

Standard Bidding Document

TENDER NO. 4442 (Single Phase, LT Type CT Operated and HT Type CT
& PT Operated AMI Smart Energy Meters)
(Goods)

International

Single Stage-One Envelope



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Table of Contents

REQUEST FOR BIDS	1
Instructions to Bidders	3
Bid Data Sheet	23
Bids Data Sheet (BDS)	24
Eligibility Criteria	29
Evaluation Criteria	30
Items/Lots	31
Related Services of Goods:	37
Items/Lot Specification	38
Price Schedule	42
General Conditions of Contract	44
Special Conditions of Contract	54
Bid Securing Declaration	61
Contract Form	63
Integrity Pact	66
Performance Guarantee Form	68
Annexure	71
Annexures	72
Procurement Forms	73
Past Experience and Completed Contracts	1
Additional Forms and Documents	76

REQUEST FOR BIDS

PROCUREMENT OF GOODS

1. The **LAHORE ELECTRIC SUPPLY COMPANY LIMITED (MATERIAL MANAGEMENT)** has reserved Funds for the procurement planned for FY **2026-27**. The **LAHORE ELECTRIC SUPPLY COMPANY LIMITED (MATERIAL MANAGEMENT)** intends to apply part of the proceeds of this Fund to cover eligible payments under the contract for the "**TENDER NO. 4442 (Single Phase, LT Type CT Operated and HT Type CT & PT Operated AMI Smart Energy Meters)**" with the reference of "**P127012**"
2. The **LAHORE ELECTRIC SUPPLY COMPANY LIMITED (MATERIAL MANAGEMENT)** invites sealed Bids from eligible Bidders for procurement of goods described in the bidding documents on **EPADS v2.0**.
3. **Single Stage-One Envelope** will be used by adopting **Least Cost Based Selection (LCBS)** Technique for the subject procurement, in line with the Public Procurement Rules, 2004 and any Regulations, Regulatory Guides, Procurement Guidelines or Instructions issued by the Authority from time to time.
4. All Bids must be accompanied by a Bid Security amounting described in Bid Security Section in Bidding Document in the form of **Pay Order, Banker's Cheque, Call at Deposit, Bank Guarantee, Demand Draft** or all bids must be accompanied by bid securing declaration in the format specified in the Bidding documents
5. E-Bidding documents, containing detailed terms & conditions, specifications and requirements etc. are available on **e-Pak Acquisition and Disposal System (EPADS)** at **<https://epads.gov.pk/opportunities/federal/procurements/127012>** for all the interested bidders registered on **EPADS v2.0**. Bidders are required to get themselves registered on **EPADS v2.0** to participate in Bidding process.
6. The e-bids, prepared in accordance with the instructions in the e-Bidding Documents, must be submitted through **EPADS v2.0** on or before **Thursday, October 29, 2026 10:30 AM**. E-bids will be opened using **EPADS v2.0** on

the same day at **Thursday, October 29, 2026 11:00 AM**. Manual submission of Bids shall not be entertained. Those vendors who have not yet registered on the new version of **EPADS v2.0**, may register themselves on <https://vendors.epads.gov.pk/>. A tutorial to explain the registration process is available at <https://www.youtube.com/watch?v=MNW6T38v7tc>

In terms of Rule 48 of Public Procurement Rules, 2004 Grievance Redressal Committee (GRC) is notified for the subject procurement and notification copy is available on the procuring agency's website and on Authority's website at (www.ppra.org.pk).

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Instructions to Bidders

A. Introduction

1.Scope of Bids

1.1 The Procuring Agency (PA), as indicated in the **Bids Data Sheet (BDS)** invites Bids **through EPADS v2.0** for the provision of Goods for as specified in the BDS and **in Section V - Evaluation Criteria, Specifications & Schedule of Requirements**. The name, identification, and number of items/deliverables are provided in the **BDS**. The successful Bidders will be expected to provide the goods within the specified period and timeline(s) as stated in the **BDS**.

2. Source of Funds

2.1 Source of funds is referred in Clause-1 of Invitation for Bids.

3. Eligible Bidders

3.1 A Bidder may be natural person, company or firm or public or semi-public agency of Pakistan or any foreign country, or any combination of them with a formal existing agreement (on Judicial Papers) in the form of a joint venture, consortium, or association. In the case of a joint venture, consortium, or association, all members shall be jointly and severally liable for the execution of the Contract in accordance with the terms and conditions of the Contract. The joint venture, consortium, or association shall nominate a Lead Member as nominated in the BDS, who shall have the authority to conduct all business for and on behalf of any and all the members of the joint venture, consortium, or association during the Bidding process, and in case of award of contract, during the execution of the contract.

3.2 Verifiable copy of the agreement that forms a joint venture, consortium or association shall be required to be submitted as part of the Bid.

3.3 The appointment of Lead Member in the joint venture, consortium, or association shall be confirmed by submission of a valid Power of Attorney to the Procuring Agency.

3.4 Any bid submitted by the joint venture, consortium or association shall indicate the part of proposed contract to be performed by each party and each party shall be evaluated (or post qualified if required) with respect to its contribution only, and the responsibilities of each party shall not be substantially altered without prior written approval of the Procuring Agency and in line with

any instructions issued by the Authority.

(The limit on the number of members of JV or Consortium or Association may be prescribed in BDS, in accordance with the guidelines issued by the PPRA).

3.5 The invitation for Bids is open to all prospective suppliers, manufacturers, or authorized agents / dealers subject to any provisions of incorporation or licensing by the respective national incorporating agency or statutory body established for that particular trade or business. Procuring agencies shall specify the registration/licensing requirements for the foreign bidders keeping in view the requirement of that business.

3.6 A Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest with one or more parties in this Bidding process, if they:

1. are associated or have been associated in the past, directly or indirectly with a firm or any of its affiliates which have been engaged by the Procuring Agency to provide consulting services for the preparation of the design, specifications and other documents to be used for the procurement of the Goods to be purchased under this Invitation for Bids.
2. have controlling shareholders in common; or
3. receive or have received any direct or indirect subsidy from any of them; or
4. have the same legal representative for purposes of this Bid; or
5. have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the Bids of another Bidder, or influence the decisions of the Procuring Agency regarding this Bidding process; or
6. Submit more than one Bid in this Bidding process.

3.7 A Bidder may be ineligible if –

1. he is declared bankrupt or, in the case of company or firm, insolvent;
2. payments in favor of the Bidder is suspended in accordance with the judgment of a court of law other than a judgment declaring bankruptcy and resulting (in accordance with the national laws) in the total or partial loss of the right to administer and dispose of its property;

3. the Bidder is convicted, by a final judgment, of any offence involving professional conduct;

4. the Bidder is blacklisted locally or by international organizations and hence debarred due to involvement in corrupt and fraudulent practices, or performance failure or due to breach of Bid securing declaration.

3.8 As and when required, bidders shall provide to the Procuring Agency evidence of their eligibility, proof of compliance with the necessary legal requirements to carry out the contract effectively.

3.9 Bidders shall submit Bids relating to the nature, conditions and modalities of sub-contracting wherever the sub-contracting of any elements of the contract amounting to more than ten (10) percent of the Bid price is envisaged.

4. Eligible Goods and Related Services

4.1 All goods and related services to be supplied under the contract shall have their origin in eligible source countries, and all expenditures made under the contract will be limited to such goods and services. For purpose of this Bid, ineligible countries are the countries declared ineligible by the Federal Government.

5. One Bid per Bidder

5.1 A bidder shall submit only one Bid, in the same bidding process, either individually as a Bidder or as a member in a joint venture or any similar arrangement.

5.2 The Bidder shall not engage a subcontractor for any portion of the contract if the value of such subcontracting exceeds thirty percent (30%) of the total contract amount.

6. Cost of Bidding

6.1 Any cost incurred by the bidder relating to the preparation and submission of its Bid shall be borne by the bidder, and the Procuring Agency shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

B. Bidding Documents

7. Contents of Bidding Document

7.1 The Goods required, Bidding procedures, and terms and conditions of the contract are prescribed in the Bidding Documents. In addition to the Invitation for Bids, the Bidding documents which should be read in conjunction with any addenda issued in accordance with **ITB 9.1** include:

Section I -Invitation to Bids

Section II Instructions to Bidders (ITB)

Section III Bid Data Sheet (BDS)

Section IV Evaluation Criteria, Specifications, Schedule of Requirements

Section V Bid Forms

Section VI General Conditions of Contract (GCC)

Section VII Special Conditions of Contract (SCC)

Section VIII Contract Forms

7.2 The Bidder is expected to examine all instructions, forms, terms and specifications in the Bidding documents. Failure to furnish all the information required in the Bidding documents through **EPADS v2.0** will be at the Bidder's risk and may result in the rejection of his Bids.

8. Clarification of Bidding documents

8.1 A prospective Bidder requiring any clarification of the Bidding documents may notify the Procuring Agency through **EPADS v2.0**.

8.2 The Procuring Agency will within three (3) working days after receiving the request for clarification, respond to any request for clarification through **EPADS v2.0** provided that such request is received not later than three (03) days prior to the deadline for the submission of Bids as prescribed in **ITB 22**

8.3 Copies of the Procuring Agency's response will be forwarded to all identified Prospective Bidders through **EPADS v2.0**, including a description of the inquiry, but without identifying its source.

8.4 Should the Procuring Agency deem it necessary to amend the Bidding document as a result of a clarification, it shall do so following the procedure under **ITB 9**.

8.5 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 document.

8.6 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 uploaded on **EPADS v2.0**. 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 exclusively through the use of an Addendum pursuant to **ITB 9**. Non-attendance at the pre-Bid meeting will not be a cause for disqualification of a Bidder.

9. Amendment of Bidding documents

9.1 Before the deadline for submission of Bids, the Procuring Agency for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder or Pre-Bid meeting may modify the Bidding documents by issuing addenda through **EPADS v2.0**.

9.2 The Procuring Agency shall promptly publish the addendum through **EPADS v2.0**.

9.3 Any addendum issued including the notice of any extension of the deadline shall also be communicated through EPADS v2.0 to all the bidders who have already submitted their bids. Such bidders shall have the right to withdraw their already submitted bid and re-submit the revised bid prior to the original or extended bid submission deadline.

9.4 To give prospective Bidders reasonable time in which to take an addendum/corrigendum into account in preparing their Bids, the Procuring Agency may, at its discretion, extend the deadline for the submission of Bids through **EPADS v2.0**:

Provided that the Procuring Agency shall extend the deadline for submission of Bids, if such an addendum is issued within last three (03) days of the Bids submission deadline.

C. Preparation of Bids

10. Language of Bid

10.1 The Bid prepared by the bidder, as well as all correspondence and documents relating to the Bids exchanged by the Bidder and the Procuring Agency shall be written in the English language unless otherwise specified in the BDS. Supporting documents and printed literature furnished by the Bidder may be in another language provided they are accompanied by an accurate translation of the relevant pages in the English language unless otherwise specified in the **BDS**, in which case, for purposes of interpretation of the Bidder, the translation shall govern.

11. Documents and samples Constituting the Bid

11.1 The Bid prepared by the Bidder shall constitute the documents required in the **BDS**.

Details of sample(s) where applicable and requested in the BDS.

1. Documentary evidence established in accordance with ITB that the Bidder is eligible and/or qualified for the subject bidding process;
2. Documentary evidence establish that the Bidder has been authorized by the manufacturer to deliver the goods into Pakistan, where required and where the supplier is not the manufacturer of those goods;
3. Documentary evidence establish that the goods and related services to be supplied by the Bidder are eligible goods and services, and conform to the Bidding Documents;
4. Bid security or Bid Securing Declaration furnished in accordance with **ITB 18**.

12. Documents Establishing Eligibility of the Goods and Conformity to Bidding documents

12.1 To establish the conformity of the bidder to the Bidding document, the Bidder shall furnish as part of its Bids the documentary evidence that Goods provided conform to the technical specifications and standards.

13. Documents Establishing Eligibility and Qualification of the Bidder

13.1 The Bidder shall furnish, as part of its Bid, all those documents establishing the Bidder's eligibility to participate in the Bidding process and/or its qualification to perform the contract if its Bid is accepted.

14. Form of Bids

14.1 The Bidder shall fill the Form of Bid furnished in the Bidding documents. The Bids Form must be completed without any alterations to its format and no substitute shall be accepted.

15. Bids Prices

15.1 The Bids Prices quoted by the Bidder in the Form of Bid and in the Price Schedules shall conform to the requirements specified below or exclusively mentioned hereafter in the Bidding documents.

15.2 All items in the Schedule of Requirement must be listed and priced separately in the Price Schedule(s). If a Price Schedule shows items listed but not priced and neither explicitly denied, their prices shall be construed to be included in the prices of other items.

15.3 Items not listed in the Price Schedule shall be assumed not to be included in the Bid, and provided that the Bid is still substantially responsive in their absence or due to their nominal nature, the corresponding average price of the respective item(s) of the remaining substantially responsive Bidder(s) shall be construed to be the price of those missing item(s).

15.4 The Bid price to be quoted in the Form of Bid in accordance with **ITB 14.1** shall be the total price of the Bid.

15.5 The Bidder shall indicate on the appropriate Price Schedule, the unit prices (where applicable) and total Bid price of the Goods it proposes to provide under the contract.

15.6 Prices quoted by the Bidder shall be fixed during the Bidder's performance of the contract and not subject to variation on any account. A Bid submitted with an adjustable price will be treated as non-responsive and shall be rejected.

16. Bids Currencies

16.1 Prices shall be quoted in Pakistani Rupees unless otherwise specified in the BDS in accordance with Rule 30 (2) of the Public Procurement Rules, 2004.

17. Bids Validity Period

17.1 Bids shall remain valid for the period specified in the **BDS** after the Bid submission deadline prescribed by the Procuring Agency. A Bid valid for a shorter period shall be rejected by the Procuring Agency as non-responsive. The period of Bid validity will be determined from the complementary Bid securing instrument, i.e. the expiry period of Bid Security or Bids Securing Declaration as the case may be.

17.2 The procuring agency shall ordinarily be under an obligation to process and evaluate the bid and to issue letter of award within the stipulated bid validity period.

17.3 Under exceptional circumstances, prior to the expiration of the initial Bid validity period, the Procuring Agency may request the Bidders' consent to an extension of the period of validity of their Bids only once through **EPADS v2.0**, for the period not more than the period of initial bid validity. The Bid Security provided under **ITB 18** shall also be suitably extended. A Bidder may refuse the request without forfeiting its Bid security or causing to be executed its Bid Securing Declaration. A Bidder agreeing to the request will not be required nor permitted to modify its Bid, but will be required to extend the validity of its Bid Security or Bid Securing Declaration for the period of the extension.

18. Bid Security or Bid Securing Declaration

18.1 The Bidder shall furnish as part of its Bid, a Bid Security in accordance with Rule 25 of the Public Procurement Rules, 2004.

18.2 The original Bid Security shall be enclosed within the sealed envelope and to be submitted physically before closing time for submission of bids. Whereas, scanned copy of bid security shall be uploaded electronically through EPADS v2.0 before closing hours for submission of bids.

18.3 The Bidder who failed to submit the original Bids security before the submission deadline shall be disqualified straightaway.

18.4 The Bid Security or Bid Securing Declaration is required to protect the Procuring Agency against the risk of Bidder's conduct which would warrant the security's forfeiture, pursuant to **ITB 18.7**.

18.5 The Bid Security shall be denominated in the local currency, and it shall be a Bank Draft in the name of the Procuring Agency and valid for twenty-eight (28) days beyond the end of the validity of the Bid. This shall also apply if the period

for Bids/Bid Validity is extended. In either case, the form must include the complete name of the Bidder.

18.6 The Bid Security shall be payable promptly upon written demand by the Procuring Agency in case any of the conditions listed in **ITB 18** are invoked.

18.7 Unsuccessful Bidders' Bid Security will be discharged or returned as promptly as possible, however in no case later than thirty (30) days after the expiration of the period of Bids Validity prescribed by the Procuring Agency pursuant to **ITB 17**. The Procuring Agency shall make no claim to the amount of the Bid Security, and shall promptly return the Bid Security document, after whichever of the following that occurs earliest:

- a. the expiry of the Bid Security;
- b. the entry into force of a procurement contract and the provision of a Performance Guarantee, for the performance of the contract if such a guarantee, is required by the Bid documents;
- c. the rejection by the Procuring Agency of all Bids;
- d. the withdrawal of the Bids prior to the deadline for the submission of Bids, unless the Bids documents stipulate that no such withdrawal is permitted.

18.8 The successful Bidder's Bids Security will be discharged upon the Bidder signing the contract, or furnishing the Performance Guarantee.

18.9 The Bid Security may be forfeited or the Bid Securing Declaration executed:

- a. if a Bidder:
- b. withdraws its Bid during the period of Bid Validity as specified by the Procuring Agency, and referred by the Bidder on the Form of Bids except as provided for in **ITB 17.2**; or
- c. does not accept the correction of errors; or
- d. in the case of a successful Bidder, if the Bidder fails:
- e. to sign the contract; or
- f. to furnish Performance Guarantee.

19. Withdrawal, Substitution, and Modification of Bid

19.1 Before Bid submission deadline, any Bidder may withdraw, substitute, or modify its Bid after it has been submitted through EPADS v2.0. Bids requested to be withdrawn, shall be returned unopened to the Bidders through **EPADS v2.0**.

20. Format and Signing of Bid

20.1 The Bidder shall prepare and submit Bids with due diligence after carefully reading all the terms and condition **before bid submission deadline** through EPADS v2.0.

D. Submission of Bids

21. Submission of Bids through EPADS v2.0

21.1 The Technical and Financial Bids if required to submitted, shall be submitted on **EPADS v2.0**.

22. Deadline for Submission of Bids

22.1 Bids shall be received by the Procuring Agency through **EPADS v2.0** before bid submission deadline.

22.2 The Procuring Agency may, under exceptional circumstances, extend the deadline for the submission of Bids, after recording reasons in writing and in an equal opportunity manner.

In such case, all rights and obligations of the Procuring Agency and the Bidders that were previously governed by the original deadline shall thereafter be subject to the revised deadline.

E. Opening and Evaluation of Bids

23. Opening of Bids

23.1 The Bid Evaluation Committee of the Procuring Agency shall open all Bids through the EPADS v2.0, on the date and time specified in the Bid Data Sheet (BDS).

23.2 The Bid Evaluation Committee **shall generate minutes through EPADS v2.0 containing brief details of bid opening process.** The record of the Bid opening shall include, as a minimum: the name of the Bidder, the Bid price if applicable, and the presence or absence of a Bid Security or Bid Securing Declaration.

23.3 The procuring agency shall live broadcast the opening of bids on national media or on their website or digital channels, if the volume of procurement exceeds five hundred million rupees in case of goods and services and one thousand million rupees in case of works.

23.4 In case the date of opening of bid has been declared as public holiday or the procuring agency fail to open bid due to any EPADS v2.0 related issues, the submission and opening of bids shall be shifted to the next working day on the same time.

23.5 In case of Single Stage One Envelope Procedure, the Bidders names, the Bid prices, the total amount of each Bid and, the presence or absence of Bid Security, Bid Securing Declaration and such other details as the Procuring Agency may consider appropriate, will be announced by the Bid Evaluation Committee.

24. Clarification of Bids

24.1 To assist in the examination, evaluation and comparison of Bids of the Bidders, the Procuring Agency may, ask any Bidder for a clarification of its Bid including breakdown of prices.

24.2 The request for clarification and the response shall be sought through EPADS v2.0 before **three days prior to the deadline for submission of bids.** No change in the prices or substance of the Bids shall be sought, offered, or permitted.

24.3 The alteration or modification in the BIDS which in any way affect the following parameters will be considered as a change in the substance of a Bids:

1. evaluation & qualification criteria;
2. required scope of work or specifications;
3. all securities requirements;
4. tax requirements;

5. terms and conditions of Bidding documents.

6. change in the ranking of the Bidder

24.4 From the time of Bids opening to the time of Contract award if any Bidder wishes to contact the Procuring Agency on any matter related to the Bids it should do so through **EPADS v2.0**.

25. Preliminary Examination of Bids

25.1 Prior to the detailed evaluation of Bids, the Procuring Agency will determine whether each Bid:

1. meets the eligibility criteria defined in **ITB 3**;
2. has been prepared as per the format and contents defined by the Procuring Agency in the Bidding documents;
3. is accompanied by the required securities; and
4. is substantially responsive to the requirements of the Bidding documents.

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

25.3 A substantially responsive Bid is one which conforms to all the terms, conditions, and specifications of the Bidding documents, without material deviation or reservation. A material deviation or reservation is one that: -

1. affects in any substantial way the scope, quality, or performance of the Goods;
2. limits in any substantial way, inconsistent with the Bidding documents, the Procuring Agency's rights or the Bidders obligations under the Contract; or
3. if rectified, would affect unfairly the competitive position of other Bidders presenting substantially responsive Bids.

25.3 If a Bids is not substantially responsive, it will be rejected by the Procuring Agency and may not subsequently be evaluated for complete technical responsiveness.

26. Examination of Terms and Conditions; Technical Evaluation

26.1 The Procuring Agency shall examine the Bids to confirm that all terms and conditions specified in the **GCC** and the **SCC** have been accepted by the Bidder without any material deviation or reservation.

26.2 The Procuring Agency shall evaluate the technical aspects of the Bids submitted, to confirm that all requirements specified in Schedule of Requirements and Technical Specifications of the Bidding documents have been met without material deviation or reservation.

26.3 If after the examination of the terms and conditions and the technical evaluation, the Procuring Agency determines that the Bid is not substantially responsive in accordance with **ITB 25.2**, it shall reject the Bid.

27. Correction of Errors

27.1 Bids determined to be substantially responsive will be checked for any arithmetic errors. Errors will be corrected as follows: -

1. if there is a discrepancy between unit prices and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected, unless in the opinion of the Procuring Agency there is an obvious misplacement of the decimal point in the unit price, in which the total price as quoted shall govern and the unit price shall be corrected;
2. if there is an error in a total corresponding to the addition or subtraction of sub-totals, the sub-totals shall prevail and the total shall be corrected; and
3. where there is a discrepancy between the amounts in figures and in words, the amount in words will govern.
4. Where there is discrepancy between grand total of price schedule and amount mentioned on the Form of Bids, the amount referred in Price Schedule shall be treated as correct subject to elimination of other errors.

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

28. Conversion to Single Currency

28.1 To facilitate evaluation and comparison, the Procuring Agency will convert all Bids prices expressed in the amounts in various currencies in which the Bids prices are payable. For the purposes of comparison of bids quoted in different currencies, the price shall be converted into a single currency specified in the bidding documents. The rate of exchange shall be the selling rate prevailing on the date of opening of financial bids specified in the bidding documents, in accordance with weighted average customer exchange rates list issued by the State Bank of Pakistan on that day.

29. Evaluation of Bids

29.1 The Bids, quotations, or proposals shall be evaluated by the respective evaluation committees as per evaluation criteria described in the Bidding Documents in accordance with Rule 29 and 30 of the Public Procurement Rules, 2004.

1. Least Cost Based Selection (LCBS)

After meeting the requirements of eligibility, qualification and substantial responsiveness, the bid in compliance with all the mandatory (technical) specifications/requirements and/or requisite quality threshold (if any), and having lowest evaluated cost (or financial proposal) shall be considered Successful Bid.

2. Quality and Cost Based Selection (QCBS)

In such combination, there shall be some specific weightage of both the technical features and financial aspects of the proposal. The financial marks shall be awarded on the basis of inverse proportion calculations. The successful bid shall be declared, on the basis of combined evaluation.

3. Quality Based Selection (QBS)

After meeting the requirements of eligibility, qualification and substantial responsiveness the bid in compliance with all the mandatory (technical) specifications/requirements and attaining highest marks in the Technical Evaluation considering all other qualitative and/or quantitative parameters (or point rated criteria) for technical proposal(s) such as working methodology, implementation plan, resource allocation, additional functionalities, risk management approach, knowledge transfer techniques, post implementation methodology etc. shall be treated as highest ranked bid. Later on, the financial proposal of highest ranked bidder shall be opened, however, in case of failure to proceed further with such a bidder, the procuring agency may resort to second

highest bidder and so on.

29.2 In case of tie of bids, the bidders shall be provided an opportunity to offer their best and final monetary offer through EPADS v2.0. However, in no case the rates shall be higher than the original financial bids.

30. Domestic Preference

30.1 The procuring agency shall evaluate and compare bids, allow for preference to domestic bidders, while competing with the international bidders in accordance with the policies of Federal Government.

The percentage of preference, to be accorded shall be clearly mentioned in the bidding documents under the bid evaluation criteria.

31. Determination of Successful Bid

31.1 Selection technique will be adopted for determining the Successful Bid in accordance with the criteria referred in the BDS or prescribed in the separate section titled as Evaluation Criteria.

31.2 In case where the Procuring Agency adopts the Cost Based Evaluation Technique and, the Bid with the lowest evaluated price from amongst those which are eligible, compliant and substantially responsive shall be the Successful Bid.

31.3 The Procuring Agency may adopt the Quality & Cost Based Selection Technique due to the following two reasons:

1. Where the Procuring Agency knows about the main features, usage and output of the products; however not clear about the complete features, technical specifications and functionalities of the goods to be procured and requires the bidders to submit their proposals defining those features, specifications and functionalities; or
2. Where the Procuring Agency, in addition to the mandatory requirements and mandatory technical specifications, requires parameters specified in Evaluation Criteria to be evaluated while determining the quality of the goods.

31.4 In such cases, the Procuring Agency may allocate certain weightage to these factors as a part of Evaluation Criteria, and may determine the ranking of the bidders on the basis of combined evaluation in accordance with provisions of Rule 2(1)(h) of the Public Procurement Rules, 2004.

32. Abnormally Low Financial Bids

32.1 Where the Bid price is considered to be abnormally low, the Procuring Agency shall perform price analysis either during determination of Successful Bids or as a part of the post-qualification process.

32.2 The Procuring Agency may reject an Abnormally low financial bids.

32.3 In order to identify the Abnormally Low Bids (ALB) following approaches can be considered to minimize the scope of subjectivity:

1. Comparing the Bids price with the cost estimate;
2. Comparing the Bids price with the Bids offered by other Bidders submitting substantially responsive Bids; and
3. Comparing the Bids price with prices paid in similar contracts in the recent past either government- or development partner-funded.

32.4 The Procuring Agency will determine to its satisfaction whether the Bidder that is selected as having submitted the successful bid is qualified to perform the contract satisfactorily.

32.5 The determination will take into account the Bidder's financial, technical, and production capabilities. It will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, as well as such other information as the Procuring Agency deems necessary and appropriate. Factors not included in these Bidding documents shall not be used in the evaluation of the Bidders' qualifications.

32.6 Procuring Agency may seek "Certificate for Independent Price Determination" from the Bidder and the results of reference checks may be used in determining an award of contract.

Explanation: The Certificate shall be furnished by the Bidder. The Bidder shall certify that the price is determined keeping in view of all the essential aspects such as raw material, its processing, value addition, optimization of resources due to economy of scale, transportation, insurance and margin of profit etc.

32.7 An affirmative determination will be a prerequisite for award of the contract to the Bidder. A negative determination will result in rejection of the Bidder's Bids, in which event the Procuring Agency will proceed to the next ranked Bidder to make a similar determination of that Bidder's capabilities to

perform satisfactorily.

F. Award of Contract

33. Criteria of Award

33.1 The Procuring Agency will award the Contract to the Bidder whose Bids has been determined to be substantially responsive to the Bidding documents and who has been declared as Most Advantageous Bidder.

34. Negotiations

34.1 The procuring agency shall not engage in negotiations with respect to scope and price with the bidder except when the procuring agency conducts a procurement using direct **or negotiated** contracting or a request for proposals with evaluation based on quality alone.

34.2 The procuring agency may negotiate with the most advantageous bid with a view to streamline the work or task execution, at the time of contract finalization on methodology, work plan, staffing, finalizing payment arrangements, delivery arrangements, minor amendments to the special conditions of the contract.

35. Procuring Agency Right to reject all bids

35.1 The Procuring Agency reserves the right to reject all bids or proposals at any time prior to the issuance of the Letter of Award, without incurring any liability, in accordance with Rule 33 of the Public Procurement Rules, 2004.

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

36.1 The Procuring Agency reserves the right at the time of contract award to increase or decrease the **quantity of** Goods originally specified in these Bidding documents provided this does not exceed **by** 15%, without any change in unit price or other terms and conditions of the Bids and Bidding documents.

37. Notification of Award

37.1 Prior to the award of contract, the procuring agency shall announce and publish the result of bid evaluation on **EPADS v2.0** in accordance with Rule 35

of the Public Procurement Rules, 2004.

37.2 The Bidder whose Bids has been accepted will be notified of the award by the Procuring Agency prior to expiration of the Bids/Bid Validity period. The Letter of Award will state the sum that the Procuring Agency will pay the successful Bidder in consideration for the delivery of Goods as prescribed by the Contract (hereinafter and in the Contract called the "Contract Price).

37.3 The Letter of award will constitute the formation of the Contract, subject to the Bidder furnishing the Performance Guarantee and signing of the contract.

38. Signing of Contract

38.1 Promptly after issuance of Letter of award, Procuring Agency shall send the successful Bidder the draft Contract, incorporating all terms and conditions as agreed by the parties to the contract.

38.2 Immediately after the Redressal of grievance by the GRC (if any), mandatory standstill period in accordance with Rule 35 of the Public Procurement Rules, 2004 and **after fulfillment of all condition's precedent** of the Contract Form, the successful Bidder and the Procuring Agency shall sign the Contract.

39. Corrupt & Fraudulent Practices

39.1 Procuring Agencies (including beneficiaries of Government funded projects and procurement) as well as Bidders/Contractors under Government financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts, and will avoid to engage in any corrupt and fraudulent practices.

F. Grievance Redressal & Complaint Review Mechanism

40. Constitution of Grievance Redressal

40.1 The Grievance Redressal Committee shall address the grievance, if any submitted by any party, including the bidder, in accordance with Rule 48 of the Public Procurement Rules, 2004 to be read with Redressal of Grievances Regulations, 2021.

40.2 In case if any party or the bidder is not satisfied with the decision of the GRC or if it fails to decide within ten days, the bidder or the party may file an appeal before the Appellate Committee of the Authority in accordance with Rule 48 of the Public Procurement Rules, 2004 to be read with Redressal of Grievances Regulations, 2021.

G. Mechanism of Blacklisting

41. Mechanism of Blacklisting

41.1 The Procuring Agency shall initiate blacklisting proceedings against any bidder, supplier, or contractor in accordance with the Mechanism for Blacklisting Regulations, 2024, read with Rule 19 of the Public Procurement Rules, 2004.

41.2 The blacklisted/debarred bidder may file the review petition before the Authority in accordance with Rule 19 of the Public Procurement Rules, 2004 to be read with Procedure of filing and disposal of Review Petitions Regulations, 2021.





Bid Data Sheet

Bids Data Sheet (BDS)

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

BDS Clause Number

ITB Number

Amendments of, and Supplements to, Clauses in the Instruction to Bidders

A. Introduction

BDS Clause Number 1

ITB Number 1.1

Name of Procuring Agency: **LAHORE ELECTRIC SUPPLY COMPANY LIMITED (MATERIAL MANAGEMENT)**

The subject of procurement is: **TENDER NO. 4442 (Single Phase, LT Type CT Operated and HT Type CT & PT Operated AMI Smart Energy Meters)**

Expected commencement date: **Monday, November 30, 2026**

BDS Clause Number 2

ITB Number 2.1

Financial year for the operations of the Procuring Agency: **2026-27**

Name and identification number of the Contract: **P127012**

BDS Clause Number 3

ITB Clause Number 3.1

JV/Consortium or Association Allowed: **No**

Number of JV/Consortium Members: **Nil**

see section of eligibility criteria.

B. Bidding Documents

BDS Clause Number 4

ITB Number 8.1

The Bidders may seek clarifications through **EPADS v2.0** : Clarification Date: Friday, October 2, 2026

Pre-Bid Meeting: Thursday, October 15, 2026 11:30 AM

Venue: Chief Engineer Material Management (Lahore Electricity Supply Company (LESCO), LESCO Head Quarter, 22-A, Queens Road., Lahore

C. Preparation of Bids

BDS Clause Number 5

ITB Number 10.1

The Language of all correspondences and documents related to the Bids shall be in: **English**

List of documents required along with the bid:

1. Power of Attorney authorizing the signatory of the bidder to submit the bid on the Company's letter head. (otherwise bidder may be disqualified).
2. Complete tender documents signed and stamped (in original) by the bidder. (otherwise bidder may be disqualified).
3. Bidder is required to upload Undertaking on company letter head of 100% compliance of technical specifications, all clauses, terms and conditions of bidding documents are acceptable. (otherwise bid may be disqualified).
4. Bidder is required to upload Integrity Pact. (For Contract Worth 10 M or above) (otherwise bid may be disqualified).
5. No deviation Certificates from Commercial Conditions and Technical specifications. (Required Forms to be Uploaded otherwise bid may be disqualified).
6. Bidder is required to upload Declaration for no blacklisting/debarment from NTDC/ WAPDA/DISCOs/GENCOs/Govt. Dept. or any organization acknowledged by PPRA (locally or internationally) for the bidder. (otherwise bid may be disqualified).
7. Bidder is required to upload Non default certificate in any contract agreement/purchase order in WAPDA/NTDC/DISCOs. (otherwise bid may be disqualified).

8. Technical data and Literature in English giving out salient feature of the quoted item(s) along-with WAPDA/PEPCO/PPMC standard specification. (otherwise bid may be disqualified).

9. Valid ISO-18001/ISO-45001 Certificate. (In case the certificate is expired or not valid at the time of bid submission, the bidder shall submit an undertaking that a valid certificate will be provided prior to the award of the contract.)

10. Certificate that the material offered is in accordance with the NTDC/PPMC Standard Specifications amended to date. (otherwise bid may be disqualified).

11. (a). Bidders are required to submit details of all litigations, arbitration and other claims whether pending, threatened or resolved in last five years. The employer / Purchaser may disqualify bidder in the event that the total amount of pending or threatened litigations, arbitration and other claims represents Fifty percent (50%) of the Bidder's net worth.

12. (b). Details in this regard should be submitted in the Bid on attached form of pending litigation (Along with proof / documentary evidences of required net worth). (Form-06) Or otherwise Undertaking of no litigation by bidder is must.

13. Certificate that latest purchase procedure PPRA-2004 (amended to date) are acceptable to the bidder and are hereby agreed to by the bidder (otherwise bid may be disqualified).

14. Financial statements and documents to ascertain the financial health of bidder (In case of Litigation).(otherwise bid may be disqualified)

BDS Clause Number 6

ITB Number 11.1

Items/Lots and threre related documents:

See section items and Lots

BDS Clause Number 7

ITB Number 12.1

Items / Lots Specifications:

see section of items specifications.

BDS Clause Number 8

ITB Number 15.6

The price shall be **Fixed**.

BDS Clause Number 9

ITB Number 16.1

Currency of the Bids shall be : **PKR**

BDS Clause Number 10

ITB Number 17.1

The Bids/Bid Validity period shall be: **120 Days**

BDS Clause Number 11

ITB Number 18.1

The amount of Bid Security shall be as defined in Bid Security Section for items and lots given in **BDS 6**

The Bid Security shall be in the form of: **Pay Order, Banker's Cheque, Call at Deposit, Bank Guarantee, Demand Draft**

D. Submission of Bids

BDS Clause Number 12

ITB Number 20.1

Bid shall be submitted online on EPADS v2.0 whereas hard copy of the bid security should be submitted to the following;

Material Management (Lahore Electricity Supply Company (LESCO), Assistant Manager Procurement LESCO Head Quarter, 22-A, Queens Road., Lahore City, Lahore (District), Lahore Division (Division), Punjab (Province). before bid submission deadline.

Bids that are not submitted on EPADS v2.0 shall be disqualified.

The deadline for Bids submission is: **Thursday, October 29, 2026 10:30 AM**

E. Opening and Evaluation of Bids

BDS Clause Number 13

ITB Number 23.1

The Bids opening shall take place on **EPADS v2.0**.

Day : **Thursday**

Date: **Thursday, October 29, 2026**

Time : **11:00 AM**

BDS Clause Number 14

ITB Number 31.1

Selection technique adopted will be: **Least Cost Based Selection (LCBS)**
see Evaluation Criteria

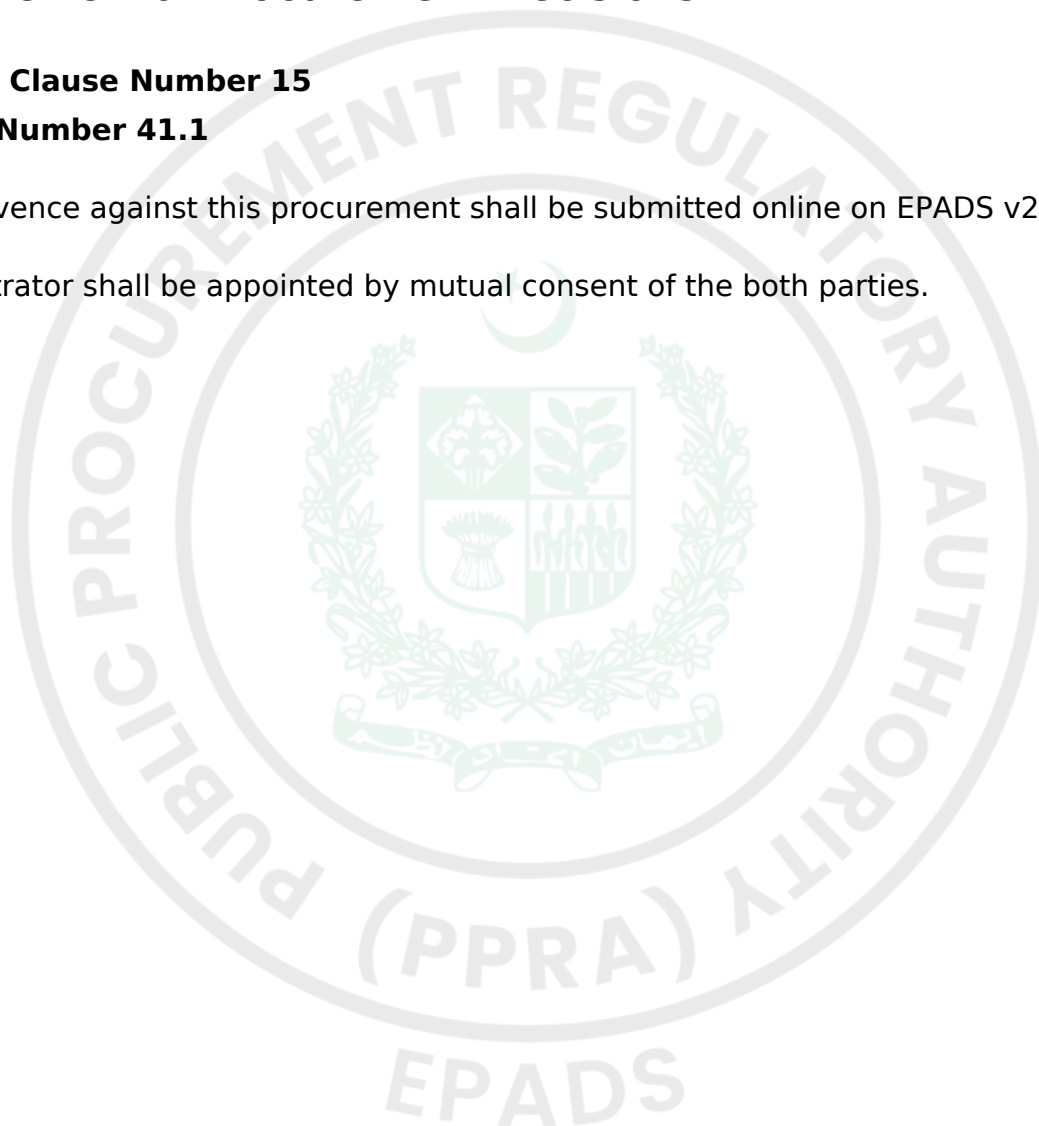
F. Review of Procurement Decisions

BDS Clause Number 15

ITB Number 41.1

Grievance against this procurement shall be submitted online on EPADS v2.0.

Arbitrator shall be appointed by mutual consent of the both parties.



Eligibility Criteria

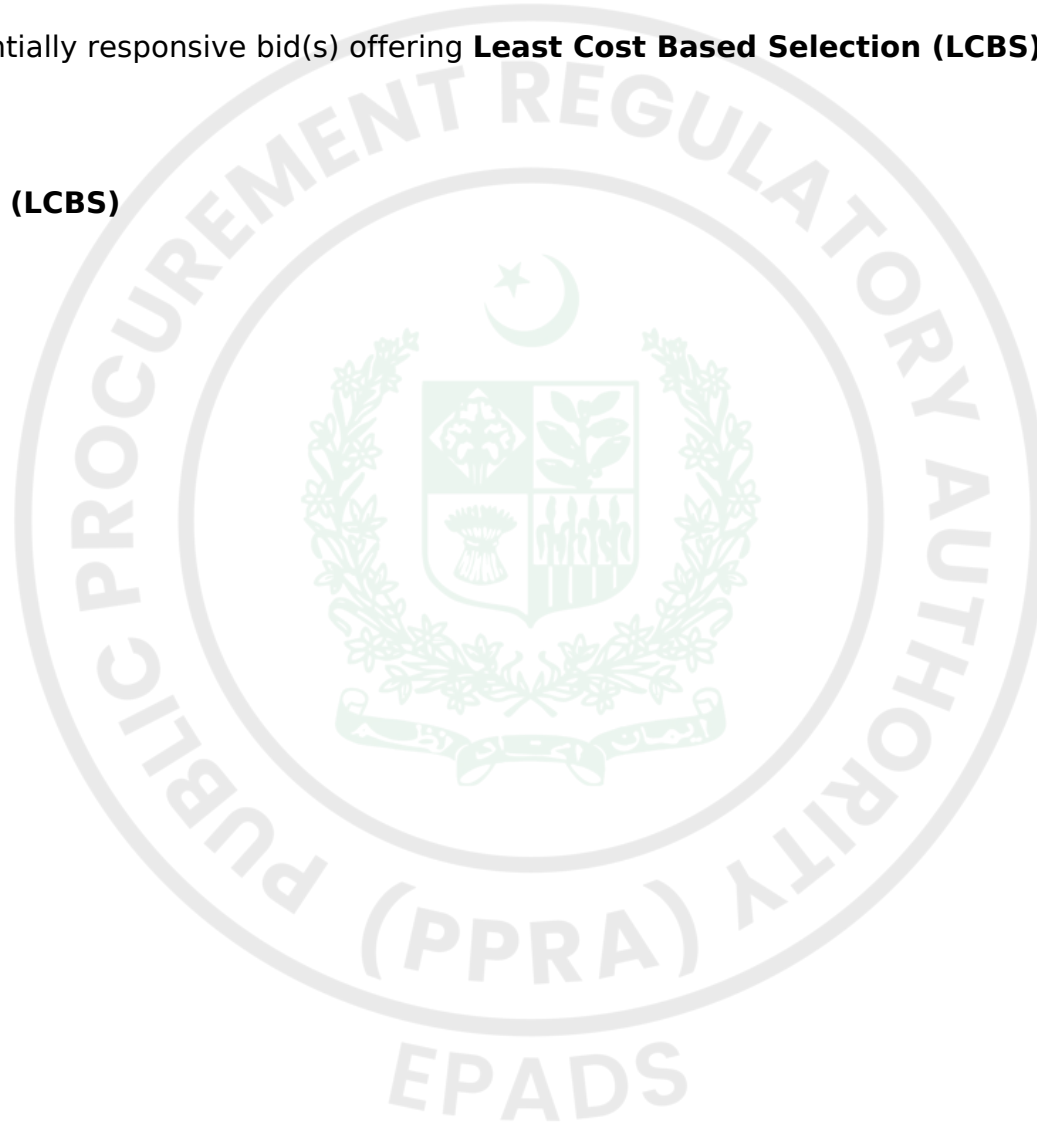
Bidder's Type	Required Registration
Any	FBR (NTN) FBR (GSTN)

Eligibility Criteria	Document
The bid security shall be, at the option of the bidder, in the form of Call Deposit Receipt (CDR) or Pay Order or Banker's Cheque or a Bank Guarantee must be issued in the favor of CEO LESCO and compliance all the instructions as stated in Annexure Section and Bid security Form of this documents. (Upload Bid Security other wise bidder may be declared ineligible).	Yes
Valid Prototype/Type Test approval from Stands & Specifications Department of PPMC/NGC, (if applicable) or undertaking for provision of fresh valid prototype approval from the Stands & Specifications Department of PPMC/NGC. Within delivery schedule in case of expired/not valid prototype approval. (Upload Document/Undertaking otherwise bidder may be declared ineligible).	Yes

Evaluation Criteria

Eligible bidder(s) with substantially responsive bid(s) offering **Least Cost Based Selection (LCBS)** shall be consider for the award of contract(s).

Least Cost Based Selection (LCBS)



Items/Lots

Lot Title : Item No. 1-Single Phase AMI Smart Energy Meters

Bid Security : 75000000 PKR

Item	UNSPSC	Delivery Schedule	Quantity	Manufacturer / Dealer Authorization	Warranty
Lot-1: Single Phase AMI Smart Energy Meters	Remote automatic meter reading system	Address: Dy. Manager, LESCO Regional Store Shalamar Lahore Dy. Manager, LESCO Regional Store Walgon Sohail Dy. Manager, LESCO Regional Store Pattoki Schedule: Within 60 days starting from the date of issuance of PO Quantity: 49500/Nos Address: Dy. Manager, LESCO Regional Store Shalamar Lahore Dy. Manager, LESCO Regional Store Walgon Sohail Dy. Manager, LESCO Regional Store Pattoki Schedule: Next 60 Days Quantity: 49500/Nos	99000 / Nos	Manufacturer Authorization form	24 Months

Item	UNSPSC	Delivery Schedule	Quantity	Manufacturer / Dealer Authorization	Warranty
Lot-2: Single Phase AMI Smart Energy Meters	Remote automatic meter reading system	Address: Dy. Manager, LESCO Regional Store Shalamar Lahore Dy. Manager, LESCO Regional Store Walgon Sohail Dy. Manager, LESCO Regional Store Pattoki Schedule: Within 60 days starting from the date of issuance of PO Quantity: 49500/Nos Address: Dy. Manager, LESCO Regional Store Shalamar Lahore Dy. Manager, LESCO Regional Store Walgon Sohail Dy. Manager, LESCO Regional Store Pattoki Schedule: Next 60 Days Quantity: 49500/Nos	99000 / Nos	Manufacturer Authorization form	24 Months
Lot-3: Single Phase AMI Smart Energy Meters	Remote automatic meter reading system	Address: Dy. Manager, LESCO Regional Store Shalamar Lahore Dy. Manager, LESCO Regional Store Walgon Sohail Dy. Manager, LESCO Regional Store Pattoki Schedule: Within 60 days starting from the date of issuance of PO Quantity: 49500/Nos Address: Dy. Manager, LESCO Regional Store Shalamar Lahore Dy. Manager, LESCO Regional Store Walgon Sohail Dy. Manager, LESCO Regional Store Pattoki Schedule: Next 60 Days Quantity: 49500/Nos	99000 / Nos	Manufacturer Authorization form	24 Months

Lot Title : Item No. 2-LT Type CT Operated AMI Smart Energy Meters

Bid Security : 3900000 PKR

Item	UNSPSC	Delivery Schedule	Quantity	Manufacturer / Dealer Authorization	Warranty
Lot-1: LT Type CT Operated AMI Smart Energy Meters	Power monitoring or control systems	Address: Dy. Manager, LESCO Regional Store Shalamar Lahore Dy. Manager, LESCO Regional Store Walgon Sohail Dy. Manager, LESCO Regional Store Pattoki Schedule: Within 60 days starting from the date of issuance of PO Quantity: 1750/Nos Address: Dy. Manager, LESCO Regional Store Shalamar Lahore Dy. Manager, LESCO Regional Store Walgon Sohail Dy. Manager, LESCO Regional Store Pattoki Schedule: Next 60 Days Quantity: 1750/Nos	3500 / Nos	Manufacturer Authorization form	24 Months

Item	UNSPSC	Delivery Schedule	Quantity	Manufacturer / Dealer Authorization	Warranty
Lot-2: LT Type CT Operated AMI Smart Energy Meters	Power monitoring or control systems	Address: Dy. Manager, LESCO Regional Store Shalamar Lahore Dy. Manager, LESCO Regional Store Walgon Sohail Dy. Manager, LESCO Regional Store Pattoki Schedule: Within 60 days starting from the date of issuance of PO Quantity: 1750/Nos Address: Dy. Manager, LESCO Regional Store Shalamar Lahore Dy. Manager, LESCO Regional Store Walgon Sohail Dy. Manager, LESCO Regional Store Pattoki Schedule: Next 60 Days Quantity: 1750/Nos	3500 / Nos	Manufacturer Authorization form	24 Months
Lot-3: LT Type CT Operated AMI Smart Energy Meters	Power monitoring or control systems	Address: Dy. Manager, LESCO Regional Store Shalamar Lahore Dy. Manager, LESCO Regional Store Walgon Sohail Dy. Manager, LESCO Regional Store Pattoki Schedule: Within 60 days starting from the date of issuance of PO Quantity: 1750/Nos Address: Dy. Manager, LESCO Regional Store Shalamar Lahore Dy. Manager, LESCO Regional Store Walgon Sohail Dy. Manager, LESCO Regional Store Pattoki Schedule: Next 60 Days Quantity: 1750/Nos	3500 / Nos	Manufacturer Authorization form	24 Months

Lot Title : Item No. 3-HT Type CT & PT Operated AMI Smart Energy Meters

Bid Security : 700000 PKR

Item	UNSPSC	Delivery Schedule	Quantity	Manufacturer / Dealer Authorization	Warranty
Lot-1: HT Type CT & PT Operated AMI Smart Energy Meters	Power monitoring or control systems	Address: Dy. Manager, LESCO Regional Store Shalamar, Dy. Manager, LESCO Regional Store Walgon Sohail, Dy. Manager, LESCO Regional Store Pattoki, Schedule: Within 60 days starting from the date of issuance of PO Quantity: 500/Nos Address: Dy. Manager, LESCO Regional Store Shalamar, Dy. Manager, LESCO Regional Store Walgon Sohail, Dy. Manager, LESCO Regional Store Pattoki, Schedule: Next 60 Days Quantity: 500/Nos	1000 / Nos	Manufacturer Authorization form	24 Months

Item	UNSPSC	Delivery Schedule	Quantity	Manufacturer / Dealer Authorization	Warranty
Lot-2: HT Type CT & PT Operated AMI Smart Energy Meters	Power monitoring or control systems	Address: Dy. Manager, LESCO Regional Store Shalamar Lahore Dy. Manager, LESCO Regional Store Walgon Sohail Dy. Manager, LESCO Regional Store Pattoki Schedule: Within 60 days starting from the date of issuance of PO Quantity: 500/Nos Address: Dy. Manager, LESCO Regional Store Shalamar Lahore Dy. Manager, LESCO Regional Store Walgon Sohail Dy. Manager, LESCO Regional Store Pattoki Schedule: Next 60 Days Quantity: 500/Nos	1000 / Nos	Manufacturer Authorization form	24 Months

Related Services of Goods:

No



Items/Lot Specification

Lot Title : Item No. 1-Single Phase AMI Smart Energy Meters

Item: Lot-1: Single Phase AMI Smart Energy Meters

UNSPSC: Remote automatic meter reading system

Specifications / Requirements:

Single Phase 2 Wire, 240V, 10/40Amp, 50Hz, having Accuracy Class 1.0 (kWh) and built-in programmable features, AMI Smart energy meters with capability of remote disconnect / reconnect relay and PTA compliant 4G communication module (with backward compatibility to 2G) for remote metering system along with MDC Software/Driver/HES as per Latest NTDC/WAPDA Specifications DDS:110:2012, DDS:98:2011, DDS:65:2003 (All Amended to Date) and Supply, Installation and Configuration, of the MDC software to meet the performance requirements listed in Item quantities in the Schedule of Prices. As per latest UDIL Specifications developed by PITC.

Item: Lot-2: Single Phase AMI Smart Energy Meters

UNSPSC: Remote automatic meter reading system

Specifications / Requirements:

Single Phase 2 Wire, 240V, 10/40Amp, 50Hz, having Accuracy Class 1.0 (kWh) and built-in programmable features, AMI Smart energy meters with capability of remote disconnect / reconnect relay and PTA compliant 4G communication module (with backward compatibility to 2G) for remote metering system along with MDC Software/Driver/HES as per Latest NTDC/WAPDA Specifications DDS:110:2012, DDS:98:2011, DDS:65:2003 (All Amended to Date) and Supply, Installation and Configuration, of the MDC software to meet the performance requirements listed in Item quantities in the Schedule of Prices. As per latest UDIL Specifications developed by PITC.

Item: Lot-3: Single Phase AMI Smart Energy Meters

UNSPSC: Remote automatic meter reading system

Specifications / Requirements:

Single Phase 2 Wire, 240V, 10/40Amp, 50Hz, having Accuracy Class 1.0 (kWh) and built-in programmable features, AMI Smart energy meters with capability of remote disconnect / reconnect relay and PTA compliant 4G communication module (with backward compatibility to 2G) for remote metering system along with MDC Software/Driver/HES as per Latest NTDC/WAPDA Specifications DDS:110:2012, DDS:98:2011, DDS:65:2003 (All Amended to Date) and Supply, Installation and Configuration, of the MDC software to meet the performance requirements listed in Item quantities in the Schedule of Prices. As per latest UDIL Specifications developed by PITC.

Lot Title : Item No. 2-LT Type CT Operated AMI Smart Energy Meters

Item: Lot-1: LT Type CT Operated AMI Smart Energy Meters

UNSPSC: Power monitoring or control systems

Specifications / Requirements:

As per relevant NTDC Design & Standard DDS- 50:2007, 98:2011, 110:2012 (all amended to date) applicable at the date 15 days prior to bids submission deadline and IEC-62055-31 for relay with capability of remote disconnect /reconnect for Whole Current 3/Phase Meters only. The backup battery must have minimum capacity of 2000mAh for Three Phase Meters with support of super capacitor. The MDC (driver) software must be PITC-UDIL compliant.

Item: Lot-2: LT Type CT Operated AMI Smart Energy Meters

UNSPSC: Power monitoring or control systems

Specifications / Requirements:

As per relevant NTDC Design & Standard DDS- 50:2007, 98:2011, 110:2012 (all amended to date) applicable at the date 15 days prior to bids submission deadline and IEC-62055-31

for relay with capability of remote disconnect /reconnect for Whole Current 3/Phase Meters only. The backup battery must have minimum capacity of 2000mAh for Three Phase Meters with support of super capacitor. The MDC (driver) software must be PITC-UDIL compliant.

Item: Lot-3: LT Type CT Operated AMI Smart Energy Meters

UNSPSC: Power monitoring or control systems

Specifications / Requirements:

As per relevant NTDC Design & Standard DDS- 50:2007, 98:2011, 110:2012 (all amended to date) applicable at the date 15 days prior to bids submission deadline and IEC-62055-31 for relay with capability of remote disconnect /reconnect for Whole Current 3/Phase Meters only. The backup battery must have minimum capacity of 2000mAh for Three Phase Meters with support of super capacitor. The MDC (driver) software must be PITC-UDIL compliant.

Lot Title : Item No. 3-HT Type CT & PT Operated AMI Smart Energy Meters

Item: Lot-1: HT Type CT & PT Operated AMI Smart Energy Meters

UNSPSC: Power monitoring or control systems

Specifications / Requirements:

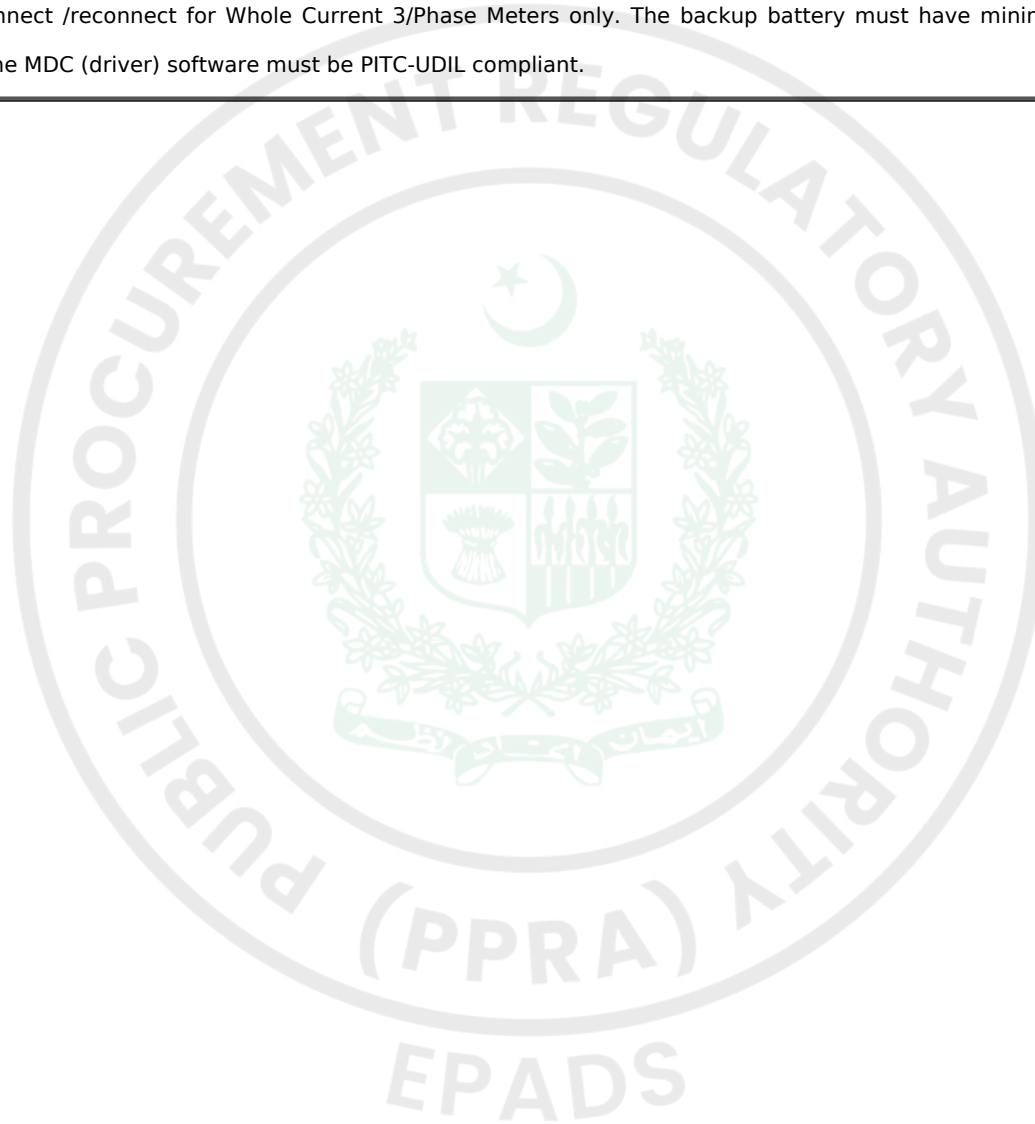
As per relevant NTDC Design & Standard DDS- 50:2007, 98:2011, 110:2012 (all amended to date) applicable at the date 15 days prior to bids submission deadline and IEC-62055-31 for relay with capability of remote disconnect /reconnect for Whole Current 3/Phase Meters only. The backup battery must have minimum capacity of 2000mAh for Three Phase Meters with support of super capacitor. The MDC (driver) software must be PITC-UDIL compliant.

Item: Lot-2: HT Type CT & PT Operated AMI Smart Energy Meters

UNSPSC: Power monitoring or control systems

Specifications / Requirements:

As per relevant NTDC Design & Standard DDS- 50:2007, 98:2011, 110:2012 (all amended to date) applicable at the date 15 days prior to bids submission deadline and IEC-62055-31 for relay with capability of remote disconnect /reconnect for Whole Current 3/Phase Meters only. The backup battery must have minimum capacity of 2000mAh for Three Phase Meters with support of super capacitor. The MDC (driver) software must be PITC-UDIL compliant.



Price Schedule

For Individual Items

#	Item Title	Quantity	Unit Price (PKR)	Total Price (PKR)	Delivery Location	Delivery Period / Year	Country of Origin
1							
2							

For Lots

#	Lot Title	Total Lot Price (PKR)	Country of Origin
1	[Lot 1 Title]		





General Conditions of Contract

A. General

1. Definitions

1.1 Unless the context otherwise requires, the following terms whenever used in this Contract shall have the same meaning and shall be interpreted as indicated

- a. "Applicable Law" means the laws and any other instruments having the force of law in the Government's Country, or in such other country as may be specified in the Special Conditions of the Contract (SC), as they may be issued and in force from time to time;
- b. "Procuring Agency" means:-
 - a. any Ministry, Division, Department or any Office of the Government;
 - b. any authority, corporation, body or organization established by or under a Law or which is owned or controlled by the Government;
- c. "The Contract" means an agreement enforceable by law;
- d. "The Contract Price" means the price payable to the Bidder under the Contract for the full and proper performance of its contractual obligations;
- e. "Ancillary Services" means those services ancillary to the provision of Goods, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training, and other such obligations of the Bidder covered under the Contract;
- f. "GCC" means the General Conditions of Contract contained in this section;
- g. "SCC" means the Special Conditions of Contract by which the GCC may be amended or supplemented;
- h. "Day" means calendar day unless indicated otherwise.
- i. "Effective Date" means the date on which this Contract comes into force and effect.
- j. "The Bidder" means the individual or corporate body whose Bids to provide the Goods has been accepted by the Procuring Agency;
- k. "The Project Site," where applicable, means the place or places named in Bids Data Sheet and technical Specifications;
- l. "Government" means the Government of Pakistan;
- m. "Subcontractor" means any entity to which the Bidder subcontracts any part of the Goods.
- n. "Service" means any object of procurement other than goods or works;
- o. "Party" means the Procuring Agency or the Bidder, as the case may be, and "Parties" means both of them;
- p. "Foreign Currency" means any currency other than the currency of the country of the Procuring Agency;

q. "Completion Date" means the date of completion of the contract by the Bidder as certified by the Procuring Agency;

r. "In Writing" means communicated in written form with proof of receipt;

s. "Local Currency" means the currency of Pakistan;

2. Application and Interpretation

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

2.2 In interpreting these Conditions of Contract headings and marginal notes are used for convenience only and shall not affect their interpretations unless specifically stated; references to singular include the plural and vice versa; and masculine include the feminine. Words have their ordinary meaning under the language of the Contract unless specifically defined.

3. Applicable Law

3.1 The contract shall be governed and interpreted in accordance with the laws of Pakistan, unless otherwise specified in SCC.

4. Governing Language

4.1 The Contract as well as all correspondence and documents relating to the Contract exchanged between the Bidder and the Procuring Agency, shall be written in the **English language** unless otherwise stated in the SCC. Supporting documents and printed literature that are part of the Contract may be in another language provided these are accompanied by an accurate translation of the relevant passages in English, in which case, for purposes of interpretation of the Contract, this translation shall govern.

5. Notices

5.1 Any notice, request, or consent made pursuant to this Contract shall be in writing and shall be deemed to have been made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent by registered mail, telex, telegram, or facsimile to such Party at the address specified in the SCC.

6. Delivery/Location

6.1 The Goods shall be delivered to such locations as the Procuring Agency may approve and as specified in SCC.

7. Authorized Representatives / Authority of Member in charge

7.1 Any action required or permitted to be taken, and any document required or permitted to be executed, under this Contract by the Procuring Agency or the Bidder may be taken or executed by the officials specified in the SCC.

B. Commencement, Completion, Modification, and Termination of Contract

8. Effectiveness of Contract

8.1 This Contract shall come into effect on the date the Contract is signed by both parties and such other later date as may be stated in the SCC.

9. Commencement of Services

9.1 The Bidder shall confirm availability of Key Experts and begin carrying out the Services not later than the number of days after the Effective Date specified in the SCC.

10. Program

10.1 Before commencement of the Services, the Bidder shall submit to the Procuring Agency for approval a Program showing the general methods, arrangements, order and timing for all activities. The Services shall be carried out in accordance with the approved Program as updated.

11. Starting Date/Expiration Date

11.1 The Bidder shall start carrying out the Services Five (05) days after the date the Contract becomes effective, or at such other date as may be specified in the SCC.

11.2 Unless terminated earlier pursuant to Clause **GCC 15** hereof, this Contract shall expire at the end of such time period after the Effective Date as specified in the SCC.

12. Entire Agreement

12.1 This Contract contains all covenants, stipulations and provisions agreed by the Parties. No agent or representative of either Party has authority to make, and the Parties shall not be bound by or be liable for, any statement, representation, promise or agreement not set forth herein.

13. Modification

13.1 Any modification or variation of the terms and conditions of this Contract, including any modification or variation of the scope of the Services, may only be made by written agreement between the Parties. However, each Party shall give due consideration to any Bids for modification or variation made by the other Party.

13.2 In cases of any modifications or variations, the prior written consent of the Procuring Agency is required.

14. Force Majeure

14.1 Definition

For the purposes of this Contract, “Force Majeure” means an event which is beyond the reasonable control of a Party and which makes a Party’s performance of its obligations under the Contract impossible or so impractical as to be considered impossible under the circumstances.

14.2 No Breach of Contract

The failure of a Party to fulfill any of its obligations under the contract shall not be considered to be a breach of, or default under, this Contract in so far as such inability arises from an event of Force Majeure, provided that the Party affected by such an event (a) has taken all reasonable precautions, due care and reasonable alternative measures in order to carry out the terms and conditions of this Contract, and (b) has informed the other Party as soon as possible about the occurrence of such an event.

14.3 Extension of Time

Any period within which a Party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result

of Force Majeure.

14.4 Payments

During the period of their inability to perform the Services as a result of an event of Force Majeure, the Bidder shall be entitled to continue to be paid under the terms of this Contract, as well as to be reimbursed for additional costs reasonably and necessarily incurred by them during such period for the purposes of the Services and in reactivating the Service after the end of such period.

15. Termination

15.1 By the Procuring Agency

The Procuring Agency may terminate this Contract in case of the occurrence of any of the events specified in paragraphs (a) through (e) of this Clause. In such an occurrence the Procuring Agency shall give at least thirty (30) calendar days' written notice of termination to the Bidder in case of the events referred to in (a) through (d); at least sixty (60) calendar days' written notice in case of the event referred to in (e);

- a. If the Bidder fails to remedy a failure in the performance of its obligations hereunder, as specified in a notice of suspension;
- b. If the Bidder becomes (or, if the Bidder consists of more than one entity, if any of its members becomes) insolvent or bankrupt or enter into any agreements with their creditors for relief of debt or take advantage of any law for the benefit of debtors or go into liquidation or receivership whether compulsory or voluntary;
- c. If the Bidder fails to comply with any final decision reached as a result of arbitration proceedings;
- d. If, as the result of Force Majeure, the Bidder is unable to perform a material portion of the Services for a period of not less than sixty (60) calendar days;
- e. If the Procuring Agency, in its sole discretion and for any reason whatsoever, decides to terminate this Contract;

15.2 By the Bidder

The Bidder may terminate this Contract, by not less than thirty (30) calendar days' written notice to the Procuring Agency, in case of the occurrence of any of the events specified in paragraphs (a) through (d) of this Clause.

- a. If the Procuring Agency fails to pay any money due to the Bidder pursuant to this Contract and not subject to dispute within forty-five (45) calendar days after receiving written notice from the Bidder that such payment is overdue.
- b. If, as the result of Force Majeure, the Bidder is unable to perform a material portion of the Services for a period of not less than sixty (60) calendar days.
- c. If the Procuring Agency fails to comply with any final decision reached as a result of arbitration.
- d. If the Procuring Agency is in material breach of its obligations pursuant to this Contract and has not remedied the same within forty-five (45) days (or such longer period as the Bidder may have subsequently approved in writing) following the receipt by the Procuring Agency of the Bidder's notice specifying such breach.

C. Obligations of the Bidder

16. General

16.1 Standard of Performance

1. The Bidder shall deliver the product and carry out the Services with all due diligence, efficiency and economy, in accordance with generally accepted professional standards and practices, and shall observe sound management practices, and employ appropriate technology and safe and effective equipment, machinery, materials and methods. The Bidder shall always act, in respect of any matter relating to this Contract or to the Services, as a faithful adviser to the Procuring Agency, and shall at all times support and safeguard the Procuring Agency's legitimate interests in any dealings with the third parties.

16.2 Law Applicable to Goods

The Bidder shall deliver the goods in accordance with the Contract and in accordance with the Law of Pakistan and shall take all practicable steps to ensure that any of its Experts and Sub-Bidders, comply with the Applicable Law.

17. Conflict of Interests

17.1 Bidder Not to Benefit from Commissions and Discounts.

The remuneration of the Bidder shall constitute the Bidder's sole remuneration in connection with this Contract or the Services, and the Bidder shall not accept for their own benefit any trade commission, discount, or similar payment in connection with activities pursuant to this Contract or to the Services or in the discharge of their obligations under the Contract, and the Bidder shall use their best efforts to ensure that the Personnel, any Subcontractors, and agents of either of them similarly shall not receive any such additional remuneration.

17.2 Bidder and Affiliates Not to be Otherwise Interested in Project

The Bidder agree that, during the term of this Contract and after its termination, the Bidder and its affiliates, as well as any Subcontractor and any of its affiliates, shall be disqualified from providing Goods for any project resulting from or closely related to the Services.

17.3 Prohibition of Conflicting Activities

Neither the Bidder nor its Subcontractors nor the Personnel shall engage, either directly or indirectly, in any of the following activities:

- a. during the term of this Contract, any business or professional activities in the Government's country which would conflict with the activities assigned to them under this Contract;
- b. during the term of this Contract, neither the Bidder nor their Subcontractors shall hire public employees in active duty or on any type of leave, to perform any activity under this Contract;

18. Confidentiality

18.1 Except with the prior written consent of the Procuring Agency, the Bidder and the Experts shall not at any time communicate to any person or entity any confidential information acquired in the course of the contract.

19. Insurance to be Taken Out by the Bidder

19.1 The Bidder(a) shall take out and maintain, and shall cause any Subcontractors to take out and maintain, at its (or the Subcontractors', as the case may be) own cost but on terms and conditions approved by the Procuring Agency, insurance against the risks, loss or damage, and for the coverage, as shall be specified in the SCC; and (b) at the Procuring Agency's request, shall provide evidence to the Procuring Agency showing that such insurance has been taken out and maintained and that the current premiums have been paid.

20. Bidder's Actions Requiring Procuring Agency's Prior Approval

20.1 The Bidder shall obtain the Procuring Agency's prior approval in writing before taking any of the following actions:

- (a) appointing such members of the Personnel not provided by the Bidder;
- (b) changing the Program of activities; and
- (c) any other action that may be specified in the SCC.

21. Reporting Obligations

21.1 The Bidder shall submit to the Procuring Agency the reports and documents in the numbers, and within the periods as prescribed by the Procuring Agency.

22. Liquidated Damages

22.1 If the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Procuring Agency shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in SCC of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the performance security (or guarantee) specified in SCC. Once the said maximum is reached, the Procuring Agency may consider termination of the Contract pursuant to **GCC Clause 15**.

22.2 Correction for Over-payment

If the Intended Completion Date is extended after liquidated damages have been paid, the Procuring Agency shall correct any overpayment of liquidated damages by the Bidder by adjusting the next payment certificate. The Bidder shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in SCC.

22.3 Lack of performance penalty

If the Bidder has not corrected a Defect within the time specified in the Procuring Agency's notice, a penalty for Lack of performance will be paid by the Bidder. The amount to be paid will be calculated as a percentage of the cost of having the Defect corrected, assessed as specified in the SCC.

23. Performance Guarantee

23.1 Within Seven (07) days from the issuance of acceptance letter from the Procuring Agency, the successful Bidder shall furnish the Performance Guarantee in shape of ----- at the discretion of the PA in the amount **specified in SCC**. In case the amount of Bids security is equal or greater than

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

23.3 The Performance Guarantee shall be denominated in the currency of the Contract, or in a freely convertible currency acceptable to the Procuring agency and shall be in the acceptable form as specified in SCC.

23.4 The Performance Guarantee will be discharged by the Procuring agency and returned to the Supplier not later than thirty (30) days following the date of completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless otherwise **specified in SCC**.

24. Fraud and Corruption

24.1 The Procuring Agency requires the Supplier to disclose any commissions or fees that may have been paid or are to be paid to agents or any other party with respect to the Bidding process or execution of the Contract. The information disclosed must include at least the name and address of the agent or other party, the amount and currency, and the purpose of the commission, gratuity or fee.

25. Sustainable Procurement

25.1 The Bidder shall conform to the sustainable procurement contractual provisions, if and as specified in the SCC.

D. Bidder's Personnel

26. Description of Personnel

26.1 The titles, agreed job descriptions, minimum qualifications, and estimated periods of engagement in the carrying out of the Services of the Bidder's Key Personnel. The Key Personnel listed by title as well as by name are hereby approved by the Procuring Agency.

27. Removal and/or Replacement of Personnel

27.1 Except as the Procuring Agency may otherwise agree, no changes shall be made in the Key Personnel. If, for any reason beyond the reasonable control of the Bidder, it becomes necessary to replace any of the Key Personnel, the Bidder shall provide as a replacement a person of equivalent or better qualifications.

27.2 If the Procuring Agency finds that any of the Personnel have (i) committed serious misconduct or have been charged with having committed a criminal action, or (ii) have reasonable cause to be dissatisfied with the performance of any of the Personnel, then the Bidder shall, at the Procuring Agency's written request specifying the grounds thereof, provide as a replacement a person with qualifications and experience acceptable to the Procuring Agency.

27.3 The Bidder shall have no claim for additional costs arising out of or incidental to any removal and/or replacement of Personnel.

E. Obligations of the Procuring Agency

28. Assistance and Exemptions

28.1 The Procuring Agency shall use its best efforts to ensure that the Government shall provide the Bidder such assistance and exemptions as specified in the SCC.

29. Change in the Applicable Law

29.1 If, after the date of this Contract, there is any change in the Applicable Law with respect to taxes and duties which increases or decreases the cost of the related Services rendered by the Bidder, then the remuneration and reimbursable expenses otherwise payable to the Bidder under this Contract shall be increased or decreased accordingly by agreement between the Parties, and corresponding adjustments shall be made to the amounts referred in the SCC.

30. Services and Facilities

30.1 The Procuring Agency shall make available to the Bidder and the Experts, for the purposes of the Services and free of any charge, the services, facilities and property described , at the times and in the manner specified in the SCC or terms of reference.

30.2 In case that such services, facilities and property shall not be made available to the Bidder, the Parties shall agree on (i) any time extension that it may be appropriate to grant to the Bidder for the performance of the Services, (ii) the manner in which the Bidder shall procure any such services, facilities and property from other sources, and (iii) the additional payments, if any, to be made to the Bidder as a result thereof.

F. Payments to the Bidder

31. Contract Price

31.1 The price payable shall be in Pakistani Rupees unless otherwise specified in the SCC. Prices charged by the Supplier for Goods delivered under the Contract shall not vary from the prices quoted by the Supplier in its Bid.

32. Terms and Conditions of Payment

32.1 Payments will be made to the Bidder according to the payment schedule stated in the SCC and as per actual invoice submitted by the Bidder.

32.2 Unless otherwise stated in the SCC, the advance payment shall be made against the provision by the Bidder of a bank guarantee for the same amount, and shall be valid for the period stated in the SCC. Any other payment shall be made after the conditions listed in the SCC for such payment have been met, and the Bidder have submitted an invoice to the Procuring Agency specifying the amount due.

33. Currency of Payment

33.1 Any payment under this Contract shall be made in the currency(ies) specified in the SCC.

G. Quality Control

34. Identifying Defects

34.1 The principle and modalities of Inspection of the Goods by the Procuring Agency shall be as indicated in the SCC. The Procuring Agency shall check the Bidder's performance and notify him of any Defects that are found. Such checking shall not affect the Bidder's responsibilities. The Procuring Agency may instruct the Bidder to search for a Defect and to uncover and test any service that the Procuring Agency considers may have a Defect. Defect Liability Period is as defined in the SCC.

35. Correction of Defects, and

Lack of Performance Penalty

35.1 The Procuring Agency shall give notice to the Bidder of any Defects before the end of the Contract. The Defects liability period shall be extended for as long as Defects remain to be corrected.

35.2 Every time notice a Defect is given, the Bidder shall correct the notified Defect within the length of time specified by the Procuring Agency's notice.

35.3 If the Bidder has not corrected a Defect within the time specified in the Procuring Agency's notice, the Procuring Agency will assess the cost of having the Defect corrected, the Bidder will pay this amount, and a Penalty for Lack of Performance.

36. Taxes and Duties

36.1 A Supplier shall be entirely responsible for all taxes, duties, fees, etc., incurred until delivery of the contracted Goods to the Procuring Agency.

H. Settlement of Disputes

37. Alternate Dispute Resolution

37.1 The disputes between the parties to the contract may be settled in accordance with Public Procurement Rules, 2004.

37.2 The procuring agency shall refer the matter to the Chief Justice Islamabad High Court or Managing Director PPRA or the Secretary Ministry of Law & Justice for appointment of Arbitrator.

37.3 The fee for the Arbitrator shall be specified in Pak Rupees as determined by the appointing authority which shall be borne and shared equally by the contracting parties.



Special Conditions of Contract

SECTION VIII. SPECIAL CONDITIONS OF CONTRACT

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

Number of GC Clause

Amendments of, and Supplements to, Clauses in the General Conditions of Contract

Number of GC Clause 1

Definitions

The Procuring Agency is: LAHORE ELECTRIC SUPPLY COMPANY LIMITED (MATERIAL MANAGEMENT), CHIEF ENGINEER Material Management (Lahore Electricity Supply Company (LESCO), Assistant Manager Procurement LESCO Head Quarter, 22-A, Queens Road., Lahore City, Lahore (District), Lahore Division (Division), Punjab (Province).

The Supplier is:

The title of the subject procurement is: TENDER NO. 4442 (Single Phase, LT Type CT Operated and HT Type CT & PT Operated AMI Smart Energy Meters)

Number of GC Clause 3

Applicable/Governing Law:

The Contract shall be interpreted in accordance with the laws of Islamic Republic of Pakistan

Number of GC Clause 4

Language:

The language of the Contract, all correspondence and communications to be given, and all other documentation to be prepared and supplied under the Contract shall be in **English**.

Number of GC Clause 5

Notices:

The addresses for the notices are:

Procuring Agency:

LAHORE ELECTRIC SUPPLY COMPANY LIMITED (MATERIAL MANAGEMENT), CHIEF ENGINEER

Material Management (Lahore Electricity Supply Company (LESCO), Assistant Manager Procurement LESCO Head Quarter, 22-A, Queens Road., Lahore City, Lahore (District), Lahore Division (Division), Punjab (Province).

+92-370-499-0342

ammm5@lesco.gov.pk

Contractor/ Bidder:

[Name, address and telephone number].

The Contractor/ Bidder's Representative(s)

[Name, address, telephone number and e-mail address]

Number of GC Clause 7.1

The Authorized Representatives are:

For the Procuring Agency:

LAHORE ELECTRIC SUPPLY COMPANY LIMITED (MATERIAL MANAGEMENT), CHIEF ENGINEER

Material Management (Lahore Electricity Supply Company (LESCO), Assistant Manager Procurement
LESCO Head Quarter, 22-A, Queens Road., Lahore City, Lahore (District), Lahore Division (Division),
Punjab (Province).

+92-370-499-0342

ammm5@lesco.gov.pk

For the Bidder:

Name:

Designation:

Address:

Number of GC Clause 8

Effectiveness of the contract

Number of GC Clause 9

Commencement of Contract:

Number of GC Clause 11.2

Expiration of Contract:

Number of GC Clause 15

Termination

In the event of termination of the contract due to any reason as already defined in the General Conditions of Contract, the Bidder shall be responsible for providing to the Authority the Goods till the time of alternate arrangements.

Number of GC Clause 17

Conflict of Interest:

The Procuring Agency reserves the right to determine on a case-by-case basis whether the Bidder should be disqualified from providing goods or services due to a conflict of a nature described in Clause GCC 17.

Number of GC Clause 22

Liquidated Damages

If the Bidder fails to provide services as required under the contract or in case of any data loss/data breach or any incident compromising the data security or other such failures related to any services, the Bidder shall pay to the Procuring Agency as Liquidated Damages at a rate of **0.06% to 10.00%** of the Contract value, in accordance with the extent of performance failure & the cost of investigating such incidents as judged by the Authority.

Number of GC Clause 23

Performance Guarantee:

The amount of performance guarantee shall be **5.00%** of the contract price in acceptable form of **Pay Order, Banker's Cheque, Call at Deposit, Bank Guarantee, Demand Draft**

Number of GC Clause 32

Payment terms:

Payment will be made to the Bidder against the procured Goods and services according to the actual invoice or running bills submitted by the Bidder against the services provided within the time given in the conditions of the contract.

Number of GC Clause 33

Currency of Payment:

All the payment to be released to the contractor/Bidder shall be in Pakistani Rupees.

Number of GC Clause 34

Identifying Defects:

The Authority reserves the right at any time to inspect the premises of the provider to inspect the goods and monitor the goods being provided.

Inspections & Tests Requirements

Inspection of offered material will be carried out at the manufacturer's premises by the C.E (MI) PPMC, CE (TS) and LESCO team or his / their authorized representatives if required by the purchaser / competent authority. Notice in writing shall have to be given to the office of C.E (MI) PPMC and Chief Engineer (MM) LESCO HQ by you when the store against the order is ready for inspection. All expenses of Inspector(s)/Engineer(s) will be born by the Tenderer.

Boarding/ Lodging, Daily Allowance etc. shall have to be Borne by the Tenderers/Supplier. The manufacturer shall allow to Inspector(s) the use of his laboratory material, instruments & labour free of cost as per provision of the specification /usual trade practice. The manufacturer/Supplier will have to deposit Inspection Fee @ 0.5% of the cost of material on order while offering material for inspection in the Account of Chief Engineer (MI) PPMC.

For local inspection, the bidder will provide all reasonable facilities as provided in the specifications or followed by the Industry or Trade in general, shall have to be afforded to the inspecting officers by you at your expense, boarding and lodging and daily allowance permissible under LESCO/WAPDA rules.

In case the Goods fail to withstand any test, the cost of repeating such test at the cost of witnessing such test by the Inspector shall be borne by the Supplier and the equipment released or modified to the satisfaction of the purchaser without any additional cost to the purchaser.

Any inspection and or witnessing of tests or the waiving of such tests and or surveillance by the Engineer/Inspectors shall not relieve the Supplier of its obligations and responsibilities under the Contract regardless of any approval or consent given by the Engineer and or Inspector.

Two copies of all the Inspection and Tests Reports and certificates including those for quality control shall be supplied to the Engineer. The reports and certificates of such tests as have been witnessed shall be countersigned by the Engineer and or Inspector.

The supplier/manufacturer shall have to carry out specified type tests & sample tests at manufacturer's premises as described in above specifications (amended to-date) in the presence of LESCO/ NTDC/NGC / PPMC / WAPDA Engineer(s) before mass production.

The manufacturer will have to develop/establish in house testing facilities for all the type tests as per standard specifications. These facilities should be approved by the Stands & Specifications Department of PPMC. Joint Type Test shall be carried in accordance with relevant clause of the above specifications.

The word "THE LAHORE ELECTRIC SUPPLY COMPANY" LTD." or LESCO, with PO No. & year of manufacturing together with other essential markings as per specification shall be provided.

Any changes suggested by the Stands & Specifications Department of PPMC. during prototype testing for compliance of Specification and Purchase Order shall have to be incorporated without any extra price claim.

The testing charges of the material, if any, shall be borne by the tenderer.

All the materials shall be locally manufactured at your Works or approved facilities in Pakistan under your quality control. Representative of Chief Engineer (MI) PPMC and Stands & Specifications Department of PPMC. shall verify the local manufacturing of parts/components at your Works or facilities elsewhere in Pakistan and assembly of complete material at your works during Stage Inspection of mass production once in every two months duration.

The tenderer shall provide free of charge all such assistance, instruments, machines, labour & material as are normally required for carrying out such tests.

The tenderer shall submit the delivery schedule with offer.

Delivery & Documents

For Goods from within Pakistan: For local supplier upon submission of delivery challan duly stamped and signed by LESCO/WAPDA consignee, Inspection Certificate, Warranty Certificate and confirmation of receipt of performance Security by this office.

The above documents shall be received by the Procuring Agency before arrival of the Goods and, if not received, the Supplier will be responsible for any consequent expenses.

For local Manufacturers:- 50% quantity against each item / lot shall be supplied within 60-days and remaining 50% quantity shall be delivered in next 60-days from the date of issuance of Purchase Order. Delivery period is the essence of the Contract and delivery must be completed not later than the dates specified.

The terms "Delivery Date" shall mean the date of 1st day of Inspection or 15th day of Inspection Call whichever is earlier, shall be reckoned as date of delivery of Store to Consignee provided the goods accepted for supply have been delivered within 20-days of issue of Inspection Certificate subject to the condition that:

The supplier / manufacturer offers the material for Inspection at least 15-days prior to the due date and the offer is not rejected due to being a fake call or material not conforming to the specification.

For Foreign Manufacturers:- 100% quantity against each item / lot shall be supplied within 120-days from the date of issuance of Purchase Order. Delivery period is the essence of the Contract and delivery must be completed not later than the dates specified.

The terms "Delivery Date" shall mean the date of 1st day of Inspection or 60th day of Inspection Call whichever is earlier, shall be reckoned as date of delivery of Store to Consignee provided the goods accepted for supply have been delivered within 60-days of issue of Inspection Certificate subject to the condition that:

The supplier / manufacturer offers the material for Inspection at least 60-days prior to the due date and the offer is not rejected due to being a fake call or material not conforming to the specification.

(a) All the payments due under this Purchase Order will be made through direct / cash payment or confirmed & irrevocable Letter of Credit for Contract Price i.e. Rs._____ to be established by Chief Financial Officer LESCO according to their share allocation through any Scheduled Bank of Pakistan in your favour. The amount of material excluding Sales Tax i.e. Rs._____ in the Letter of Credit shall be available for negotiation and encashment on the production of documents mentioned as under:

i- Bill in triplicate for 100% claim. ii- Delivery Challan and GRN duly stamped and signed by the consignee. iii- Warranty Certificate. iv- Confirmation of Chief Engineer (MM) LESCO about acceptance of Performance Bond. v- Inspection Certificate issued by C.E (MI) PPMC or his authorized representative. vi- 1/5th of GST amount will be deducted at the time of making payment as per FBR rules. vii- Professional Tax Paid Certificate by the firm.

viii- The manufacturer in its invoices shall also give an undertaking that in case of omission of any deductible amount, LESCO's claim at any later stage (through / pre-audit or post audit) shall be acceptable to you. ix- While raising invoice for the material supplied, the firm shall vividly mention the account number as well as the name of the bank and branch enabling Finance Director office to release payment thereof accordingly.

x- As per directions of FBR dated. 3.9.2015 conveyed vide C.E (Operation) PEPCO vide letter No. 1918-28 dated. 17.09.2015, the payment to the registered persons may be linked with the active taxpayer status of the suppliers as per FBR database. If any registered supplier is not in ATL his payment should be stopped till he files his mandatory returns and appears on ATL of FBR.

xi- At the time of delivery, supplier / manufacturer will submit Commercial Invoice and Sales Tax Invoice along-with the Goods Dispatch Note to Store as well as to respective Billing Office.

(b) The amount of Sales Tax i.e. Rs._____ in the Letter of Credit shall be available for negotiation and en-cashable on production of following documents "DULY PRE-AUDITED" by the office of Director Finance of concerned DISCOs but Finance Directorate will take maximum 7-days for pre-audit: i. Sales Tax Return-cum-Payment challan for the month of delivery of material. ii. Copy of GRN duly stamped and signed by respective consignees. iii. Sales Tax invoice as per GRN above (Item-ii)

In case the manufacturers who pay lump sum Sales Tax, they shall also submit an affidavit on on-judicial paper that "he Challan includes the amount of Rs._____ of Sales Tax for supply of the quantity of Material to LESCO against P.O. No.____ dated ____.

PARTIAL DELIVERIES AND PART PAYMENT ARE ALLOWED. NOTE:- All charges relating to L/C opening and negotiation shall be borne by the Supplier.

Number of GC Clause 37

Following is the guidance for Dispute Resolution

- i. If any dispute of any kind whatsoever shall arise between the Authority and the Bidder in connection with or arising out of the Contract, including without prejudice to the generality of foregoing, any question regarding its existence, validity, termination and the execution of the Contract – whether during developing phase or after their completion and whether before or after the termination, abandonment or breach of the Contract – the parties shall seek to resolve any such dispute or difference by mutual diligent negotiations in good faith within 14 (fourteen) days following a notice sent by one Party to the other Party in this regard.
- ii. At future of negotiation the dispute shall be resolved through mediation and mediator shall be appointed with the mutual consent of the both parties.
- iii. At the event of failure of mediation to resolve the dispute relating to this contract such dispute shall finally be resolved through binding Arbitration by sole arbitrator in accordance with Arbitration Act 1940. The arbitrator shall be appointed by mutual consent of the both parties. The Arbitration shall take place in Islamabad, Pakistan and proceedings will be conducted in English language.
- iv. The cost of the mediation and arbitration shall be shared by the parties in equal proportion however the both parties shall bear their own costs and lawyer's fees regarding their own participation in the mediation and arbitration. However, the Arbitrator may make an award of costs upon the conclusion of the arbitration making any party to the dispute liable to pay the costs of another party to the dispute.
- v. Arbitration proceedings as mentioned in the above clause regarding resolution of disputes may be commenced prior to, during or after completion of the contract.

Notwithstanding any reference to the arbitration herein, the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree that the Authority shall pay the Bidder any monies due to the Bidder.

Rules of procedure for arbitration proceedings:

Any dispute between the Authority and a Bidder who is a national of the Islamic Republic of Pakistan arising in connection with the present Contract shall be referred to adjudication or arbitration in accordance with the laws of the Islamic Republic of Pakistan including Arbitration Act 1940, however above provision shall prevail in referring the case to the Arbitrator.

Place of Arbitration and Award:

The arbitration shall be conducted in English language and place of arbitration shall be at Islamabad. The award of the arbitrator shall be final and shall be binding on the parties.



Bid Securing Declaration

Form 9: Bid Securing Declaration

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

Bid No.: **P127012**

To: **LAHORE ELECTRIC SUPPLY COMPANY LIMITED (MATERIAL MANAGEMENT), CHIEF ENGINEER Material Management (Lahore Electricity Supply Company (LESCO), Assistant Manager Procurement LESCO Head Quarter, 22-A, Queens Road., Lahore City, Lahore (District), Lahore Division (Division), Punjab (Province).**

We, the undersigned, declare that:

We understand that, according to your conditions, Bids must be supported by a Bid Securing Declaration.

We accept that we will be blacklisted and henceforth cross debarred for participating in respective category of public procurement proceedings for a period of (not more than) six months, if fail to abide with a bid securing declaration, however without indulging in corrupt and fraudulent practices, if we are in breach of our obligation(s) under the Bid conditions, because we:

1. have withdrawn or modified our Bid during the period of Bid Validity specified in the Form of Bid;
2. Disagreement to arithmetical correction made to the Bid price; or
3. having been notified of the acceptance of our Bid by the Procuring Agency during the period of Bid Validity, (i) failure to sign the contract if required by Procuring Agency to do so or (ii) fail or refuse to furnish the Performance Security or to comply with any other condition precedent to signing the contract specified in the Bidding Documents.

We understand this Bid Securing Declaration shall expire if we are not the successful

Bidder, upon the earlier of (i) our receipt of your notification to us of the name of the successful Bidder; or (ii) twenty-eight (28) days after the expiration of our Bid.



Contract Form

SECTION IX: CONTRACT FORMS

THIS AGREEMENT made the ____ day of _____ 20____ between **LAHORE ELECTRIC SUPPLY COMPANY LIMITED (MATERIAL MANAGEMENT), CHIEF ENGINEER Material Management (Lahore Electricity Supply Company (LESCO), Assistant Manager Procurement LESCO Head Quarter, 22-A, Queens Road., Lahore City, Lahore (District), Lahore Division (Division), Punjab (Province).**

(hereinafter called “the Procuring Agency”) of the one part and [name of Bidder] of [city and country of Bidder] (hereinafter called “the Bidder”) of the other part:

WHEREAS the Procuring Agency invited Bids for provision of goods, viz., **TENDER NO. 4442 (Single Phase, LT Type CT Operated and HT Type CT & PT Operated AMI Smart Energy Meters) (P127012)** and has accepted a Bids by the Bidder for the provision of Goods in the sum of [contract price in words and figures] (hereinafter called “the Contract Price”).

NOW THIS CONTRACT WITNESSETH AS FOLLOWS:

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

2. The following documents shall be deemed to form and be read and construed as part of this Contract, In the event of any ambiguity or conflict between the Contract Documents listed below, the order of precedence shall be the order in which the Contract Documents are listed below:-

1. This form of Contract;
2. the Form of Bids and the Price Schedule submitted by the Bidder;
3. the Schedule of Requirements;
4. the Technical Specifications;
5. the Special Conditions of Contract;
6. the General Conditions of the Contract;
7. the Procuring Agency’s Letter of Acceptance; and
8. [add here: any other documents]

3. In consideration of the payments to be made by the Procuring Agency to the Bidder as hereinafter mentioned, the Bidder hereby covenants with the Procuring Agency to provide the Goods related services and to remedy defects therein in conformity in all respects with the provisions of the Contract.

4. The Procuring Agency hereby covenants to pay the Bidder in consideration of the provision of Goods and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the contract at the times and in the manner prescribed by the contract.

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

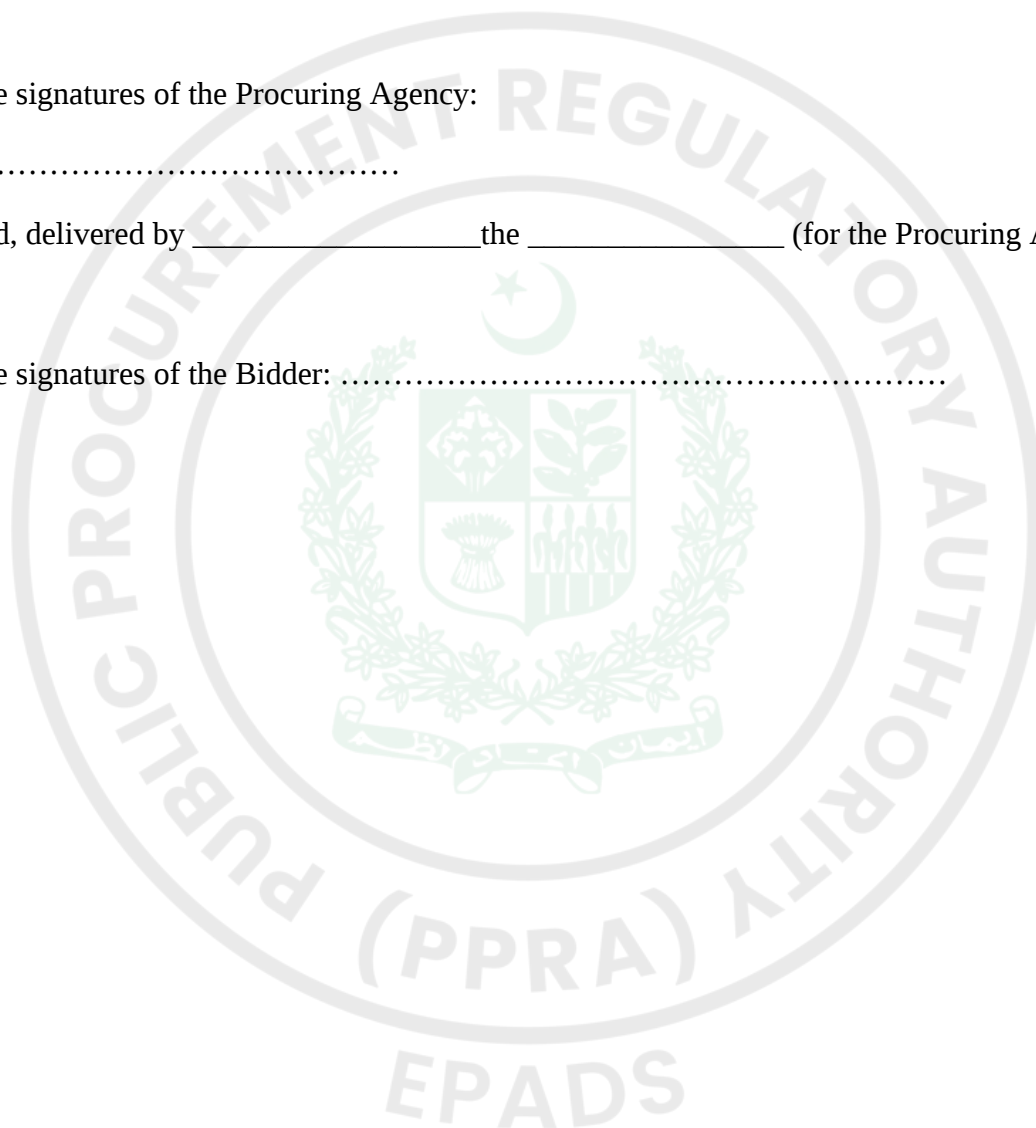
Signed, sealed, delivered by _____ the _____ (for the Procuring Agency)

Witness to the signatures of the Procuring Agency:

.....

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

Witness to the signatures of the Bidder:





Integrity Pact

Integrity Pact

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

Contract

Number: Contract

Value: Contract Title:

Dated:

[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 or any administrative subdivision or agency thereof or any other entity owned or controlled by it (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, fee 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 consultations 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, representative or warranty.

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

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



Performance Guarantee Form

Performance Guarantee Form

To: **LAHORE ELECTRIC SUPPLY COMPANY LIMITED (MATERIAL MANAGEMENT), CHIEF ENGINEER Material Management (Lahore Electricity Supply Company (LESCO), Assistant Manager Procurement LESCO Head Quarter, 22-A, Queens Road., Lahore City, Lahore (District), Lahore Division (Division), Punjab (Province).**

WHEREAS *[name of Bidder]* (hereinafter called “the Bidder”) has undertaken, in pursuance of Contract No. *[reference number of the contract]* dated *[insert date]* for provision of Goods(hereinafter called “the Contract”).

AND WHEREAS it has been stipulated by you in the said Contract that the Bidder shall furnish you with a Bank Guarantee by a reputable bank for the sum specified therein as security for compliance with the Bidder’s performance obligations in accordance with the Contract.

AND WHEREAS we have agreed to give the Bidders guarantee:

THEREFORE, WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Bidder, up to a total of *[amount of the guarantee in words and figures]*, and we undertake to pay you, upon your first written demand declaring the Bidder to be in default under the Contract and without cavil or argument, any sum or sums within the limits of *[amount of guarantee]* as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the: *[insert date]*

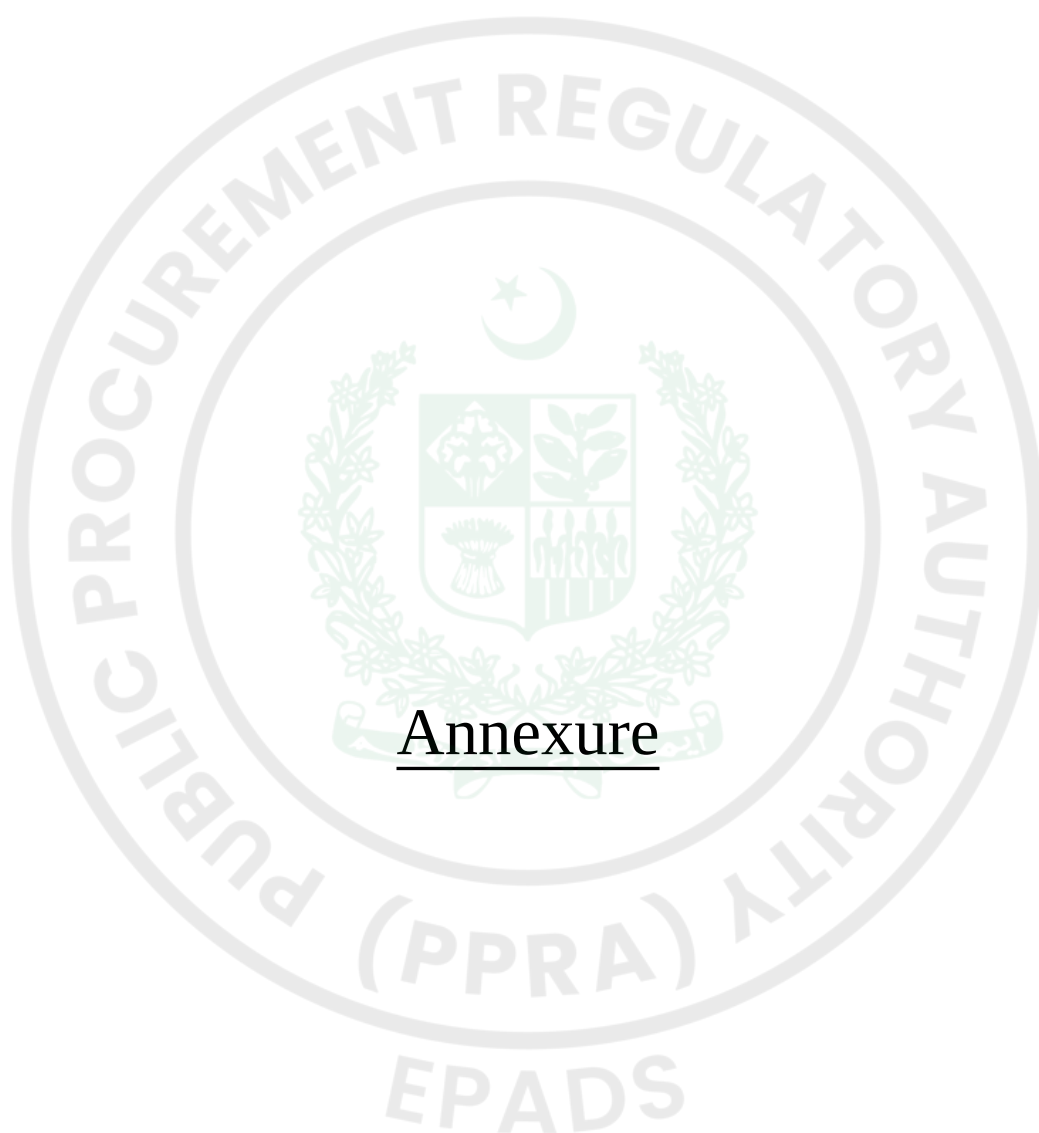
Signature and seal of the Guarantors

[name of bank or financial institution]

[address]

[date]





Annexure

Annexures

Technical Submission (Vendor)

Document Required

See Form Under Additional Forms and Documents: **Annexures** (page number: 77)





Procurement Forms

Past Experience and Completed Contracts

Past Experience and Completed Contracts

It is mandatory for bidder (s) to establish experience, qualification and evaluation criteria.

The bidder/ manufacturer must have successfully completed at-least one (01) number similar nature or higher capacity contract/ educational order. Non-manufacturer shall also provide a valid and current Manufacturer's Authorization Letter (MAL) for supply of goods.

Note:

1. Evidence of contract completion must be provided. Non-submission/uploading of said documents / certificates shall render the bid non-responsive.
2. Experience will count from date of P.O of relevant material.

In case bidder/manufacturer fails to fulfill the criteria, its bid will be considered non-responsive and may be disqualified.

See Form Under Additional Forms and Documents:

Past Experience and Completed Contracts

See Form Under Additional Forms and Documents: **Past Experience and Completed Contracts** (page number: 114)





Additional Forms and Documents

Additional Forms and Documents

Form 1: Form of Bid

(Bidders is required to fill, sign, stamp and upload this form in vendor response otherwise bidder may be disqualified.)

Date:

To: Gentlemen and/or Ladies:

Having examined the Bidding Documents including Addenda Nos: _____ [insert numbers], the receipt of which is hereby duly acknowledged, we, the undersigned, offer to deliver _____ [description of goods and services], price valid for _____ [insert bid validity days] in conformity with the said Bidding Documents for the sum of _____ [total Bid Amount in words and figures] or such other sums as may be ascertained in accordance with the Schedule of Prices attached herewith and made part of this Bid.

We declare that our Bidding price did not involve agreements with other Bidders for the purpose of Bid suppression.

We are hereby confirming [insert the name of the Appointing Authority], to be the Appointing Authority, to appoint the adjudicator in case of any arisen disputes in accordance with **ITB Clause**.

We undertake, if our Bid is accepted, to deliver the goods in accordance with the delivery schedule specified in the Schedule of Requirements.

If our Bid is accepted, we undertake to provide a Performance Security (or Guarantee) in the form, in the amounts, and within the times specified in the Bidding Documents.

We declare that, as Bidder(s) we do not have conflict of interest with reference to **ITB**.

We agree to abide by this Bid for the Bid Validity Period specified in **BDS**, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

We are not participating, as Bidders, in more than one Bid in this Bidding process, other than alternative offers in accordance with the Bidding Documents.

Our firm, its affiliates or subsidiaries – including any subcontractors or suppliers for any part of the contract – has not been declared ineligible by the Government of Pakistan under Pakistan's laws or official regulations.

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

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

We certify/confirm that we comply with the eligibility requirements as per **ITB Clause 3** of the Bidding Documents.

Dated this _____ day of _____ 20_____.

(Name) _____ [signature]

[in the capacity of]

Duly authorized to sign Bid for and on behalf of _____

Form 2: Delivery/Completion Schedule

(Bidders is required to fill, sign, stamp and upload this form in vendor response otherwise bidder may be disqualified.)

Tender No.	Item No.	Lot No.	Description of Material	Specification (Amended to date)	Qty. (Nos.)	Required delivery period (Days)
4442 (Type ICB)	1	1	Single Phase AMI Smart Energy Meters	Single Phase 2 Wire, 240V, 10/40Amp, 50Hz, having Accuracy Class 1.0 (kWh) and built-in programmable features, AMI Smart energy meters with capability of remote disconnect / reconnect relay and PTA compliant 4G communication module (with backward compatibility to 2G) for remote metering system along with MDC Software/Driver/HES as per Latest NTDC/WAPDA Specifications DDS:110:2012, DDS:98:2011, DDS:65:2003 (All Amended to Date) and Supply, Installation and Configuration, of the MDC software to meet the performance requirements listed in Item quantities in the Schedule of Prices. As per latest UDIL Specifications developed by PITC.	99,000	As detailed below
		2			99,000	
		3			99,000	
	2	1	LT Type CT Operated AMI Smart Energy Meters	As per relevant NTDC Design & Standard DDS- 50:2007, 98:2011, 110:2012 (all amended to date) applicable at the date 15 days prior to bids submission deadline and IEC- 62055-31 for relay with capability of remote disconnect /reconnect for Whole Current 3/Phase Meters only. The backup battery must have minimum capacity of 2000mAh for Three Phase Meters with support of super capacitor. The MDC (driver) software must be PITC-UDIL compliant.	3,500	
		2			3,500	
		3			3,500	
	3	1	HT Type CT & PT Operated AMI Smart Energy Meters	As per relevant NTDC Design & Standard DDS- 50:2007, 98:2011, 110:2012 (all amended to date) applicable at the date 15 days prior to bids submission deadline and IEC- 62055-31 for relay with capability of remote disconnect /reconnect for Whole Current 3/Phase Meters only. The backup battery must have minimum capacity of 2000mAh for Three Phase Meters with support of super capacitor. The MDC (driver) software must be PITC-UDIL compliant	1,000	
		2			1,000	

Delivery / Completion Schedule:

For Local Manufacturers:-

50% quantity against each item / lot shall be supplied within 60-days and remaining 50% quantity shall be delivered in next 60-days from the date of issuance of Purchase Order. Delivery period is the essence of the Contract and delivery must be completed not later than the dates specified. The terms "Delivery Date" shall mean the date of 1st day of Inspection or 15th day of Inspection Call whichever is earlier, shall be reckoned as date of delivery of Store to Consignee provided the goods accepted for supply have been delivered within 20-days of issue of Inspection Certificate subject to the condition that the supplier / manufacturer offers the material for Inspection at least 15-days prior to the due date and the offer is not rejected due to being a fake call or material not conforming to the specification.

For Foreign Manufacturers:-

100% quantity against each item / lot shall be supplied within 120-days from the date of issuance of Purchase Order. Delivery period is the essence of the Contract and delivery must be completed not later than the dates specified. The terms "Delivery Date" shall mean the date of 1st day of Inspection or 60th day of Inspection Call whichever is earlier, shall be reckoned as date of delivery of Store to Consignee provided the goods accepted for supply have been delivered within 60-days of issue of Inspection Certificate subject to the condition that the supplier / manufacturer offers the material for Inspection at least 60-days prior to the due date and the offer is not rejected due to being a fake call or material not conforming to the specification.

CONSIGNEE

Dy. Manager, LESCO Regional Store Shalamar,

Name in the capacity of

..... Signature of Bidder:

Duly authorized to sign the Bid for and on behalf of

Dated on day of 20

Form 3: Bid Security Form

(Bidders is required to fill, sign, stamp and upload this form in vendor response otherwise bidder may be disqualified.)

To: Chief Executive Officer (CEO)
LESCO, Lahore.

Whereas _____ [name of the Bidder] (hereinafter called "the Bidder") has submitted its Bid dated [date of submission of Bid] for the delivery of [name and/or description of the goods] (hereinafter called "the Bid").

KNOW ALL PEOPLE by these presents that WE _____ [name of Financial Institution] of _____ [name of country], having our registered office at _____ [address of Financial Institution] (hereinafter called "the Bank"), are bound unto Chief Engineer (MM) LESCO (hereinafter called "the Procuring Agency") in the sum of _____ [amount] for which payment well and truly to be made to the said Procuring Agency, the Bank binds it-self, its successors, and assigns by these presents.

Sealed with the Common Seal of the said Bank this _____ day of 20_____.

THE CONDITIONS of this obligation are:

1. If the Bid
 - (a) have withdrawn or modified our Bid during the period of Bid Validity specified in the Form of Bid;
 - (b) Disagreement to arithmetical correction made to the Bid price; or
 - (c) having been notified of the acceptance of our Bid by the Procuring Agency during the period of Bid Validity, (i) failure to sign the contract if required by Procuring Agency to do so or (ii) fail or refuse to furnish the Performance Security or to comply with any other condition precedent to signing the contract specified in the Bidding Documents.
2. We undertake to pay to the Procuring Agency up to the above amount upon receipt of its first written demand, without the Procuring Agency having to substantiate its demand, provided that in its demand the Procuring Agency states the amount claimed by it is due to it, owing to the occurrence of one or both of the conditions, specifying the occurred condition or conditions.

This guarantee shall remain in force up to and including **Twenty Eight (28)** days after the period of Bid Validity, and any demand in respect thereof should reach the Bank not later than the above date.

Name:..... in the capacity of signed

[Signature of the Bank]

Dated on day of 20

Form 4: Schedule of Deviations from Technical Specifications

(Bidders is required to fill, sign, stamp and upload this form in vendor response otherwise bidder may be disqualified.)

Note:- Attach additional sheets, if necessary, Non-listing of deviations, if any, shall make the bid non-responsive.

Sr. No.	Clause No. of Technical Specifications	Deviations/Clarifications

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Stamp with Signature

Form 5: Schedule of Deviations from Contractual Conditions

(Bidders is required to fill, sign, stamp and upload this form in vendor response otherwise bidder may be disqualified.)

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

Note:- Attach additional sheets, if necessary, Non-listing of deviations, if any, shall make the bid non-responsive.

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

Stamp with Signature

Form 6: Current Litigation Information

(Bidders is required to fill, sign, stamp and upload this form in vendor response otherwise bidder may be disqualified.)

Each Bidder must fill in this form

It is certified that M/s. _____ is not involved in the litigation in any court of law against Lahore Electric Supply Company (LESCO) and other DISCOs / any formation of WAPDA till date.

Stamp with Signature

OR

If the firm (M/s. _____) is involved in any litigation against above organizations then provide one page brief alongwith following information on the prescribed proforma.

Name of DISCO / Formation	P.O / W.O	Dated	Item	Amount Involved (Rs.)		Reason for Litigation	Current Status with Attested Copies of the evidences (Under Process / Resolved / Stay Order / Arbitrations)
				Pending or Threatened	Resolved		

Net worth of the Firm ending latest fiscal year = _____

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(Alongwith proof / documentary evidences of required net worth). Audit financial statement / FBR statement must be attached, otherwise bid may be disqualified.

%age of pending or threatened litigation with respect to Net worth _____

In case of any information found incorrect from the above, LESCO reserve the right to cancel our tender or prequalification and registration without assigning any reason what so ever and all consequences at our cost.

Stamp with Signature

Form 7: PROFORMA SHOWING PERFORMANCE OF THE FIRM AS PER Past Experience and Completed Contracts (Procurement Form)

(Bidders is required to fill, sign, stamp and upload this form in vendor response otherwise bidder may be disqualified.)

Name of Firm: _____

Name of DISCO	PO No. & Date	Description of Material	Qty. on Order	Delivery Schedule	Qty. Supplied to date	Date of Supply	Qty. Balance	Material Supplied		Remarks
								In time	Delay	

It is also certified that:-

- i) Our firm is not in litigation with any formation of WAPDA / DISCOs.
- ii) In case of any information found incorrect from the above, LESCO reserve the right to cancel our tender or prequalification and registration without assigning any reason what so ever and all consequences at our cost.
- iii) POs along with relevant GRNs/ICs of same nature/type or higher capacity are attached along with the procurement FORM.

Stamp with Signature

Form 8 : Beneficial Ownership Declaration Performa (For Contract Value more than 50 Million) - Annex-I of PPRA SRO 592

Declaration of Ultimate Beneficial Owners Information for Public Procurement Contacts.

(Bidders is required to fill, sign, stamp and upload this form for Contract value more than 50 Million in vendor response otherwise bidder may be disqualified.)

1. Name: _____
2. Father's Name / Spouse's Name _____
3. CNIC/NICOP/Passport No. _____
4. Nationality _____
5. Residential Address _____
6. Email Address _____
7. Date on which shareholding, control or interest acquired in the business. _____

8. In case of indirect shareholding, control or interest being exercised through intermediary companies, entries or other legal persons or legal arrangements in the chain of ownership or control, following additional particulars to be provided.

1	2	3	4	5	6	7	8	9	10
Name	Legal form (company/Limited Liability Partnership/ Association of Persons/Single Member Company/Partnership Firm/Trust/Any other individual, body corporate (to be specified)	Date of Incorporation/ registration	Name of Registering Authority	Business Address	Country	Email Address	Percentage of shareholding, control or interest of BO in the legal person or legal arrangement	Percentage of shareholding, control or interest of legal person or legal arrangement in the Company	Identify of natural person who owns or control the legal person or arrangement

9. Information about Board of Directors (details shall be provided regarding number of shares in the capital of the company as set opposite respective names)

1	2	3	4	5	6	7	8
Name and surname (In Block Letters)	CNIC No. (in case of foreigner, Passport No.)	Father's / Husband's name in full	Current Nationality	Any other Nationality (ies)	Occupation	Residential Address in full or the registered/ principal office address for a subscribers other than natural person	Number of shares taken by cash subscriber (in figure and words)

Total number of shares taken (in figures and words)

10. Any other information incidental to or relevant to Beneficial Owner(s).

[Additional page may be added if required]

Name and Signature

(Person authorized to issue notice on behalf of the company)

Form 9 : Conditions for Performance Security

(Bidders is required to read the information written in this form and ensure submission of performance security as per requirements of Procuring Agency)

- The Performance Bond equal to **5%** of the value of the contract including GST from the following Scheduled Bank of Pakistan only:

Allied Bank Limited, National Bank of Pakistan, Bank Al- Habib, United Bank Limited, Muslim Commercial Bank, Habib Bank Limited, Askari Bank Limited, Bank Al- Falah Limited, The Bank of Punjab, Faysal Bank Limited, Meezan Bank Limited, Zarai Trakiati Bank Limited, Habib Metropolitan Bank Limited, Samba Bank Limited, Standard Chartered Bank Limited, Dubai Islamic Bank Pakistan Limited and JS Bank Limited or from a foreign bank duly counter guaranteed by above Scheduled Bank in

Pakistan are acceptable operating in Pakistan duly registered with SBP.

Performance Guarantee in the shape of Shape of Call Deposit Receipt, CDR Demand Draft or Pay Order or Banker's Cheque are acceptable from any Scheduled Bank in Pakistan in favour of the CEO LESCO will be furnished by the successful bidder within **07-days** from the date of issuance of Letter of Intent (LOI). In case of further delay due to late submission of performance guarantee / bond, Purchase Order will be issued after deducting the delayed period from the legitimate delivery schedule mentioned in the LOI or bidding documents. Bank Guarantee shall be furnished on non-judicial stamp paper of value as prescribed by the Government. The Performance security must be furnished along with acceptance of Letter of Intent in writing before the formal issuance of the Purchase Order.

- The performance security shall be valid up to **24-months** after completion of FCS and shall be prepared on **Performa appended in "Standard Forms"**.
- *In case of non-submission of Performance Security within 07-days from the notification of Contract award/ Notification of Award, the bid security shall be forfeited.*
- Performance bond shall be furnished on non-judicial stamp paper of value Rs.500/-.

Stamp with Signature

Form 10 : Conditions for Bid Security

(Bidders is required to read the information written in this form and ensure submission of bid security as per requirements of Procuring Agency otherwise bidder may be disqualified.)

The bid security shall be, at the option of the bidder, in the form of Call Deposit Receipt or Pay Order or Banker's Cheque or a Bank Guarantee must be issued in the favor of **CEO LESCO**. Following Schedule Bank of Pakistan are acceptable (For Bid Security)

Allied Bank Limited, National Bank of Pakistan, Bank Al- Habib, United Bank Limited, Muslim Commercial Bank, Habib Bank Limited, Askari Bank Limited, Bank Al- Falah Limited, The Bank of Punjab, Faysal Bank Limited, Meezan Bank Limited, Zarai Trakiati Bank Limited, Habib Metropolitan Bank Limited, Samba Bank Limited, Standard Chartered Bank Limited, Dubai Islamic Bank Pakistan Limited and JS Bank Limited

Bid Security shall be in favour of the **CEO LESCO** valid for a period of 28-days beyond the Bid Validity date. Bid guarantee shall be furnished on non-judicial stamp paper of value Rs.500/-. In case of any amendment in Bid Security, the bidder should also furnish the same on non-judicial stamp paper of value Rs. 500/-.

Note: Bid security declaration is **NOT APPLICABLE**.

Stamp with Signature

Form 11 : Bid May Liabe to Reject/Disqualified/Ineligible

(Bidders is required to read the information written in this form and ensure compliance as per requirements of Procuring Agency otherwise bidder may be Reject/Disqualified/Ineligible)

Bid may be liable to reject/disqualified/Ineligible:-

Bids may liable to be rejected and declared as rejected/non-responsive/disqualified/Ineligible forthwith if:

1. **Firm does not meet Eligibility and Qualification Criteria** as per BDS Clause 3.
2. **Material is not as per required scope of work and specifications.**
3. **All securities requirements are not as per bidding documents i.e., Bid Security as per bid security conditions mentioned in bidding document and ITB Clause 18.**

Bid security/guarantee in original as per bid security conditions and relevant Form of bidding documents Not accompanied with a bid guarantee or with insufficient/less/short validity or unacceptable tender/bid guarantee or on format other than provided in the bidding document or not comply with ITB 18.1, 18.3 to 18.9 or amendment in bid guarantee or submitted bid guarantee is from Banks other than mentioned in bidding document.

4. **Firm is not as per Tax requirements** i.e., the bidder should have registered with Income Tax & Sales Tax Department and be listed on **Active Taxpayer List (ATL)**.
5. **Terms and conditions of bidding documents (undertaking on company letter head that all terms and conditions and clauses of bidding document are acceptable to bidder is not attached.)**
6. In the event that the total amount of pending or threatened litigations, arbitration and other claims represents fifty percent (50%) of the Bidder's net worth.
7. Financial statements and documents to ascertain the financial health of bidder not attached (In case of Litigation only)
8. The bid covers only a part/portion of the required equipment /lot instead of complete quantity.
9. Alternate proposal is submitted with the bid.
10. The bid is illegible in any material, part or contains alteration, additions, deletions, erasers other irregularities.
11. Tender is in some way connected with bids submitted under names different from his own.
12. Any false statement made in the bid or conditional bid is submitted.
13. Bidder didn't fulfill the Past Performance and Completed Contract Experience conditions.
14. Any documents required as per **List of documents required along with the bid** not attached with the bid.
15. Any documents/Forms required as per Annexure Sections of tender document completely filled, signed and stamped not attached with the bid.
16. Complete tender documents not signed and stamped (in original) by the bidder.

Stamp with Signature

Form 12 : Ineligibility Conditions Undertaking

(Bidders is required to read the information (as per **ITB-3.7**) written in this form and ensure submission of **Undertaking** as per Following requirements of Procuring Agency/PPRA otherwise bidder may be disqualified.)

1. The Bidder/Firm was not declared bankrupt or, in the case of company or firm, insolvent;
2. Payments in favor of the Bidder/Firm was not suspended in accordance with the judgment of a court of law other than a judgment declaring bankruptcy and resulting (in accordance with the national laws) in the total or partial loss of the right to administer and dispose of its property;
3. The Bidder/Firm was not convicted, by a final judgment, of any offence involving professional conduct.
4. The Bidder/Firm was not blacklisted locally acknowledged by PPRA or by international organizations and hence debarred due to involvement in corrupt and fraudulent practices, or performance failure or due to breach of Bid securing declaration.
5. The Bidder/Firm has provided to the Procuring Agency evidence of their eligibility, proof of compliance with the necessary legal requirements to carry out the contract effectively.

Form

Past Experience / Contracts

Contracts over <i>[insert amount]</i> during the last three years:				
Procuring Agency	Value	Year	Goods/Services Supplied	Country of Destination

SPECIAL PROVISIONS

- a) Rate should be quoted inclusive of all taxes / duties & 0.5% Inspection Charges (non-reimbursable) and inclusive of 18% Sales Tax on the basis of CIP delivery at consignee's LESCO Regional Store Shalamar, Lahore (FCS), in local currency without involving any foreign exchange. The offered price shall not be escalated for any reason what so ever. The inspection charges @0.5% shall be borne by the bidder and the same will be deposited to the accounts of Chief Engineer (MI) PPMC, Lahore.
- b) Bids having less than **100%** of the LOT quantities of tender will not be accepted. The bidder shall quote for complete quantity of Lot.
- c) **The conditional bids / rates shall not be accepted.**
- d) **For Local Meter Manufacturers:** - AMI SMART energy meters should comply with relevant NTDC Design & Standard DDS-50:2007, DDS-60:2020, DDS-65:2003, DDS-98:2011 & DDS-110:2012 (all amended to date). If the Bidder does not possess the valid prototype approval for the offered material as per DDS-50:2007, DDS-60:2020, DDS-65:2003, DDS-98:2011 and DDS-110:2012 (all amended to date) within last three years (if applicable under NTDC approved specification), the Bidder shall have to obtain the prototype approval from the office of Chief Engineer (S&S) NTDC, Lahore before start of mass production. Drawing and prototype samples for prototype testing for at least Three (03) Numbers complete Samples per meter type shall be submitted within 30 days from the date of issuance of Letter of Acceptance (in case of no existing prototype approval) to Chief Engineer (S&S) NTDC Lahore. Delay in submission of prototype sample beyond 30 days from the date of issuance of Letter of Acceptance shall make the bidder non-responsive and liable for Bid Security forfeiture. The lowest evaluated and substantially responsive bidder or Most Advantageous bidder shall extend the Bid Security for the period leading to the sample submission deadline upon receiving such request from LESCO in accordance with IB 15. All expenses of testing charges will have to be borne by the manufacturer/supplier. Any change suggested during prototype testing for compliance of specification shall have to be incorporated without any extra price or claim. The Chief Engineer (S&S) NTDC will approve the prototype sample within 30-days after its submission.

In case of failure of 1st prototype Sample, the material shall be improved and second samples must be re-offered for prototype testing to Chief Engineer (S&S) NTDC by the Bidder, within 10 days and get prototype approval within 20 days after its submission. The time taken for improvement in samples and resubmission of drawings will not entitle the manufacturer to claim any extension on this account. If the Prototype fails second time, firm will be considered Non-Responsive and Bid security will be fortified / encashed in favor of LESCO and the Letter of Acceptance shall immediately be cancelled / withdrawn. LESCO reserves the right to place Letter of Acceptance on the second lowest & substantially responsive bidder.

For Foreign Meter Manufacturer: - Specified type tests, routine & sample tests shall have to be carried out as described in NTDC Specification Nos. DDS-50:2007, DDS-60:2020, DDS-65:2003, DDS-98:2011 and DDS-110:2012 (amended to-date) in the presence of Employer's representative(s) before mass production. Drawing and prototype samples (as per S&S NTDC requirements) for prototype testing per meter category shall be submitted within 55 days from the date of issuance of Letter of Acceptance at any of the labs mentioned in the NTDC relevant specifications or any ISO / ILAC certified Labs approved by the Purchaser (in case of no existing Prototype Approval).

Delay in submission of prototype sample beyond 55 days from the date of issuance of Letter of Acceptance shall make the bidder non-responsive and liable for Bid Security forfeiture. The lowest evaluated and substantially responsive bidder Or Most Advantageous bidder shall extend the Bid Security for the period leading to the sample submission deadline upon receiving such request from LESCO in accordance with IB.15. All expenses of testing charges will have to be borne by the manufacturer/supplier. Any change suggested during prototype testing for compliance of specification shall have to be incorporated without any extra price or claim. The routine and sampling testing will be carried out at manufacturer's premises in accordance with the specifications. All expenses including service charges testing charges, Traveling, Boarding / Lodging and Daily Allowance, return airfare economy class etc., of Employer's representative(s) shall be borne by the manufacturer.

In case of failure of 1st prototype Sample, the material shall be improved and second samples must be re-offered for prototype testing within 20 days and get prototype approval within 20 days from the date of submission.



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SPECIFIC WORKS DATA / TECHNICAL SPECIFICATIONS / SCHEDULE OF TECHNICAL DATA

In this Bidding Document, material under procurement should conform to WAPDA/NTDC specifications. The below mentioned standard specifications (amended to date) are apprehended for following material:

Item No.1 : Lot 1, 2 & 3 Specification

- a) The meters shall be supplied strictly according to following NTDC standard specification No.DDS:110:2012 , DDS:98:2011 ,DDS:65:20024 (All Amended to Date). However, the time taken for obtaining prototype approval will not affect the legitimate delivery schedule of the Purchase Order.
- b) If the Bidder who must be a manufacturer under relevant category does not possess the valid prototype approval for the offered material as per above mentioned standard specifications within last three years (if applicable under NTDC approved specification), the Bidder shall have to obtain the prototype approval from the Stands & Specifications Department of PPMC, Lahore before start of mass production. Drawing and prototype samples for prototype testing (No. of samples as desired by the S&S office) shall be submitted within 30-days from the date of signing of Contract Agreement to Stands & Specifications Department of PPMC, Lahore.
- c) Delay in offering the prototype will be considered as breach of contract agreement and liquidated charges @ 0.0667% percent for each and every day, delay in submission of prototype sample shall be recoverable from the contractor. These liquidated charges are in addition to the liquidated damages stated in preamble to general conditions of contract clause 26.1. All expenses of testing charges will have to be borne by the manufacturer/supplier. Any change suggested during prototype testing for compliance of specification shall have to be incorporated without any extra price or claim. Stands & Specifications Department of PPMC will approve the prototype sample within 30-days after its submission.
- d) In case of failure of 1st prototype Sample, the material shall be improved and second samples must be re-offered for prototype testing to Stands & Specifications Department of PPMC, by the Bidder, within 10-days and get prototype approval within 20-days after its submission. The time taken for improvement in samples and resubmission of drawings will not entitle the manufacturer to claim extension in delivery period on this account. If the Prototype fails second time, firm will be considered Non-Responsive and performance security will be fortified / encashed in favor of LESCO and the Contract Agreement shall stand cancelled. LESCO reserves the right to place Letter of Acceptance on the second lowest & substantially responsive bidder. Any further delay shall be on account of the Supplier/manufacturer and LESCO reserves the right to deduct the Liquidated Damages according to the relevant clause of the Purchase Order.
- (i) For Foreign Meter Manufacturer: - Specified type tests, routine & sample tests shall have to be carried out as described in NTDC Specification Nos. DDS-50:2007, DDS-60:2020, DDS-65:2003, DDS-98:2011 and DDS-110:2012 (amended to-date) in the presence of Employer's representative(s) before mass production. Drawing and prototype samples (as per S&S NTDC requirements) for prototype testing per meter category shall be submitted within 55 days from the date of issuance of Letter of Acceptance at any of the labs mentioned in the NTDC relevant specifications or any ISO / ILAC certified Labs approved by the Purchaser (in case of no existing Prototype Approval).
- (ii) Delay in submission of prototype sample beyond 55 days from the date of issuance of Letter of Acceptance shall make the bidder non-responsive and liable for Bid Security forfeiture. The lowest evaluated and substantially responsive bidder Or Most Advantageous bidder shall extend the Bid Security for the period leading to the sample submission deadline upon receiving such request from LESCO in accordance with IB.15. All expenses of testing charges will have to be borne by the manufacturer/supplier. Any change suggested during prototype testing for compliance of specification shall have to be incorporated without any extra price or claim. The routine and sampling testing will be carried out at manufacturer's premises in accordance with the specifications. All expenses including service charges testing charges, Traveling, Boarding/Lodging and Daily Allowance, return airfare economy class etc., of Employer's representative(s) shall be borne by the manufacturer.
- (iii) In case of failure of 1st prototype Sample, the material shall be improved and second samples must be re-offered for prototype testing within 20 days and get prototype approval within 20 days from the date of submission.

- e) Optical port of the proposed AMI meters should be secured by cover or any other suitable material which provide barrier for communication through optical port to avoid unauthorized access. OPTOCOM cover shall be further protected by disposable plastic seals and the record of plastic seals used shall be maintained by the manufacturer (upto delivery to store) as well as by the DISCOs. Last date of meter programming should also be displayed in scrolling menu of meter display. Date of last optical communication shall be displayed on meter display at the end of Energy Meters "Normal Mode" display sequence. Further instructions in this regard shall be followed as per guidelines of Chief Engineer (S&S) NTDC in general before the issuance of Letter of Acceptance.
- f) The offered AMI energy meter's data (through vendor's MDC driver software) must be compliant to Universal Data Integration Layer (UDIL), developed by PITC.
- g) MDC software shall be compliant with the latest UDIL standard in effect as at the time of issuance of Letter of Acceptance. The bidder will be responsible to upgrade the MDC Software for any critical updates excluding meter firmware updates within warranty period of MDC as recommended by PITC/LESCO. The MDC Software support shall be provided free of cost for the period of five (05) years from the date of issuance of completion certificate. After completion of five years, Service Level Agreement (SLA) shall be signed with LESKO for provision of any support for further period of three years which can be extendable for another term with mutual consent.
- h) The Letter of Acceptance will be issued to the Most Advantageous Bidder. The successful bidder will have to submit the PITC Compliance Requirements to PITC within 30 (Thirty) days of signing of contract agreement / LOA (in case of valid Prototype approval) and obtain UDIL compliance certificate from PITC within Thirty 30 days (from the submission of compliance requirements) for Tier 1 (extendable if both parties agreed), on latest PITC version applicable at the time of issuance of LOA. Any delay in submission of compliance requirements to PITC for Tier-I beyond 30 days from contract agreement / LOA date shall be regarded on the successful bidder's part and liquidated damages @0.0667% per day delay shall be charged. LESKO may issue the Letter of Acceptance to the 2nd evaluated responsive bidder in such case. If the valid Prototype approval does not exist at the time of issuance of Letter of Acceptance, the bidder shall submit the PITC Compliance requirements for Tier-I Certificate to PITC within 30 days from the issuance of Prototype Approval from the office of Chief Engineer (S&S) NTDC (for local bidders) and obtain the UDIL compliance certificate from PITC within Thirty 30 days (from the submission of compliance requirements) for Tier 1 on latest UDIL version applicable at the submission of compliance.

The UDIL Compliance testing will comprise of two phases /Tiers as under:

a) UDIL Compliance Testing Tier-1 Certificate:

In this phase MDCs will be tested for UDIL Compliance as per request Performa submitted by Vendors.

After successful completion of which UDIL Compliance testing Tier-1 certificate will be issued by PITC.

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- i) The supplied AMI meters will expose data and services as per specifications laid down in UDIL latest release. All AMI meters will be created in respective vendors' driver software by successful bidder to expose data and services in compliance with UDIL document. All necessary features for billing and instantaneous data should be compliant in UDIL.
- j) The offered AMI meter should be equipped with minimum one battery along with super capacitor; the battery shall be of lithium thionyl chloride having minimum cumulative capacity of 1200 mAh for Single Phase Meter. A Super capacitor will be required for RTC to maintain date & time. The meter shall be equipped with fixed long life battery to display reading during power supply failure/outages.
- k) The meter shall be capable to provide safeguard against the theft of energy through all possible means (specially through software / Optocom port without physically tempering the meter) as required for Single Phase AMI Meters.
- l) Provision of facility for data retrieval/downloading of data (from EEPROM and also from MDM) in case of damage of meter P.T Circuit of LCD / Display wash or any other critical issue. In case of damage of meter, the security of EEPROM must be ensured and data should be readable from EEPROM. EEPROM and hard link / jumpers on PCB shall be encapsulated / covered. The encapsulation / covering shall be done by means of any suitable material.

- m) Relevant support tools / Gadgets / software shall be provided to all M&T offices for retrieving data in case of display off / retrieval from EEPROM. Provision of Read Only Software in CD/DVD along with essential accessories to relevant M&T offices of LESCO for data download purposes shall also be made for all types of offered AMI Meters. Each Single Phase Whole Current AMI should have unique password. The list of meters along with their passwords should be provided to the office of the Chief Engineer (MM) as per standard prevailing practice for in sealed envelopes at the time of delivery of meters. To protect the unauthorized access of meter reading & writing, the software shall also be protected to use on PC/Laptop with dedicated dongle only. The software provided to the DISCOs shall not have any capability of copy/paste in order to avoid tampering of data in billing/event log reports.
- n) The successful bidder will be responsible for provision of functionality of software in the meter, security of software programming and re-programming in the field and will provide necessary backup warranty and training (officers/officials) as recommended in the relevant clauses of NTDC specifications for meters. The bidders will also provide documents mentioning the mechanism for implementing security of the software programming and reprogramming in the field.
- o)
- p) The DLMS / COSEM compliance requirements certificate includes the encryption mechanisms. The Supplier must ensure the offered meters model are on DLMS / COSEM compliance certificates. The suppliers are encouraged to provide the DLMS / COSEM compliance certificate not older than One years' version. The security of data being sensitive in nature must be ensured. The successful bidder is responsible to maintain all measures to secure Application, Databases and related system (Application / Database) , HDLC mode "E" method of communication along with DLMS certification for further enhancements in terms of security of software in the draft specifications of DDS-65:2003 (all amended to date).
- q) Communication module (Modem) of Smart AMI Energy Meters must be PTA verified. It should be minimum 4G and must be downward compatible to 2G without changing SIM.
- r) For Single Phase AMI Meters, meter readers should be able to record readings manually for whatever the reasons may be (communication issues) & in whatever the mode meter is programmed, with ease & in accordance with printed name plate. The name plate data should be sequential as per Uni-directional format of the Specifications. Data should not exceed 32MB per month for data requirements / configurations, mentioned in latest version of UDIL.
- s) MDC Software/Driver must support SIM identification, installed in AMI Meter which should be identifiable through UDIL Service.
- t) The successful bidder should ensure that the MDC software must be capable to handle awarded number of meters concurrently. The installation process & information (configuration of meters, meter particulars, SIMs configuration, successful communication with MDC, Meter installation and meter functionalities) must also be configured & stored in MDC/MDM. In this regard, the successful bidder will be responsible to provide on job support during warranty period.
- u) MDC software/driver should be able to support retrieval of scheduled metering data as per programmed/configurable interval (e.g. 30 minutes) for GSM/GPRS Meters. GSM/GPRS AMI meter would be declared 'grey' if last successful read was before 24-hours and would be declared "mute" if last successful read was before 36 hours or as defined in MDM (UDIL). MDC should be able to retrieve missing data from meters after restoration without out compromising system performance. Also issues regarding error in data or missing data shall be treated as Meter Mute. In this regard, the successful bidder will also be responsible to provide on job support during warranty period.
- v) Number of muted meters shall not be more than 2% at any point within the system. In case of number of muted meters more than 2%, an investigation shall be conducted into the matter and reasons other than declared scheduled communication outage by the Network provider, transformer damages, scheduled load shedding, cable breakdowns and ERO etc., shall be on Bidder's liability. If it is observed that the muted meters ratio is more than 2%, the Supplier will be responsible to take remedial measures which includes but not limited to replacement of such meters, up-gradation of software patches etc. or any other remedy proposed by the Employer. Such enquiries / investigations shall be conducted by the designated committee of LESCO in liaison with PITC, IT Directorate LESCO, Sub Divisional Officer, Vendor, PIU and M&T.
- w) Vendor's existing hardware (If already installed at LESCO/PITC) can be used after getting resource utilization assessment / Stress Testing by PITC/LESCO.

- x) The successful bidder is required to configure meters during production for primary & secondary IPs, ports & Wakeup SIM numbers (which will be provided by LESCO/PITC). By default, the AMI meters will be in "Non keep Alive" Mode. However, Meter Configuration may be switched to "Keep Alive" mode for the first time during configuration of meters and establishing its 1st link / connection to the MDC driver software and expose required data to MDM as per UDIL specifications. Same connectivity of AMI meters will be desired if they miss any schedule activity. Later on, meter configuration can be switched to "Keep Alive" mode and the supplier/bidder shall ensure that data should not exceed 32MB per month in "Keep Alive" mode. Schedule activity will be initially eight (08) times a day, having a sampling rate interval of 30 minutes. However, the schedule as well as sampling rate (upto 1 minute) must be configurable. On demand reading could be retrieved and the response time of On Demand reading should not be more than three (03) minutes or any other frequency set by LESCO.
- y) In case of delay of retrieval of readings beyond two minutes, an investigation shall be conducted into the matter and reasons other than the transformer damages, scheduled load shedding, ERO / disconnection etc., shall be on Bidder's liability. The meters should communicate even at Signal Strengths of -95dBm to -105dBm. Vendors will get it tested also to the satisfaction of the Employer. If it is observed that the meter modem signal strength is lower than the one mentioned above, the Supplier will be responsible to replace / repair the meter under warranty. Retry Failure rate should not be more than 5 times. The Time out for each retry should not be more than 30 seconds.
- z) The MDM interface of PITC shall be used initially. In case of development of LESCO's own MDM (UDIL Complaint) in future, the integration of supplied MDC software will be carried out by the bidder within the warranty period of MDC software. Free of Cost
- aa) The successful bidder will be responsible to provide open interfaces for integration/incorporation of new technologies/ systems at later stages.
- bb) The MDC software System shall be capable of handling all installed AMI meter data on their respective billing date. Appropriate compute(CPU/RAM) and storage resources as mutually agreed upon, will be provided by LESCO to run the MDC/HES software/driver. MDC software / driver installation and configuration will be responsibility of the bidder.
- cc) System shall be able to identify and report potential system/ meter failures or tampering (Identify and report missing reads, Identify and report "stopped" meters, Identify and report inconsistent constants, receive signals for tampering or meter removal, automatically generate request for meter investigation and send to the appropriate system as defined in AMI specifications. In general MDC should comply all the tempering parameters and features of MDM, DDS and UDIL.
- dd) The successful bidder will conduct training sessions in all circles of LESCO of M&T / Operation staff and other LESCO personnel for meter configuration and testing prior to its installation in the field at site. Moreover, the successful bidder will also provide training to LESCO's IT staff regarding Hardware, software, database, network connectivity etc. Training call will be submitted at the time of submission of inspection call when the store against the order is ready for inspection. In this regard, schedule for training sessions will be issued by the office of Chief Engineer (MM) LESCO.
- ee) Following activities are pre requisite for supply of AMI meters by the successful bidder:
 - (i) SIMs allocation to meters (M2M SIMs will be provided by LESCO)
 - (ii) Meter configuration (Bidder's Responsibility).
 - (iii) Meter creation on MDC (Bidder's Responsibility).
 - (iv) Meter installation (LESCO's Responsibility).
 - (v) Live communication testing (Bidder may assist the process as needed).
 - (vi) Data validation (Bidder may assist the process as needed).
 - (vii) All input data will be provided by LESCO wherever required.
- ff) Preferably, Data log like billing, event log, tempering and other related information should be available for at-least last 120-days in the meter. The said information should contain the following in addition to the data/events mentioned in the relevant specifications. This clause is not applicable for this particular Tender.
 - i. Total No. of Power Outages.
 - ii. Phase failure/Disconnection of wires (Phase wise).
 - iii. Reverse Energy Flow.
 - iv. Reverse Polarity.
 - v. Under Voltage (80% of Un).
 - vi. Over Voltage (120 % of Un).

- vii. Reverse Phase Sequence.
- viii. Opening of Energy meter.
- ix. Logging of Optical Communication with Date & Time Stamp

- gg) CT Bypass events to be recorded in the meter as per specification. (not required in case of single phase AMI meters)
- hh) The manufacturer is required to print necessary bar code (whose format should be approved by LESCO) on two suitable places of the meter i.e. at front or any other side of body and on cartridge / packing box.
- ii) System should be capable to carry out event of remote disconnection / reconnection (for Single Phase Whole Current AMI Meters) in case of unauthorized load extension on the basis pre-programmed instructions through MDC. Similarly, the system should be able to carry out event of remote disconnection / reconnection (for Single Phase Whole Current AMI Meters) in case of default by consumer on the basis of pre-programmed instructions as well as manual command (individual consumer / Group consumers). Generalization of disconnection systems are as follows: -
 - Disconnection due to Non-Payments: Meter shall accept disconnection/reconnection command by backend system remotely as and when required. In case of disconnection initiated by backend system, meter shall not reconnect until it will receive reconnection command from backend system.
 - Disconnection due to Load Limiting/ Exceeding Sanctioned Load: Minimum two different load thresholds against different tariffs (peak/ off peak) shall be programmed to activate disconnection/reconnection automatically by the meter and time between disconnection and reconnection shall also be programmable. Meter shall have the capability to change load thresholds locally and remotely.
 - LESCO shall have provision to enable and disable the feature (Remote disconnect/ reconnect for both scenarios) locally by meter software and remotely by head end system.
- jj) LESCO will provide SIMs of at least two TELCO providers at the time of installation.
- kk) MDC software should be capable to maintain log of activities with time stamp. (Bidder shall propose the availability of on-site and archived logs). Vendors proposed solution should enable connectivity of at least 50 sessions at a time.
- ll) High Voltage Surge Protection and ultra violet stability of offered AMI Meters should be improved.
- mm) The meter shall be provided with the additional facility to display current month demand in KW for 30-minutes interval. Other facilities like Instantaneous KW or previous month KW shall be appreciated.
- nn) The Poly Carbonate Meter Security Boxes shall comply all the requirements of the relevant clause of PEPCO / WAPDA Standard Specification (amended to date).
- oo) The application of anti-static coating (acrylic lacquer) on PCB shall be incorporated in the specifications DDS-65:2003 (amended to date) if not already mentioned.
- pp) The meters shall comply all the characteristics given in relevant clause of PEPCO / WAPDA Standard Specification (amended to date). Tampering feature of opening the meter with warning sign "OPENED" shall be displayed after scroll of each quantity in "Normal Mode" on LCD instead of permanent display for all types of offered AMI Meters.
- qq) The Bidder will deliver the Meters to LESCO Regional Stores Shalamar Lahore.
- rr) The meters to be supplied should support all the features related to AMI and software security incorporated in draft amendments of NTDC Specification for Single Phase whole current energy meters issued vide C.E. (S&S) NTDC Letter No. Z-184/3012-23 dated 27-09-2023.
- ss) In case of already installed MDC of respective supplier/manufacturer, the supplier is bound to upgrade its hardware (free of cost) to its maximum capacity in order to fully utilize it before switching over to LESCO provided MDC hardware.
- tt) The following parameters shall be considered for the improvement of security of energy meters:

a) Security of Firmware / Software:

- Introduce multiple security levels for meter internal registers.
- Optimize the calibration scaling.
- “Energy Mode” configuration be fixed permanently both for Uni and Bi-Directional Registers.
- User based setting configuration for “Energy Mode” be removed permanently.
- Apart from above, additional measures deem necessary to further enhance/strengthen the firmware security shall be proposed by the manufacturers.
- The concept of Penetration tests of firmware/software shall be proposed to impose further check & balance on the safety & security of the firmware performance embedded in the hardware of energy meters.

b) Protection of Optocom:

- Introduce atleast communication “mode C” besides “Access level 4” for data downloading through Optocom.
- Optocom maybe further protected by means of sealing with postal orders for sealing caps.
- Introduce disposable plastic seals and Same meter number should be marked/reflect on the security plastic seals. Seal should be of (Same Design) as being used by SNGPL .

c) Security of PCB:

- Encasing/encapsulation of jumpers/EEPROMs in PCB of energy meters.

d) Overall improvement in Security:

- Optocom maybe further protected by means of sealing with postal orders or sealing caps.
- The last date of meter programming should be displayed in normal scroll mode.
- The list of last 10 programmer’s ID must be available in meter software report. The ID/key of each dongle/software must be unique and LESCO shall keep record of the IDs provided by manufacturers.
- Logging of Optical Communication & Programming Events should be included in Events Recording Section. Meter should keep in memory minimum 20 Optical Communication & Programming events each before roll over, including Optical Communication date & time, Programming date & time, Programmer ID and parameter programmed.
- All GSM based meters must generate an event alarm in AMI in case of firmware access through optical port.
- As meters are intellectual property of manufacturer so manufactures must be bound to take responsibility when such cases arise even after expiry of warranties/prototypes so that further improvements, feedback/amendments can be initiated. In case such issues surface, all the energy meters in the P.O. will be replaced by them without any cost, regardless of the expiry of warranty of meters.
- All previous issued software versions must be updated to incorporate latest security features. There should be separate software for reading and writing the parameters of meters. Specifically, for Single Phase whole current meters, only the reading software should be issued to LESCO whereas, writing software will be available in Manufacturer’s premises only.
- Single Phase Whole Current Meters should have provision for one-time programming only (in factory), after which it should be locked and no further programming should be possible.
- Energy meter manufactures must establish their local R&D department to strengthen the software security of their meter.

Item No.2 : Lot 1, 2 & 3 Specification

Specification: As per relevant NTDC Design & Standard DDS- 50:2007, 98:2011, 110:2012 (all amended to date) applicable at the date 15 days prior to bids submission deadline and IEC-62055-31 for relay with capability of remote disconnect / reconnect for Whole Current 3/Phase Meters only. The backup battery must have minimum capacity of 2000mAh for Three Phase Meters with support of super capacitor. The MDC (driver) software must be PITC-UDIL compliant. However, the time taken for obtaining prototype approval will not affect the legitimate delivery schedule of the Purchase Order.

UNSPSC: LT Type CT Operated AMI Smart Energy Meters

Technical Conditions/Special Provisions:-

The material shall be supplied strictly according to above mentioned standard specification of NTDC / PPMC. However, the time taken for obtaining prototype approval will not affect the legitimate delivery schedule of the Purchase Order.

- a) The material shall be supplied strictly according to above mentioned standard specification of NTDC / PPMC. However, the time taken for obtaining prototype approval will not affect the legitimate delivery schedule of the Purchase Order.
- b) If the Bidder who must be a manufacturer under relevant category does not possess the valid prototype approval for the offered material as per above mentioned standard specifications within last three years (if applicable under NTDC approved specification), the Bidder shall have to obtain the prototype approval from the Stands & Specifications Department of PPMC, Lahore before start of mass production. Drawing and prototype samples for prototype testing (No. of samples as desired by the S&S office) shall be submitted within 30-days from the date of signing of Contract Agreement to Stands & Specifications Department of PPMC, Lahore.
- c) Delay in offering the prototype will be considered as breach of contract agreement and liquidated charges @ 0.0667% percent for each and every day, delay in submission of prototype sample shall be recoverable from the contractor. These liquidated charges are in addition to the liquidated damages stated in preamble to general conditions of contract clause 26.1. All expenses of testing charges will have to be borne by the manufacturer/supplier. Any change suggested during prototype testing for compliance of specification shall have to be incorporated without any extra price or claim. Stands & Specifications Department of PPMC
- d) In case of failure of 1st prototype Sample, the material shall be improved and second samples must be re-offered for prototype testing to Stands & Specifications Department of PPMC, by the Bidder, within 10-days and get prototype approval within 20-days after its submission. The time taken for improvement in samples and resubmission of drawings will not entitle the manufacturer to claim extension in delivery period on this account. If the Prototype fails second time, firm will be considered Non-Responsive and performance security will be fortified / encashed in favor of LESCO and the Contract Agreement shall stand cancelled. LESCO reserves the right to place Letter of Acceptance on the second lowest & substantially responsive bidder. Any further delay shall be on account of the Supplier/manufacturer and LESCO reserves the right to deduct the Liquidated Damages according to the relevant clause of the Purchase Order.
- (i) For Foreign Meter Manufacturer: - Specified type tests, routine & sample tests shall have to be carried out as described in NTDC Specification Nos. DDS-50:2007, DDS-60:2020, DDS-65:2003, DDS-98:2011 and DDS-110:2012 (amended to-date) in the presence of Employer's representative(s) before mass production. Drawing and prototype samples (as per S&S NTDC requirements) for prototype testing per meter category shall be submitted within 55 days from the date of issuance of Letter of Acceptance at any of the labs mentioned in the NTDC relevant specifications or any ISO / ILAC certified Labs approved by the Purchaser (in case of no existing Prototype Approval).
- (ii) Delay in submission of prototype sample beyond 55 days from the date of issuance of Letter of Acceptance shall make the bidder non-responsive and liable for Bid Security forfeiture. The lowest evaluated and substantially responsive bidder or Most Advantageous bidder shall extend the Bid Security for the period leading to the sample submission deadline upon receiving such request from LESCO in accordance with IB.15. All expenses of testing charges will have to be borne by the manufacturer/supplier. Any change suggested during prototype testing for compliance of specification shall have to be incorporated without any extra price or claim. The routine and sampling testing will be carried out at manufacturer's premises in accordance with the specifications. All expenses including service charges testing charges, Traveling, Boarding/Lodging and Daily Allowance, return airfare economy class etc., of Employer's representative(s) shall be borne by the manufacturer.
- (iii) In case of failure of 1st prototype Sample, the material shall be improved and second samples must be re-offered for prototype testing within 20 days and get prototype approval within 20 days from the date of submission.
- e) The offered AMI energy meter's data (through vendor's MDC driver software) must be compliant to Universal Data Integration Layer (UDIL), developed by PITC.

- f) MDC hardware must be supplied with MDC's driver software. MDC software shall be compliant with the latest UDIL standard in effect as at the time of issuance of Letter of Acceptance. You will be responsible to upgrade the MDC Software for any critical updates excluding meter firmware updates within warranty period of MDC as recommended by PITC. The MDC Hardware / Software support shall be provided free of cost for the period of five (05) years from the date of issuance of completion certificate. The MDC Hardware supplied should not be End of Service / End of Life (EOSL). The Original Equipment Manufacturer (OEM) certificate in this regard is to be attached with the Bid. After completion of five years, Service Level Agreement (SLA) shall be signed with LESCO for provision of any support for further period of three years which can be extendable for another term with mutual consent.
- g) You will have to submit the PITC Compliance Requirements to PITC within 30 (Thirty) days of signing of contract agreement (in case of valid Prototype approval) and obtain UDIL compliance certificate from PITC within Thirty 30 days (from the submission of compliance requirements) for Tier 1 (extendable if both parties agreed), on latest PITC version applicable at the time of issuance of LOA. Any delay in submission of compliance requirements to PITC for Tier-I beyond 30 days from contract agreement date shall be regarded on your firm's part and liquidated damages @0.0667% per day delay shall be charged. If the valid Prototype approval does not exist at the time of issuance of Letter of Acceptance, you shall submit the PITC Compliance requirements for Tier-I Certificate to PITC within 30 days from the issuance of Prototype Approval from the office of Chief Engineer (S&S) NTDC and obtain the UDIL compliance certificate from PITC within Thirty 30 days (from the submission of compliance requirements) for Tier 1 on latest UDIL version applicable at the submission of compliance.

The UDIL Compliance testing shall be as under:-

b) UDIL Compliance Testing Tier-1 Certificate:

In this phase MDCs will be tested for UDIL Compliance as per request Performa submitted by Vendors.

After successful completion of which UDIL Compliance testing Tier-1 certificate will be issued.

- h) The supplied AMI meters will expose data and services as per specifications laid down in UDIL latest release. All AMI meters will be created in respective vendors' driver software by you to expose data and services in compliance with UDIL document. All necessary features for billing and instantaneous data should be compliant in UDIL.
- i) The offered AMI meter should be equipped with minimum one battery along with super capacitor; the battery shall be of lithium thionyl chloride having minimum cumulative capacity of 2000 mAh for Three Phase LT Type CT Operated AMI Meters. A Super capacitor will be required for RTC to maintain date & time. The meter shall be equipped with fixed long life battery to display reading during power supply failure/outages.
- j) The meter shall be capable to provide safeguard against the theft of energy through all possible means as required for Three Phase LT Type CT Operated AMI Meters.
- k) Provision of facility for data retrieval/downloading of data in case of damage of meter P.T Circuit of LCD / Display wash or any other critical issue. In case of damage of meter, the security of EEPROM must be ensured and data should be readable from EEPROM. EEPROM and hard link / jumpers on PCB shall be encapsulated / covered. The encapsulation / covering shall be done by means of any suitable material.
- l) Relevant support tools / Gadgets / software shall be provided to all M&T offices for retrieving data in case of display off / retrieval from EEPROM. Provision of Read Only Software in CD/DVD along with essential accessories to relevant M&T offices of LESCO for data download purposes shall also be made for all types of offered AMI Meters. Each Three Phase LT Type CT Operated AMI Meters should have unique password. The list of meters along with their passwords should be provided to the office of the Chief Engineer (MM) as per standard prevailing practice for in sealed envelopes at the time of delivery of meters. To protect the unauthorized access of meter reading & writing, the software shall also be protected to use on PC/Laptop with dedicated dongle only. The software provided to the DISCOs shall not have any capability of copy/paste in order to avoid tampering of data in billing/event log reports.
- m) You will be responsible for provision of functionality of software in the meter, security of software programming and re-programming in the field and will provide necessary backup warranty and training (officers/officials) as recommended in the relevant clauses of NTDC specifications for meters. You will also provide documents mentioning the mechanism for implementing security of the software programming and reprogramming in the field.
- n) The DLMS / COSEM compliance requirements certificate includes the encryption mechanisms. The Supplier must ensure the offered meters model are on DLMS / COSEM compliance certificates. The suppliers are encouraged to provide the DLMS / COSEM compliance certificate not older than two years version. The security of data being sensitive in nature must be ensured. You are responsible to maintain all measures to

secure Application, Databases, MDC, network from cyber security attack. Next Generation Firewall/UTM, IDS/IPS, EDR etc., should be included in network designing for safeguarding the infrastructure. HDLC mode “E” method of communication along with DLMS certification for further enhancements in terms of security of software in the draft specifications of DDS-50:2007 (all amended to date).

- o) Communication module (Modem) of Smart AMI Energy Meters must be PTA verified. It should be minimum 4G/3G and must be downward compatible to 2G without changing SIM.
- p) Three Phase LT Type CT Operated AMI Meters will be unidirectional but programmable for bidirectional by using optical port for net metering purpose. Moreover, meter readers should be able to record readings manually for whatever the reasons may be (communication issues) & in whatever the mode (unidirectional or bidirectional) meter is programmed, with ease & in accordance with printed name plate. The name plate data should be sequential as per Unidirectional format of the Specifications. If the meter is later converted for Bi-Directional use, then green sticker (with printed technical specifications of Bi-Directional) shall be pasted on the meter by LESCO. The Supplier shall provide 20% of the total quantity of each lot printed stickers along with each consignment for this purpose to be used by LESCO at later stage as agreed in consultation with Chief Engineer (S&S / MI) NTDC.
- q) Data should not exceed 32MB per month for data requirements / configurations, mentioned in latest version of UDIL.
- r) MDC must support SIM identification, installed in AMI Meter which should be identifiable through UDIL Service.
- s) You should ensure that the MDC must be capable to handle 100,000 number of meters concurrently. The installation process & information (configuration of meters, meter particulars, sims configuration, successful communication with MDC, Meter installation and meter functionalities) must also be configured & stored in MDC. In this regard, you will be responsible to provide on job support during warranty period.
- t) MDC should be able to support retrieval of scheduled metering data as per programmed/configurable interval (e.g. 30 minutes) for GSM/GPRS Meters. GSM/GPRS AMI meter would be declared ‘grey’ if last successful read was before 24-hours and would be declared “mute” if last successful read was before 36-hours or as defined in MDM (UDIL). MDC should be able to retrieve missing data from meters after restoration without out compromising system performance. Also issues regarding error in data or missing data shall be treated as Meter Mute. In this regard, you will also be responsible to provide on job support during warranty period.
- u) Number of muted meters shall not be more than 2% at any point within the system. In case of number of muted meters more than 2%, an investigation shall be conducted into the matter and reasons other than declared scheduled communication outage by the Network provider, transformer damages, scheduled load shedding, cable breakdowns and ERO etc., shall be on your firm’s liability. If it is observed that the muted meters ratio is more than 2%, the Supplier will be responsible to take remedial measures which includes but not limited to replacement of such meters, up-gradation of software patches etc. or any other remedy proposed by the Employer. Such enquiries / investigations shall be conducted by the designated committee of LESCO in liaison with PITC, IT Directorate LESCO, Sub Divisional Officer, Vendor, PIU and M&T.
- v) Vendor’s existing hardware can be used after getting resource utilization assessment/Stress Testing by PITC.
- w) You are required to configure meters during production for primary & secondary IPs, ports & Wakeup SIM numbers (which will be provided by LESCO/PITC). By default, the AMI meters will be in “Non-keep Alive” Mode. However, Meter Configuration may be switched to “Keep Alive” mode for the first time during configuration of meters and establishing its 1st link / connection to the MDC driver software and expose required data to MDM as per UDIL specifications. After establishing the initial contact of meter with MDM, the meter default mode shall be kept in “Non-Keep Alive” mode in order to avoid exhaustion of data. Same connectivity of AMI meters will be desired if they miss any schedule activity. Schedule activity will be initially twice a day, having a sampling rate interval of 30 minutes. However, the schedule as well as sampling rate (upto 1 minute) must be configurable. On demand reading could be retrieved and the response time of On Demand reading should not be more than two minute or any other frequency set by LESCO.
- x) In case of delay of retrieval of readings beyond two minutes, an investigation shall be conducted into the matter and reasons other than the transformer damages, scheduled load shedding, ERO / disconnection etc., shall be on firm’s liability. The meters should communicate even at Signal Strengths of -95dBm to -105dBm. Vendors will get it tested also to the satisfaction of the Employer. If it is observed that the meter modem signal strength is lower than the one mentioned above, the Supplier will be responsible to replace / repair the meter under warranty. Retry Failure rate should not be more than 5 times. The Time out for each retry should not be more than 30 seconds.

- y) The MDM interface of PITC shall be used initially. In case of development of LESCO's own MDM in future, the integration of supplied MDC will be carried out by the you within the warranty period of MDC.
- z) You will be responsible to provide open interfaces for integration/incorporation of new technologies/ systems at later stages.
- aa) The MDC System shall be capable of handling all installed AMI meter data on their respective billing date. Vendor shall propose a capable solution that incorporate 100,000-Nos. of meters into the same MDC. MDC Data should be available for a minimum period of 1 year within database before being moved to archive storage. The archived storage and retrieval or restoration of required data should be a part of proposed solution.
- bb) System shall be able to identify and report potential system/ meter failures or tampering (Identify and report missing reads, Identify and report "stopped" meters, Identify and report inconsistent constants, receive signals for tampering or meter removal, automatically generate request for meter investigation and send to the appropriate system as defined in AMI specifications. In general MDC should comply all the tempering parameters and features of MDM, DDS and UDIL.
- cc) You will conduct training sessions in all circles of LESCO of M&T / Operation staff and other LESCO personnel for meter configuration and testing prior to its installation in the field at site. Moreover, you will also provide training to LESCO's IT staff regarding Hardware, software, database, network connectivity etc. Training call will be submitted at the time of submission of inspection call when the store against the order is ready for inspection. In this regard, schedule for training sessions will be issued by the office of Chief Engineer (MM) LESCO.
- dd) Following activities are pre requisite for supply of AMI meters by your firm:
 - (i) SIMs allocation to meters (M2M SIMs will be provided by LESCO)
 - (ii) Meter configuration (Firm's Responsibility).
 - (iii) Meter creation on MDC (Firm's Responsibility)
 - (iv) Meter installation (LESCO's Responsibility).
 - (v) Live communication testing (Firm's Responsibility)
 - (vi) Data validation (Firm's Responsibility)
 - (vii) All input data will be provided by LESCO wherever required.
- ee) Preferably, Data log like billing, event log, tempering and other related information should be available for at-least last 120-days in the meter. The said information should contain the following in addition to the data/events mentioned in the relevant specifications
 - i. Total No. of Power Outages.
 - ii. Phase failure/Disconnection of wires (Phase wise).
 - iii. Reverse Energy Flow.
 - iv. Reverse Polarity.
 - v. Under Voltage (80% of Un).
 - vi. Over Voltage (120 % of Un).
 - vii. Reverse Phase Sequence.
 - viii. CT Bypass.
 - ix. Opening of Energy meter.
 - x. Logging of Optical Communication with Date & Time Stamp
- ff) CT Bypass events shall be made at least 100 Nos., to be recorded in the meter and also taken to incorporated in the specifications of DDS-50:2007 (amended to date).
- gg) The firm is required to print necessary bar code (whose format should be approved by LESCO) on two suitable places of the meter i.e. at front or any other side of body and on cartridge / packing box.
- hh) LESCO will provide SIMs of at least two TELCO providers at the time of installation.
- ii) MDC software should be capable to maintain log of activities with time stamp. (you shall propose the availability of on-site and archived logs). Vendors proposed solution should enable connectivity of at least 50 sessions at a time.
- jj) The MDC Hardware shall be provided to IT Directorate LESCO at 132kV Ghazi Grid Station by your firm. The ISP services and its charges for dedicated link shall be the responsibility of LESCO. Data Center facilities shall be provided by LESCO.
- kk) High Voltage Surge Protection and ultra violet stability of offered AMI Meters should be improved.
- ll) The meter shall be provided with the additional facility to display current month demand in KW for 30-minutes interval. Other facilities like Instantaneous KW or previous month KW shall be appreciated.
- mm) The Poly Carbonate Meter Security Boxes shall comply all the requirements of the relevant clause of

PEPCO / WAPDA Standard Specification (amended to date). The application of anti-static coating (acrylic lacquer) on PCB shall be incorporated in the specifications DDS-50:2007, (amended to date) if not already mentioned.

- nn) The meters shall comply all the characteristics given in relevant clause of PEPCO / WAPDA Standard Specification (amended to date). Tampering feature of opening the meter with warning sign "OPENED" shall be displayed after scroll of each quantity in "Normal Mode" on LCD instead of permanent display for all types of offered AMI Meters.
- oo) You will deliver the Meters along with green stickers (20% of the total quantity) to LESCO Regional Stores Shalamar Lahore.
- pp) Proposed draft amendments in NTDC Specification for LT/HT TOD/TOU energy meters and Three Phase LT Type CT Operated AMI Meters issued vide C.E. (S&S) NTDC Letter No. Z-184/3012-23 dated 27-09-2023 must be incorporated for this tender. Furthermore, the instructions issued vide Chief Engineer (S&S) NTDC letter no. Z-184/137-56 dated 17-01-2024 along with any other instructions issued vide minutes of meetings till the date of issuance of LOA must also be incorporated in this tender. The meters to be supplied in this project should support all the features of these amendments especially related to AMI and software security related issues.
- qq) The following parameters shall be considered for the improvement of security of energy meters:

a) Security of Firmware / Software:

- Introduce multiple security levels for meter internal registers.
- Optimize the calibration scaling.
- "Energy Mode" configuration be fixed permanently both for Uni and Bi-Directional Registers.
- User based setting configuration for "Energy Mode" be removed permanently.
- Apart from above, additional measures deem necessary to further enhance/strengthen the firmware security shall be proposed by the firm.
- The concept of Penetration tests of firmware/software shall be proposed to impose further check & balance on the safety & security of the firmware performance embedded in the hardware of energy meters.

b) Protection of Optocom:

- Introduce atleast communication "mode C" besides "Access level 4" for data downloading through Optocom.
- Optocom maybe further protected by means of sealing with postal orders for sealing caps.
- Introduce disposable plastic seals as being used by SNGPL.

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c) Security of PCB:

- Encasing/encapsulation of jumpers/EEPROMs in PCB of energy meters.

d) Overall improvement in Security:

- rr) Optocom maybe further protected by means of sealing with postal orders or sealing caps.
- The meters instead of mounting individually be combined into a sealed security box which maybe designed in collaboration with M&T department.
 - The last date of meter programming should be displayed in normal scroll mode.
 - The list of last 10 programmer's ID must be available in meter software report. The ID/key of each dongle/software must be unique and LESCO shall keep record of the IDs provided by the firm.

- Logging of Optical Communication & Programming Events should be included in Events Recording Section. Meter should keep in memory minimum 20 Optical Communication & Programming events each before roll over, including Optical Communication date & time, Programming date & time, Programmer ID and parameter programmed.
- All GSM based meters must generate an event alarm in AMI in case of firmware access through optical port.
- As meters are intellectual property of the firm so manufacture must be bound to take responsibility when such cases arise even after expiry of warranties/prototypes so that further improvements, feedback/amendments can be initiated. In case such issues surface, all the energy meters in the P.O. will be replaced by them without any cost, regardless of the expiry of warranty of meters.
- All previous issued software versions must be updated to incorporate latest security features. There should be separate software for reading and writing the parameters of meters. Specifically, for Three Phase LT Type CT Operated AMI Meters, only the reading software should be issued to LESCO whereas, writing software will be available in firm's premises only.
- Three Phase LT Type CT Operated AMI Meters should have provision for one-time programming only (in factory), after which it should be locked and no further programming should be possible. For LT TOU Meters, meter should have provision for 02 times programming (once in factory and other time while installation by M&T), after which it should be locked for further programming.
- In LT TOU meter, the tampering feature of opening the meter with warning sign, "OPENED" shall be displayed after scroll of each quantity on LCD instead of permanent display as per DDS-60:2020 (amended to date)
- As energy meter is the cashbox for any utility company, it should be protected by using all means and resources. Most of the whole current meter manufacturers are using Chinese firms as Principal firm and Chinese made firmware/hardware in their meters, Meter manufacturers should provide Japan / Europe based technologies (hardware/firmware/software) in energy meters.
- Energy meter manufactures must establish their local R&D department to strengthen the software security of their meter.

Item No.3 : Lot 1 and 2 Specification

Specification : As per relevant NTDC Design & Standard DDS- 50:2007, 98:2011, 110:2012 (all amended to date) applicable at the date 15 days prior to bids submission deadline and IEC-62055-31 for relay with capability of remote disconnect /reconnect for Whole Current 3/Phase Meters only. The backup battery must have minimum capacity of 2000mAh for Three Phase Meters with support of super capacitor. The MDC (driver) software must be PITC-UDIL compliant. **However, the time taken for obtaining prototype approval will not affect the legitimate delivery schedule of the Purchase Order.**

UNSPSC: HT Type CT-PT Operated AMI Smart Energy Meters

Technical Conditions/Special Provisions :-

- a) The material shall be supplied strictly according to above mentioned standard specification of NTDC / PPMC. However, the time taken for obtaining prototype approval will not affect the legitimate delivery schedule of the Purchase Order.
- b) If the Bidder who must be a manufacturer under relevant category does not possess the valid prototype approval for the offered material as per above mentioned standard specifications within last three years (if applicable under NTDC approved specification), the Bidder shall have to obtain the prototype approval from the Stands & Specifications Department of PPMC, Lahore before start of mass production. Drawing and prototype samples for prototype testing (No. of samples as desired by the S&S office) shall be submitted within 30-days from the date of signing of Contract Agreement to Stands & Specifications Department of PPMC, Lahore.
- c) Delay in offering the prototype will be considered as breach of contract agreement and liquidated charges @ 0.0667% percent for each and every day, delay in submission of prototype sample shall be recoverable from the contractor. These liquidated charges are in addition to the liquidated damages stated in preamble to general conditions of contract clause 26.1. All expenses of testing charges will have to be borne by the manufacturer/supplier. Any change suggested during prototype testing for compliance of specification shall have to be incorporated without any extra price or claim. Stands & Specifications Department of PPMC will approve the prototype sample within 30-days after its submission.
- d) In case of failure of 1st prototype Sample, the material shall be improved and second samples must be re-offered for prototype testing to Stands & Specifications Department of PPMC, by the Bidder, within 10-days and get prototype approval within 20-days after its submission. The time taken for improvement in samples and resubmission of drawings will not entitle the manufacturer to claim extension in delivery period on this account. If the Prototype fails second time, firm will be considered Non-Responsive and performance security will be fortified / encashed in favor of LESCO and the Contract Agreement shall stand cancelled. LESCO reserves the right to place Letter of Acceptance on the second lowest & substantially responsive bidder. Any further delay shall be on account of the Supplier/manufacturer and LESCO reserves the right to deduct the Liquidated Damages according to the relevant clause of the Purchase Order.
- (i) **For Foreign Meter Manufacturer:** - Specified type tests, routine & sample tests shall have to be carried out as described in NTDC Specification Nos. DDS-50:2007, DDS-60:2020, DDS-65:2003, DDS-98:2011 and DDS-110:2012 (amended to date) in the presence of Employer's representative(s) before mass production. Drawing and prototype samples (as per S&S NTDC requirements) for prototype testing per meter category shall be submitted within 55 days from the date of issuance of Letter of Acceptance at any of the labs mentioned in the NTDC relevant specifications or any ISO / ILAC certified Labs approved by the Purchaser (in case of no existing Prototype Approval).
- (ii) Delay in submission of prototype sample beyond 55 days from the date of issuance of Letter of Acceptance shall make the bidder non-responsive and liable for Bid Security forfeiture. The lowest evaluated and substantially responsive bidder Or Most Advantageous bidder shall extend the Bid Security for the period leading to the sample submission deadline upon receiving such request from LESCO in accordance with IB.15. All expenses of testing charges will have to be borne by the manufacturer/supplier. Any change suggested during prototype testing for compliance of specification shall have to be incorporated without any extra price or claim. The routine and sampling testing will be carried out at manufacturer's premises in accordance with the specifications. All expenses including service charges testing charges, Traveling, Boarding/Lodging and Daily Allowance, return airfare economy class etc., of Employer's representative(s) shall be borne by the manufacturer.
- (iii) In case of failure of 1st prototype Sample, the material shall be improved and second samples must be re-offered for prototype testing within 20 days and get prototype approval within 20 days from the date of

submission.

- e) Optical port of the proposed AMI meters should be secured by cover or any other suitable material which provide barrier for communication through optical port to avoid unauthorized access. OPTOCOM cover shall be further protected by disposable plastic seals and the record of plastic seals used shall be maintained by the manufacturer (upto delivery to store) as well as by the DISCOs. Last date of meter programming should also be displayed in scrolling menu of meter display. Date of last optical communication shall be displayed on meter display at the end of Energy Meters "Normal Mode" display sequence. Further instructions in this regard shall be followed as per guidelines of Chief Engineer (S&S) NTDC in general before the issuance of Letter of Acceptance.
- f) The offered AMI energy meter's data (through vendor's MDC driver software) must be compliant to Universal Data Integration Layer (UDIL), developed by PITC.
- g) Only MDC's driver / software must be supplied that will be compliant with the latest UDIL standard in effect as at the time of issuance of Letter of Acceptance. You will be responsible to upgrade the MDC Software for any critical updates excluding meter firmware updates within warranty period as recommended by PITC. The MDC software support shall be provided free of cost for the period of five (05) years from the date of issuance of completion certificate. The MDC's driver / software supplied should not be End of Service / End of Life (EOSL). You shall provide his own certificate regarding support End of Service / End of life at the time of bid submission. However, you will submit certificate from OEM as well as after LOI before issuance of PO. After completion of five years, Service Level Agreement (SLA) shall be signed with LESCO for provision of any support for further period of three years which can be extendable for another term with mutual consent.
- h) You will have to submit the PITC Compliance Requirements to PITC within 30 (Thirty) days of signing of contract agreement/LOA (in case of valid Prototype approval) and obtain UDIL compliance certificate from PITC within Thirty 30 days (from the submission of compliance requirements) for Tier 1 (extendable if both parties agreed), on latest PITC version applicable at the time of issuance of LOA. Any delay in submission of compliance requirements to PITC for Tier-I beyond 30 days from contract agreement/loa date shall be regarded on firm's part and liquidated damages @0.0667% per day delay shall be charged. If the valid Prototype approval does not exist at the time of issuance of Letter of Acceptance, you shall submit the PITC Compliance requirements for Tier-I Certificate to PITC within 30 days from the issuance of Prototype Approval from the office of Chief Engineer (S&S) NTDC (for local manufacturer) and obtain the UDIL compliance certificate from PITC within Thirty 30 days (from the submission of compliance requirements) for Tier 1 on latest UDIL version applicable at the submission of compliance. Total allowable time for UDIL compliance is 30-days.

The UDIL Compliance testing will comprise of two phases /Tiers as under:

c) UDIL Compliance Testing Tier-1 Certificate:

In this phase MDCs will be tested for UDIL Compliance as per request Performa submitted by Vendors.

After successful completion of which UDIL Compliance testing Tier-1 certificate will be issued by PITC.

d) UDIL Performance Testing Tier-2 Certificate:

- i) Tier-2 Certificate will be issued once at least 70% meters are installed and One billing cycle of these installed meters have been successfully performed by the LESCO using the AMI solution provided by Vendor. The certificate for Tier-2 will be issued by LESCO after consultation with PITC.
- j) The supplied AMI meters will expose data and services as per specifications laid down in UDIL latest release. All AMI meters will be created in respective vendors' driver software by you to expose data and services in compliance with UDIL document. All necessary features for billing and instantaneous data should be compliant in UDIL.
- k) The offered AMI meter should be equipped with minimum one battery along with super capacitor; the battery shall be of lithium thionyl chloride having minimum cumulative capacity of 2000 mAh for Three Phase HT Type CT & PT Operated AMI Meters. A Super capacitor will be required for RTC to maintain date & time. The meter shall be equipped with fixed long life battery to display reading during power supply failure/outages.
- l) The meter shall be capable to provide safeguard against the theft of energy through all possible means specially through software / Optocom port without physically tempering as required for Three Phase HT Type CT & HT Operated AMI Meters.
- m) Provision of facility for data retrieval/ downloading of data (from EEPROM and also from MDM) in case of damage of meter P.T Circuit of LCD / Display wash or any other critical issue. In case of damage of meter,

the security of EEPROM must be ensured and data should be readable from EEPROM. EEPROM and hard link / jumpers on PCB shall be encapsulated / covered. The encapsulation / covering shall be done by means of any suitable material.

- n) Relevant support tools / Gadgets / software shall be provided to all M&T offices for retrieving data in case of display off / retrieval from EEPROM. Provision of Read Only Software in CD/DVD along with essential accessories to relevant M&T offices of LESCO for data download purposes shall also be made for all types of offered AMI Meters. Each Three Phase HT Type CT & PT Operated AMI Meters should have unique password. The list of meters along with their passwords should be provided to the office of the Chief Engineer (MM) as per standard prevailing practice for in sealed envelopes at the time of delivery of meters. To protect the unauthorized access of meter reading & writing, the software shall also be protected to use on PC/Laptop with dedicated dongle only. The software provided to the DISCOs shall not have any capability of copy / paste in order to avoid tampering of data in billing/ event log reports.
- o) You will be responsible for provision of functionality of software in the meter, security of software programming and re-programming in the field and will provide necessary backup warranty and training (officers/officials) as recommended in the relevant clauses of NTDC specifications for meters. You will also provide documents mentioning the mechanism for implementing security of the software programming and reprogramming in the field.
- p) The DLMS / COSEM compliance requirements certificate includes the encryption mechanisms. The Supplier must ensure the offered meters model are on DLMS / COSEM compliance certificates. The suppliers are encouraged to provide the DLMS / COSEM compliance certificate not older than One years' version. The security of data being sensitive in nature must be ensured. You are responsible to maintain all measures to secure Application, Databases, MDC, network from cyber security attack. Next Generation Firewall/UTM, IDS/IPS, EDR etc., should be included in network designing for safeguarding the infrastructure. HDLC mode "E" method of communication along with DLMS certification for further enhancements in terms of security of software in the draft specifications of DDS-50:2007 and DDS-60:2020 (all amended to date).
- q) Communication module (Modem) of Smart AMI Energy Meters must be PTA verified. It should be minimum 4G and must be downward compatible to 2G without changing SIM.
- r) Three Phase HT Type CT & HT Operated AMI Meters will be unidirectional but programmable for bidirectional by using optical port for net metering purpose. Moreover, meter readers should be able to record readings manually for whatever the reasons may be (communication issues) & in whatever the mode (unidirectional or bidirectional) meter is programmed, with ease & in accordance with printed name plate. The name plate data should be sequential as per Unidirectional format of the Specifications. If the meter is later converted for Bi-Directional use, then green sticker (with printed technical specifications of Bi-Directional) shall be pasted on the meter by LESCO. The Supplier shall provide 20% of the total quantity of each lot printed stickers along-with each consignment for this purpose to be used by LESCO at later stage as agreed in consultation with Chief Engineer (S&S / MI) NTDC.
- s) Data should not exceed 32MB per month for data requirements / configurations, mentioned in latest version of UDIL.
- t) MDC must support SIM identification, installed in AMI Meter which should be identifiable through UDIL Service.
- u) You should ensure that the MDC must be capable to handle 100,000 number of meters concurrently. The installation process & information (configuration of meters, meter particulars, sims configuration, successful communication with MDC, Meter installation and meter functionalities) must also be configured & stored in MDC. In this regard, you will be responsible to provide on job support during warranty period.
- v) MDC should be able to support retrieval of scheduled metering data as per programmed/configurable interval (e.g. 30 minutes) for GSM/GPRS Meters. GSM/GPRS AMI meter would be declared 'grey' if last successful read was before 24-hours and would be declared "mute" if last successful read was before 36-hours or as defined in MDM (UDIL). MDC should be able to retrieve missing data from meters after restoration without out compromising system performance. Also issues regarding error in data or missing data shall be treated as Meter Mute. In this regard, you will also be responsible to provide on job support during warranty period.
- w) Number of muted meters shall not be more than 2% at any point within the system. In case of number of muted meters more than 2%, an investigation shall be conducted into the matter and reasons other than declared scheduled communication outage by the Network provider, transformer damages, scheduled load shedding, cable breakdowns and ERO etc., shall be on firm's liability. If it is observed that the muted meters ratio is more than 2%, the Supplier will be responsible to take remedial measures which includes but not limited to replacement of such meters, up-gradation of software patches etc. or any other remedy proposed

by the Employer. Such enquiries / investigations shall be conducted by the designated committee of LESCO in liaison with PITC, IT Directorate LESCO, Sub Divisional Officer, Vendor, PIU and M&T.

- x) Vendor's existing hardware can be used after getting resource utilization assessment / Stress Testing by PITC.
- y) You are required to configure meters during production for primary & secondary IPs, ports & Wakeup SIM numbers (which will be provided by LESCO/PITC). By default, the AMI meters will be in "Non keep Alive" Mode. However, Meter Configuration may be switched to "Keep Alive" mode for the first time during configuration of meters and establishing its 1st link / connection to the MDC driver software and expose required data to MDM as per UDIL specifications. After establishing the initial contact of meter with MDM, the meter default mode shall be kept in "Non Keep Alive" mode in order to avoid exhaustion of data. Same connectivity of AMI meters will be desired if they miss any schedule activity. Schedule activity will be initially twice a day, having a sampling rate interval of 30 minutes. However, the schedule as well as sampling rate (upto 1 minute) must be configurable. On demand reading could be retrieved and the response time of On Demand reading should not be more than two minute or any other frequency set by LESCO.
- z) In case of delay of retrieval of readings beyond two minutes, an investigation shall be conducted into the matter and reasons other than the transformer damages, scheduled load shedding, ERO / disconnection etc., shall be on firm's liability. The meters should communicate even at Signal Strengths of -95dBm to -105dBm. Vendors will get it tested also to the satisfaction of the Employer. If it is observed that the meter modem signal strength is lower than the one mentioned above, the Supplier will be responsible to replace / repair the meter under warranty. Retry Failure rate should not be more than 5 times. The Time out for each retry should not be more than 30 seconds.
- aa) The MDM interface of PITC shall be used initially. In case of development of LESCO's own MDM in future, the integration of supplied MDC will be carried out by you within the warranty period of MDC.
- bb) You will be responsible to provide open interfaces for integration/incorporation of new technologies/ systems at later stages.
- cc) The MDC System shall be capable of handling all installed AMI meter data on their respective billing date. Vendor shall propose a capable solution that incorporate 100,000-Nos. of meters into the same MDC. MDC Data should be available for a minimum period of 1 year within database before being moved to archive storage. The archived storage and retrieval or restoration of required data should be a part of proposed solution.
- dd) System shall be able to identify and report potential system/ meter failures or tampering (Identify and report missing reads, Identify and report "stopped" meters, Identify and report inconsistent constants, receive signals for tampering or meter removal, automatically generate request for meter investigation and send to the appropriate system as defined in AMI specifications. In general MDC should comply all the tempering parameters and features of MDM, DDS and UDIL.
- ee) You will conduct training sessions in all circles of LESCO of M&T / Operation staff and other LESCO personnel for meter configuration and testing prior to its installation in the field at site. Moreover, the firm will also provide training to LESCO's IT staff regarding Hardware, software, database, network connectivity etc. Training call will be submitted at the time of submission of inspection call when the store against the order is ready for inspection. In this regard, schedule for training sessions will be issued by the office of Chief Engineer (MM) LESCO.
- ff) Following activities are pre requisite for supply of AMI meters by the manufacturer:
 - (i) SIMs allocation to meters (M2M SIMs will be provided by LESCO)
 - (ii) Meter configuration (Firm's Responsibility).
 - (iii) Meter creation on MDC (Firm's Responsibility).
 - (iv) Meter installation (LESCO's Responsibility).
 - (v) Live communication testing (Firm's Responsibility).
 - (vi) Data validation (Firm's Responsibility).
 - (vii) All input data will be provided by LESCO wherever required.
- gg) Preferably, Data log like billing, event log, tempering and other related information should be available for at-least last 120-days in the meter. The said information should contain the following in addition to the

data/events mentioned in the relevant specifications.



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- i. Total No. of Power Outages.
- ii. Phase failure/Disconnection of wires (Phase wise).
- iii. Reverse Energy Flow.
- iv. Reverse Polarity.
- v. Under Voltage (80% of Un).
- vi. Over Voltage (120 % of Un).
- vii. Reverse Phase Sequence.
- viii. CT Bypass.
- ix. Opening of Energy meter.
- x. Logging of Optical Communication with Date & Time Stamp

hh) CT Bypass events shall be recorded in the meter as per specification.

ii) The manufacturer is required to print necessary bar code (format : 29 0628 12965 000000000001) on two suitable places of the meter i.e. at front and one on any other side of body and one on cartridge / packing box.

jj) LESCO will provide SIMs of at least two TELCO providers at the time of installation.

kk) MDC software should be capable to maintain log of activities with time stamp. (The firm will propose the availability of on-site and archived logs). Vendors proposed solution should enable connectivity of at least 50 sessions at a time.

ll) Only MDC's Driver /Software will be supplied to IT Directorate LESCO at 132-kV Ghazi Grid Station by you.

e) High Voltage Surge Protection and ultra violet stability of offered AMI Meters should be improved.

f) The meter shall be provided with the additional facility to display current month demand in KW for 30-minutes interval. Other facilities like Instantaneous KW or previous month KW shall be appreciated.

mm) The Poly Carbonate Meter Security Boxes shall comply all the requirements of the relevant clause of PEPCO / WAPDA Standard Specification (amended to date). The application of anti-static coating (acrylic lacquer) on PCB shall be incorporated in the specifications DDS-50:2007, DDS-60:2020 (amended to date) if not already mentioned.

nn) You shall comply all the characteristics given in relevant clause of PEPCO / WAPDA Standard Specification (amended to date). Tampering feature of opening the meter with warning sign "OPENED" shall be displayed after scroll of each quantity in "Normal Mode" on LCD instead of permanent display for all types of offered AMI Meters.

oo) You will deliver the Meters alongwith green stickers (20% of the total quantity) to LESCO Regional Stores Shalamar Lahore.

pp) Proposed draft amendments in NTDC Specification for HT TOD/TOU energy meters and Three Phase HT Type CT & PT Operated AMI Meters issued vide C.E. (S&S) NTDC Letter No. Z-184/3012-23 dated 27-09-2023 must be incorporated for this tender. Furthermore, the instructions issued vide Chief Engineer (S&S) NTDC letter no. Z-184/137-56 dated 17-01-2024 along with any other instructions issued vide minutes of meetings till the date of issuance of LOA must also be incorporated in this tender. The meters to be supplied in this project should support all the features of these amendments especially related to AMI and software security related issues.

qq) The following parameters shall be considered for the improvement of security of energy meters:

a) Security of Firmware / Software:

- Introduce multiple security levels for meter internal registers.
- Optimize the calibration scaling.
- "Energy Mode" configuration be fixed permanently both for Uni and Bi-Directional Registers.
- User based setting configuration for "Energy Mode" be removed permanently.
- Apart from above, additional measures deem necessary to further enhance/strengthen the firmware security shall be proposed by the manufacturers.

- The concept of Penetration tests of firmware/software shall be proposed to impose further check & balance on the safety & security of the firmware performance embedded in the hardware of energy meters.

b) Protection of Optocom:

- Introduce atleast communication “mode C” besides “Access level 4” for data downloading through Optocom.
- Optocom maybe further protected by means of sealing with postal orders for sealing caps.
- Introduce disposable plastic seals as being used by SNGPL.

c) Security of PCB:

- Encasing/encapsulation of jumpers/EEPROMs in PCB of energy meters.

d) Overall improvement in Security:

- Optocom maybe further protected by means of sealing with postal orders or sealing caps.

- The meters instead of mounting individually be combined into a sealed security box which maybe designed in collaboration with M&T department.
- The last date of meter programming should be displayed in normal scroll mode.
- The list of last 10 programmer’s ID must be available in meter software report. The ID/key of each dongle/software must be unique and LESCO shall keep record of the IDs provided by manufacturers.
- Logging of Optical Communication & Programming Events should be included in Events Recording Section. Meter should keep in memory minimum 20 Optical Communication & Programming events each before roll over, including Optical Communication date & time, Programming date & time, Programmer ID and parameter programmed.
- All GSM based meters must generate an event alarm in AMI in case of firmware access through optical port.
- As meters are intellectual property of manufacturer so manufactures must be bound to take responsibility when such cases arise even after expiry of warranties/prototypes so that further improvements, feedback/amendments can be initiated. In case such issues surface, all the energy meters in the P.O. will be replaced by them without any cost, regardless of the expiry of warranty of meters.
- All previous issued software versions must be updated to incorporate latest security features. There should be separate software for reading and writing the parameters of meters. Specifically, for Three Phase HT Type CT & PT Operated AMI Meters, only the reading software should be issued to LESCO whereas, writing software will be available in Manufacturer’s premises only.

- Three Phase HT Type CT & PT operated AMI Meters should have provision for one-time programming only (in factory), after which it should be locked and no further programming should be possible. For HT TOU Meters, meter should have provision for 02 times programming (once in factory and other time while installation by M&T), after which it should be locked for further programming.
- In HT (TOU) meter, the tampering feature of opening the meter with warning sign, “OPENED” shall be displayed after scroll of each quantity on LCD instead of permanent display just like in Three Phase HT Type CT & PT operated AMI Meters as per Specification.
- As energy meter is the cashbox for any utility company, it should be protected by using all means and resources. Most of the energy meter manufacturers are using Chinese firms as Principal firm

and Chinese made firmware/hardware in their meters, Meter manufacturers should provide Japan / Europe based technologies (hardware/firmware/software) in energy meters.

- Energy meter manufactures must establish their local R&D department to strengthen the software security of their meter.

*Note:- Any required 3rd Party License including those for operating system, databases or any other will be the responsibility of the bidder and to be quoted separately.

The main technical data is prescribed above and also in the relevant sections of the Technical Provisions. However, the Bidder may supplement the main technical data by providing hereunder other salient parameters including main plant make, capacity and suitability for the works under consideration to enable the Employer/Project Manager/Engineer to assess technical conformance of the proposed process and the means available with the contractor to do it.

Moreover, complete set of technical information, description data, literature and drawings as required. This will include but not be limited to the following:

- (i) A sufficient number of drawings, photographs, catalogues, illustrations and such other information as is necessary to illustrate clearly the significant characteristics such as general construction dimensions and other relevant information about the Goods/Plant to be furnished.
- (ii) Details of equipment and machinery with capacity.
- (iii) The approximate weight and dimension of the main components, a brief description of the principal materials and fabrication processes to be used and recommended methods of assembly.

Initials of Signatory to Bid:.....

Note:-

- i. Rate should be quoted inclusive of all taxes / duties & 0.5% Inspection Charges (non-reimbursable) and inclusive of 18% Sales Tax on the basis of CIP delivery at free delivery to consignee's LESCO Regional Store Shalamar, Lahore. The offered price shall not be escalated for any reason what so ever. The inspection charges @0.5% shall be borne by the bidder and the same will be deposited to the accounts of Chief Engineer (MI) PPMC, Lahore.
- ii. The quoted FCS price in Pak Rupees shall be firm and final and not subject to escalation for any reason what-so-ever. The Tenderer shall be entirely responsible for all duties and Taxes and other such levies on finished goods/ components and raw material of the Contracted goods until delivery to the consignee(s).
- iii. This tender will be evaluated in the light of categorization policy formulated by WAPDA Authority and if any pre-qualified firm has not yet been categorized by WAPDA, it will be considered in category-1. (applicable for only meter manufacturers)
- iv. In case of any specific occurrence the shares will be distributed / allocated on the basis of previous performance in supplies against DISCOs Purchase Orders, manufacturing capacity / capability etc.
- v. Conditional Bids / Rates will not be entertained / accepted.
- vi. Bid submission / Tender opening date & timings shall be observed strictly.
- vii. You have to submit the requisite Certificate dully filled in, regarding the Declaration of Fees, Commission & Brokerage etc. paid by you about Goods, Services & Works.
- viii. Cartel / pool rates are strictly prohibited. The firms found involved in collusive practice shall be dealt under PPRA Rules / PEPCO instructions.
- ix. In case of holiday announced by the Govt. of Pakistan, strike in LESCO or any other reasons what so ever due to which this office remains closed on the above scheduled tender opening date, the tender will be opened on next working day at same time and place / venue.
- x. The bidder's Beneficiary Declaration certificate mentioning the names of beneficiary accounts as per PPRA SRO 592 and in case, such owners / Beneficiary have other firms with different names registered as General Order Suppliers with DISCO/ NTDC/WAPDA who are consistently non-performing (non-delivery of material, non-submission of performance Guarantees, Bid Guarantees, Advance Payments, non-execution of contract agreements etc.) then the bidder's having same beneficiary / owners firm's shall be declared as non-responsive. Copy of form of Beneficiary Declaration certificate is attached.
- xi. The word PEPCO shall be read and considered as "PPMC"
- xii. The bid will be considered liable for rejection in case of the blacklisting of that bidder has been displayed / published on PPRA's official website only.

Price Schedule

For Individual Items

Item No.	Lot No.	Item Title	Quantity	Unit Price (PKR)	Total Price (PKR)	Delivery Location	Delivery Period / Year	Country of Origin
1								
2								
3								

For Lots

Item No.	Lot No.	Lot Title	Total Lot Price (PKR)	Country of Origin
1	1			
	2			
	3			
2	1			
	2			
	3			
3	1			
	2			

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Past Experience / Contracts

Contracts over <i>[insert amount]</i> during the last three years:				
Procuring Agency	Value	Year	Goods/Services Supplied	Country of Destination

