be limited to:
 - Measurement of winding resistance
 - Ratio and polarity check
 - No-load and load losses & current measurement
 - Insulation resistance measurement
 - Induced and applied voltage tests
 - Oil tests (dielectric strength, moisture, acidity)
 - Function tests for all accessories
2. Routine Tests:
 - To be conducted on each unit as per IEC 60076 before dispatch.
3. Inspection & Witnessing:
 - Purchaser reserves the right to witness FAT at the manufacturer's works.
 - All testing instruments shall have valid calibration certificates.

7. Packing & Delivery

- Transformer shall be delivered oil-filled in robust packing to prevent damage during transport.
- All accessories to be shipped together with the transformer and clearly tagged.
- Lifting instructions, weight details, and center of gravity to be clearly marked on the

unit.

8. Documentation

The supplier shall provide:

1. Two sets of operation & maintenance manuals in English.
2. Test certificates (type, routine, oil tests).
3. GA (General Arrangement) drawings, wiring diagrams, and nameplate details.
4. Warranty certificate for minimum 24 months from commissioning date.

11 kV Bi-Directional Import/Export HT Panel with Metering

Indoor metal-enclosed 11 kV switchgear for **bi-directional import/export metering** with latest specifications. The panel will serve as the interface between the 1000 kVA transformer (0.4 kV/11 kV) and the utility grid, enabling energy flow in both directions.

1. Standards Compliance

The equipment shall conform to the latest editions of the following standards (or equivalent):

- IEC 62271-200 — Metal-enclosed switchgear for rated voltages above 1 kV up to and including 52 kV
- IEC 62271-1 — Common specifications for high-voltage switchgear
- IEC 60044-1 / IEC 61869 — Current transformers
- IEC 60044-2 / IEC 61869 — Voltage transformers
- IEC 60255 — Protection relays
- IEC 62053 — Electricity metering equipment

2. Service Conditions

- Installation altitude: ≤ 1000 m above sea level
- Maximum ambient temperature: 50°C
- Indoor installation
- Relative humidity: up to 95% non-condensing

3. Electrical & Functional Characteristics

No.	Parameter	Specification
1	System Voltage	11 kV, 3-phase, 50 Hz
2	Rated Current	630 A (or as per load flow requirement)
3	Short-Circuit Withstand	≥ 25 kA for 3 sec
4	Duty Cycle	E2, M2, C2 (per IEC 62271-100)
5	Busbar	Electrolytic copper, tinned, sized for rated current + 25% spare capacity
6	Busbar Insulation	Heat-shrink sleeves/epoxy insulation
7	Panel Type	Metal-enclosed, metal-clad, compartmentalized, extensible
8	Protection Degree	IP4X (enclosure), IP2X (compartment)
9	Operating Mechanism	Manual spring-charged for circuit breaker; electrically close/trip facility

No.	Parameter	Specification
10	Earthing	Fixed earthing switch with mechanical interlock
11	Paint Finish	Epoxy-primed, powder-coated, min. 60 μm thickness, RAL shade as specified

4. Metering & Instrument Transformers

1. Import/Export Meter

- Class: **0.2S** accuracy for active energy (IEC 62053-22) and **Class 0.5** for reactive energy (IEC 62053-23).
- Capable of recording **bi-directional kWh and kVARh** separately with time-of-use (TOU) capability.
- Optical/RS-485 communication port for remote data collection.

2. Current Transformers (CTs)

- Ratio: as per DISCO requirement for system rating
- Class: **0.2S** (metering), 5P20 (protection)
- Burden: as per metering/protection design
- Standards: IEC 61869-2

3. Potential Transformers (PTs)

- Voltage ratio: as per system rating
- Class: **0.2** (metering), 3P (protection)
- Standards: IEC 61869-3

5. Protection & Control

- **Protection Relays:** Numerical multifunction relay for feeder protection with:
 - Overcurrent (50/51), Earth fault (50N/51N)
 - Programmable logic and event recording
 - Self-diagnostic and communication capability (Modbus/IEC-61850 optional)
- **Trip Circuit Supervision**
- **Breaker Fail Protection** (if required by DISCO)
- Control wiring: stranded copper, PVC insulated, color-coded

6. Accessories

- Mimic diagram on front panel
- Mechanical & electrical interlocks between breaker, earthing switch, and panel door
- Space heaters with thermostat & control MCB
- LED indication lamps for breaker status, trip circuit, and heater ON/OFF
- Lockable doors with provision for padlocks
- Cable termination area with adequate clearance and gland plates

7. Testing & Inspection

1. Factory Acceptance Tests (FAT):

- Visual and dimensional check
- High-voltage withstand test
- Primary & secondary injection tests
- CT/PT ratio & polarity check
- Functional check of protection relays and interlocks
- Meter programming and functional test

2. Routine Tests:

- Per IEC 62271-200 for each panel before dispatch.

8. Packing & Delivery

- Each panel to be securely packed to prevent moisture and mechanical damage during transit.
- All small accessories, spare parts, and manuals to be packed in separate, clearly labeled boxes.
- Lifting points to be clearly marked; total weight to be indicated on packing.

9. Documentation

Supplier to provide:

1. Schematic diagrams, GA drawings, and terminal schedules.
2. Meter programming details and configuration files.
3. Test reports (routine, and FAT).
4. O&M manuals in hard and soft copies.
5. Warranty certificate — **minimum 24 months** from commissioning.

RCC Foundation & Civil Works:

The Contractor shall construct a reinforced cement concrete (RCC) foundation for the 1000 kVA transformer strictly in accordance with the latest standards and drawings approved by WAPDA, ensuring compliance with all structural, dimensional, and load-bearing requirements for outdoor/indoor electrical equipment foundations. The works shall also include necessary modifications to the existing transformer room, including demolition of designated walls for access, provision of adequate ventilation openings/louvers, and any associated masonry, plastering, and finishing, all in accordance with WAPDA specifications and safety clearances. The complete scope shall ensure proper mounting, cooling, accessibility, and operational safety of the transformer installation as per approved WAPDA guidelines.

SYSTEM PROTECTIONS

System must be complete with all protections as per standards approved by the WAPDA

EARTHING PROTECTION

Separate earthing must be provided as per IEC standard and as per NEPRA SRO/2015 and IESCO SOP. Earth Resistance must be 3 ohm or less.