



TECHNICAL BID

e-Tender for Electrical Energy Audit at Assam University Silchar.



ASSAM UNIVERSITY, SILCHAR

(A Central University Established by an Act of Parliament)

Silchar-788011, Assam, India.

Certified that both Technical & Price Bid contains (31) pages including the cover page.

ASSAM UNIVERSITY, SILCHAR



(A Central University Constituted under Act. XXIII of 1989)
Silchar – 788011, Assam, India.

Tender No.AU/ENGG/MAINT/ELECT-63/2022

Date: 24.08.22

NIT/ TENDER PAPER

Name of works: - **e-Tender for Electrical Energy Audit at Assam University Silchar.**

- Application / Form Fee: Rs.500.00
- Estimated Cost: Rs.2, 63,371/-
- Earnest Money: Rs.5, 267/-
- Tender Processing Fee Rs 885/-
- Last date of submission online of tender: 01.09.22 up to 11.00 A.M.
- Date and Time of online Technical Bid Opening: 01.09.22 at 11.30 A.M.
- Date and Time of online Price Bid Opening: 01.09.22 at 12:00 PM



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CHECK LIST OF DOCUMENTS

Check List:

1. Valid registration certificate of Central Govt. / State Govt. [Performa 2(a)] : Yes/No
2. Credentials of Bureau of Energy Efficiency (BEE) Accredited Energy Auditor. : Yes/No
3. Experience certificate: Experience of executing similar nature works
During the last seven years with the record of completion [Performa 3(a)] : Yes/No
(Within seven years from date of publication of NIT)
4. Bank solvency from nationalized/ scheduled Bank within one year from date of
Publication of NIT as per Prescribed [Proforma-2(b)] : Yes/No
[At least 40% of the Estimated Cost has to be mentioned in the certificate]
5. Ongoing works statement [Performa 3(b)] : Yes/No
6. PAN CARD : Yes/No
7. GSTIN : Yes/No
8. EPF registration certificate with latest deposit challan copy : Yes/No
(Payment of wage month must be within two months from last date of submission of bid)
9. Certificate and undertaking from the Engineer employed : Yes/No
10. Self-attested copy of tender document : Yes/ No

Note:

- a. The Bidders are required to submit the print copy of the above uploaded documents duly self-certified along with the proof towards payment of tender document cost and EMD submitted.
- b. The works of Energy audit at Assam University Silchar is to be executed under the supervision of BEE accredited Energy Auditor.
- c. Works completion Certificate should be issued by officer not below the rank of Executive Engineer or equivalent/ Head of any Institution. Work order shall not be considered as proof for works completion.

Signature of Agency / Contractor



SECTION -1

Tender No. AU/ENGG/MAINT/ELECT-63/2022

Date: 24.08.22

NOTICE INVITING TENDER

Name of Work	Estimated Cost	Time of Completion	EMD (In Rupees)	Application / Form Fee	Tender Processing Fee	Last date of submission of e-tender	Date and Time of online Technical Bid Opening	Date and Time of online Price Bid Opening
e-Tender for Electrical Energy Audit at Assam University Silchar.	Rs. 2,63,371/-	30 days	Rs. 5,267/-	Rs. 500/-	Rs. 885/-	01-09-2022 to 11.00 A.M	01-09-2022 At 11.30 A.M	01-09-2022 At 12.00 P.M

Online Item rate tenders in two bid systems valid for 90 days are invited from Registered Electrical Contractors having valid registration & license of CPWD/APWD/MES of appropriate class and category for the works of '**e-Tender for Electrical Energy Audit at Assam University Silchar.**' of estimated amount Rs.2,63,371.00/-. Kindly submit your bid / tender giving lowest rates per unit along with terms and conditions through online mode only on e-Procurement portal <https://mhrd.euniwizarde.com> or before **Last date and time of submission of bid is 01.09.22 up to 11.00 AM**. The tender documents and other details can be obtained from the websites www.aus.ac.in, or <https://mhrd.euniwizarde.com> or <https://eprocure.gov.in/epublish/app>

Sd/-

Executive Engineer



TENDER CONDITIONS:

1. The Tenderer shall quote his rate as per NIT & the Terms and Conditions enclosed in the Tender document.
2. Tender Documents can be obtained from the Engineering Section of Assam University during working hours against written request and on payment of Rs500/- online.
3. The Tender Document must be scanned and upload online otherwise you will be rejected.
4. The Earnest Money Deposit (EMD) of Rs.5,267.00-mentioned above is absolutely mandatory and pay through online only, failing which the tender will not be accepted.
5. Self-Attested Checklist documents must be submitted for verification:
 - a) Envelop No-1 should contain following documents: -
 - i) self-attested registration certificate,
 - ii) self-attested PAN Card,
 - iii) self-attested GST Registration,
 - iv) self-attested EPF registration, copy of latest chalan,
 - v) self-attested work experience certificate once similar nature of work,
 - vi) Self-attested bank solvency certificate.

- b) Envelop No-1 properly sealed with wax and super scribing Name of Work, Closing Date & Name of Agency/Contractor on the cover of the Envelop No-1

NB: -If any Bidder is found to submit any misleading information regarding their credentials, during or afterwards, of tendering procedure and execution of work, then disciplinary action will be taken against those bidders as per GOI rules.

6. Tenders should be valid for 90 days from the date of opening of the tenders and may have to be extended further if considered necessary by the University. No reasons will be assigned for extension and no withdrawal shall be allowed. If any tenderer withdraws his tender before the said period or issue of letter of acceptance, which-ever is earlier, or makes any modifications in the terms and conditions of the tender which are not acceptable to the University, then the University shall, without prejudice to any other right or remedy, be at liberty to forfeit the said Earnest Money Deposit.
7. The time allowed for completing the work will be 60 days from the day of written order to commence the work.
8. Tenderer are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect



their tender. A tenderer shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed. The tenderer shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. Will be issued to him by the University and local conditions and other factors having bearing on the execution of the work.

9. No Telex/ Tele fax/ Telegram/ E-mail of the Techno-Commercial and Price bids will be accepted. The University is not responsible for Postal. Courier delays. The parties have to ensure the receipt of bids well in time.
10. If the date of tender submission and opening happens to be unforeseen holiday, the same will be postponed to the next working day without any further intimation.
11. The University does not bind itself to accept lowest tender and reserves the right to reject any or all the tenders received by recording clear, logical reasons.
12. Canvassing whether directly or indirectly, in connection with tenders is strictly prohibited and the tender submitted by the contractors who resort to canvassing will be summarily rejected.
13. The competent authority on behalf of the University reserves to himself the right of accepting the whole or any part of the tender and the tenderer shall be bound to perform the same at the rate quoted.
14. This Notice Inviting Tender shall form a part of the contract document.
15. The successful tenderer/ contractor, on acceptance of his tender by the University, shall within 15 days from the stipulated date of start of the work sign the contract agreement in standard form consisting of the notice inviting tender, all the documents including additional conditions, specifications and drawings, if any, forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.
16. No materials will be supplied by the University.
17. In case of delay in completion of the work within the stipulated time due to reasons attributable to the contractor, Standard Liquidated Damage @ 1% of the tender accepted value shall be recovered for each day of delay from the final bill or the part thereof.
18. The contractor shall obtain a valid license under the contract labour (R&A) Act, 1970, and the contract labour central rules 1971, before the commencement of the work, and continue to have a valid license until the completion of the work. The contractor shall also abide by the provisions of the Child Labour (Prohibition and Regulation) Act, 1986 and other labour laws. Any failure to fulfill this requirement shall attract the penal provisions of this contract arising out of the resultant no execution of the work. No labour below the age of fourteen years shall be employed on the work.



19. During Opening of tender only representative duly authorized by the agency / contractor will be allowed to be present.
20. All relevant documents submitted with the tender should be self-attested (by the agency/ contractor) and on demand original copy must be produced failing which tender will not be considered.
21. Authenticity of signatory (contractor) of tender document will be verified before finalization of tender document.
22. Tax at higher of prescribed rate or 20% will be deducted on all transactions liable to TDS, where the permanent Account Number (PAN) of the deductee is not available.
23. In case of any dispute, it would be referred to a sole Arbitrator to be appointed by the University authority. The decision of the sole Arbitrator will be final and binding to both the parties.
24. 10% security money will be retained by the University from the bill value which shall be released after 01(One) year of satisfactory completion of work.
25. EMD of unsuccessful bidder shall be released within 02 (two) months after issue of work order to the successful bidders.
26. If the work is found not as per specification or abandoned by the executing contractor/agency, same will be cancelled and remaining work will be done through other contractor/agency at their cost & risk.
27. At any time prior to the deadline for submission of bids, the University may, if necessary, modify the tender document by a written amendment. All prospective Tenders will be notified of the amendment which will be binding to all the bidders. The amendments will be notified on the websites, <https://mhrd.euniwizarde.com> or www.aus.ac.in.
28. The bidders are advised to get themselves registered on the e-Procurement portal at least a week before the scheduled date and time of bid submission. This will help the new bidders/vendors to get familiar with the e-Procurement portal. The bidders must arrange computers/laptop, high speed internet and other equipment etc. required for bid submission... For more details visit <https://mhrd.euniwizarde.com>
29. Those bidders who accept the above terms and conditions, may submit their tender along with all relevant documents and a copy of above terms and conditions of the tender duly signed.
30. The bidders are directed to complete the works strictly within the stipulated time, failing which Assam University may not be in a position to make payment after the fund validity is over.

31. Introduction & Scope of works

A.Introduction:

Assam University Silchar is desirous of undertaking Preliminary Energy audit of the Electrical installations provided in the office/department building at Silchar campus. The office building



receives power supply at 33/11 KV substation from the APDCL. In addition, diesel generator sets of suitable capacities have been installed to meet critical applications during power outages. The objective of energy audit is to have Energy Performance Assessment of equipment's and utilities in the office/department building at Silchar campus., Electric power distribution network, Water pumping systems, UPS systems , Lighting systems , Diesel generator sets etc. including study of energy consumption pattern and management of power demand in the building. Based on the above observations, to identify opportunities for energy saving and to have recommendations for the same along with cost benefit analysis.

B. Terms & Conditions

Equipment's / measuring instruments

i) All the equipment's / instruments required for site measurements for carrying out the energy audit will have to be arranged by the firm without any extra payment to the University. The site measurements should be recorded in the presence of University's personnel. Please note that the University will not provide any kind of assistance in the form of men/material and the firm will have to make their own arrangement for all assistance.

Work at site, the firm may visit the premises and ascertain site conditions. The work has to be carried out in a working office building without causing inconvenience to the normal working of the University. No power shut down will be provided during office hours. Power shut down required for the work will be given on holidays and after office hours at the discretion of the University. No extra claims will be admissible later on these grounds. The firm should deploy only qualified and experienced Technician having requisite licenses to carry out such works. Utmost care shall be exercised by the firm in carrying out the work to ensure that no damage is caused to persons and properties. The University will not be liable for any injury or damage to persons and any such happening will be entirely the responsibility of the firm.

Scope of Work:

C. Methodology: Energy audit activities shall include the following:

1. Pre Audit: Meeting with University's technical team, Visual inspection of the site & verification of various documents regarding energy consumption and electrical installation.
2. Audit: Auditing and performance analysis to determine the condition of electrical Installation.
3. Submission of Draft report to University and discuss the report with University's representative.
4. Submission of Final report by Energy Auditor to University after incorporating the changes as per discussions with the University.

D. Equipment Details:

The energy audit of the electrical installation as detailed below shall be conducted. The major list of equipment's is as under:

1. Electricity Supply and Distribution



2. Air Conditioning System (Split/Centralized)
5. UPS
6. Lighting and Ceiling Fans
8. Water Pumps.
9. Lifts,
10. DG sets

E. The energy audit of the electrical installation shall cover the following activities:

- i) Building Energy Bills Analysis: Analysis of energy consumption pattern in the building with respect to peak demand, Load pattern, and power factor.
- ii) Electricity Supply and Distribution network- Distribution Transformer(s) Study and analysis of the utility pattern of transformer(s), checking no load loss of the transformers, measuring all Day Efficiency for each transformer etc. and LT Distribution Panels
 1. General inspection of the LT distribution panel(s) for its maintenance and working including checking all the meters mounted on it.
 2. Measurement and analysis of demand and power factor, suggestions to reduce the demand and improve the power factor.
 3. Study on Metering system and suggestion for improvement.
 4. Study on V, I, KW fluctuation and profiling & I imbalances in the network.
 5. Detailed examination of the existing energy use of the facility with break up.
 6. Study and examination of use of electric energy, cost balance with break up.
- iii) Performance evaluation of Split Air Conditioning Systems/Centralised Air Conditioning System:
 1. Calculation of operating Input KW per TR and Comparison of actual parameters with the design values, and suggestion for corrective actions to be implemented.
- iv) UPS Systems: Measurement and analysis UPS loading, redundancy, operating efficiency, load pattern to suggest measures for energy cost reduction.
- v) Lightning system:
 1. Examination of the performance of existing lighting system in all the areas, Measurement of illumination levels, etc.
 2. To look possibilities to reduce energy use by incorporating energy efficient lighting system.
 3. Study of operating electrical parameters like voltage, current etc. in the lightening Circuits.
- vi) Diesel generator sets:
 1. General Inspection of DG set.
 2. The DG sets are to be tested for operational performance and parameters including fuel consumption, power generated, Voltage, Ampere, KW, KWh, KVA should be recorded during the audit.

F. Energy Audit Report

The report shall contain complete building information, inventory of all equipment's. It should include the log sheet data collected/measured at site, analysis of data (Log sheet and actual



measured), observations of operational performance of various equipment's, findings and recommendations for achieving energy and cost saving. The recommended energy saving measures shall be categorized as (i) short term, (ii) medium term and (iii) long term measures for energy conservation. The report should provide the estimated cost, estimated savings and simple pay back for each recommended energy saving measures in a chart. A detailed description of each energy conservation measure and supporting calculation with energy use and savings calculations, economic analysis and any assumptions that are made regarding operation or equipment efficiency shall be included. The recommendations for energy efficiency shall include the technical particulars of the equipment, life expectancy and details of manufacturer etc.

G. Specialized Equipments:

The successful bidder shall arrange all the specialized equipments required to perform the energy audit and as required and directed by the department. An indicative list of equipments are as detailed below:

Tools & Tackles:

The Contractor should maintain/promptly arrange the tools/tackles required for smooth execution of the work. An indicative list of tools/tackles is mentioned hereunder: -

- i. Megger – 1000/5000 volts.
- ii. Lux meter
- iii. Infrared thermometer
- iv. Decibel meter
- v. Digital Multimeter
- vi. Digital Tachometer
- vii. Digital humidity meter
- viii. Digital Anemometer
- ix. Tool kit {D – Spanner, Ring Spanner (5-40 No's each)}.
- x. Pliers, tester & test lamps.
- xi. Earth tester.
- xii. Power meter.
- xiii. High voltage discharge rod.
- xiv. High voltage safety gloves.
- xv. Hand gloves and safety belts.
- xvi. First aid Kit.

Sd
Executive Engineer



SECTION-2
PROFORMA -2(b)

FORM OF SOLVENCY CERTIFICATE FROM A SCHEDULED BANK

This is to certify that to the best of our knowledge and information M/S/ Sri -----
----- having marginally noted address, a customer of our bank are /is respectable
and can be treated as good for any engagement up to a limit of Rs----- (Rupees-----
-----)

This certificate is issued without any guarantee or responsibility on the Bank or any of the officers.

(Dated Signature)

For the Bank

Note: In case of partnership firm, certificate to include names of all partners as recorded with the bank.

Signature of agency / contractor



TENDER

I/We have read and examined the notice inviting tender, schedule, specifications applicable, General Rules and Directions, Conditions of contract and special conditions , schedule of rate and other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work .

I/We hereby tender for the execution of the work specified for AU , Silchar within the time specified and in accordance in all respects with the specification, designs drawings and instructions in writing referred to in General Rule and Directions and in the conditions of contract and with such materials as are approved by the University Authority, and in respects in accordance with, such conditions so far as applicable .

I/We agree to keep the tender open for 90 days from the due date of submission thereof and not make any modifications in its terms and conditions.

A sum of Rs5,160/- is hereby forwarded in FDR/ Call deposit in favour of Assam University, Silchar of scheduled Bank as earnest money. If I/We, fail to commence the work specified I/We agree that the A.U., Silchar or his authorized officer successors in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely otherwise the said earnest money shall be retained by him towards security deposit to execute all the works referred to therein and to carry out such deviations as may or orders, up to maximum of the percentage mentioned in the conditions of contract and those in excess of limit at the rates to be determined in accordance with the provision mentioned in the tender form.

I/We agree that should I/We fail to commence the work specified in the above memorandum, an amount equal to the amount of the earnest money mentioned in the form of the invitation of tender shall absolutely be forfeited to the Silchar and the same may be the option of the competent authority on behalf of the A.U. Silchar be recovered without prejudice to any other right or remedy available in law out of the deposit in so far as the same may extend in terms of the said bond and in the event of deficiency out of any other money due to me/ us under this contract or otherwise.

Date

Signature of Contractor

Postal Address & Tele No.



SECTION –3

GENERAL RULES AND DIRECTIONS

1. SUBMISSION OF TENDER/E-TENDER

- i) The General Conditions of Contract for Central PWD /APWD Works shall be the guiding principles for this work. Tenderers are advised to procure the same and familiarize themselves with the provisions of the above-mentioned Conditions of Contract.
- ii) The University reserves the right to alter, modify any Tender Conditions, technical specifications etc., before tender opening and may seek fresh quotation depending upon necessity, and may even withdraw/ cancel the tender, without assigning any reason.
- iii) All amendments/ revisions to tender documents issued by the University, if any, must be signed and submitted along with the tender. The tenderer is advised to submit the tender based strictly on the terms and conditions and specifications contained in the tender documents, and not to stipulate any deviations.
- iv) The bidders shall provide factual information. The bidder shall comply with the principle of good faith. An important aspect of the principle of good faith is that both parties to the employment contract have the right to know, namely having the right to know the opposite party and important information concerning the works contract.
- v) If the bidder supplies false information or conceals the factual conditions which cause the University to select him or her, which is contrary to the University's true intent, pursuant to the applicable law, this employment contract shall be invalid. Furthermore, in accordance with the decision of the competent authority, the awarded works contract can be terminated at any stage as per the GOI guidelines.

2. Tenders shall be prepared and submitted in soft copies of their bids electronically on the e-bid Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the e-Procurement Portal <https://mhrd.euniwizarde.com>, prepare their bids in accordance with the requirements and submitting their bids online on the e- Procurement Portal.

3. Insertion, postscript, addition and alteration are allowed till before the time of the closing of tender. In the event of the tender being submitted by a firm, any of the partners may upload and submit the tender.

4. TENDERER TO INFORM HIMSELF FULLY:

The tenderer is required to carefully examine the technical specifications and other details relating to the work given in the Tender documents and fully inform himself as to all conditions and matters that may in any effect the work or the cost thereof. The tender shall be deemed to have himself independently obtained all necessary information for the purpose of



preparing the tender and his tender as accepted shall be deemed to have taken into account all contingencies as may arise due to such information or lack of the same.

5. CLARIFICATIONS:

The Tender Document issued is complete in all respect and no further clarifications are elaborated. However, in so far Technical Clarifications if any are concerned even though not binding on university can be ascertained from the University.

6. QUOTATION OF PRICE / RATES

This being Item rate tender, the tenderer shall state at what rate he will be willing to undertake the work. Rate should be quoted both in figure & words.

7. COMPLETION TIME:

The completion time is the essence of the contract. The Tenderer shall complete the work within the period indicated in the Notice Inviting Tender.

8. TRANSFER OF TENDER DOCUMENTS/ TENDERS:

Transfer of tender documents purchased by one tenderer to another is not permissible. Similarly transfer of tenders submitted by one tenderer to another is not permissible under any circumstances. The alteration of essence of tender once submitted is also not permissible.

9. LANGUAGE:

The Tender shall be submitted in English language only.

10. EARNEST MONEY DEPOSIT:

- i) The tender must be accompanied by the Earnest Money Deposit pledged in favour of Assam University, Silchar, in the form of Demand Draft / FDR/Call Deposit as indicated in the Notice Inviting Tender. If the tenderer after submitting his tender resiles from his offer or modify the Terms and Conditions thereof in a manner not acceptable to the University, the Earnest Money will be forfeited. Tenders not accompanied by the earnest money deposit will not be considered and will be summarily rejected.
- ii) On Non-acceptance of tender, but in any case, not earlier than the expiry date of the period for which the tender is kept open, the Earnest Money shall be discharged.
- iii) Should the Tender in question be withdrawn or cancelled by the University, which the University shall have the right to do at any time, Earnest Money will be discharged.
- iv) Should the successful tenderer fail or refuse to duly sign the contract within the period fixed by the University or fail/refuse to commence the work within the stipulated time, the Earnest Money shall be forfeited without prejudice to his being liable for any further loss or damage incurred in consequence by the University.



11. NO CLAIM FOR COMPENSATION FOR SUBMISSION OF TENDER:

The Tenderer whose tender is not accepted shall not be entitled to claim any costs, charges and expenses of any incidental to or incurred by him thorough or in connection with his submission of tender, even though the University may modify/ withdraw the Tender.

12. LOWEST TENDER NOT NECESSARILY TO BE ACCEPTED:

The University does not bind itself to accept lowest tender and reserves the right to reject any or all the tenders received by recording clear, logical reasons.

13. TENDER EVALUATION:

The Tenders received and accepted will be evaluated to ascertain the best and lowest workable tender in the interest of the University, for the complete work covered under the technical specifications and documents.



Annexure

The buildings and major electrical items / equipment to be maintained by the contractor are as under

Name of buildings	Remarks
Guest House and International Guest house	
Pump House	
Seminar Halls (02 nos.)	
Administrative Office	
Examination Branch	
TAC complex	
Health Centre	
Ladies Hostels (05 Nos.)	
Boy's Hostels (04 Nos.)	
Central Library Cum Computer Centre	
Dept. of Business Administration	
Academic Building II(School of Indian Languages)	
English & Foreign Language Building	
Academic Building I (Mass Comm. and Fine Arts)	
Deptt. of Social Work Building	
Deptt. of Education Building	
Deptt. of History, Pol. Science and Sociology Building	
Deptt. of Commerce and Economics Building	
Deptt. of Mathematics and CIL Building	
Deptt. of Computer Science Building	
Deptt. of Chemistry Building	
Deptt. of Physics Building	
Deptt. of Ecology and Env. Science Building	
Deptt. of Life Science Building	



Deptt. of Bio-Technology Building	
Deptt. of Micro-Biology Building	
Deptt. of Earth Science Building	
Deptt. of Agriculture and Information Technology Building	
Deptt. of Pharmaceutical Science Building	
Control room of 5-Sub-Station	
Street Lights and Compound lights within University Campus	
Intermediate Pumping Station	
Deptt. of Law Building	
Deptt. of Library & Information Science Building	
Electronics and Telecommunication	

Note: Any other building within the Assam University Campus may be included as decided by authority.



SECTION – 4

TERMS AND CONDITIONS GOVERNING THE TENDER AND EXECUTION OF CONTRACT THEREOF.

1. DEFINITIONS:

a) Unless otherwise required by the subject or context the terms herein below shall have the following meanings.

The Contract means the documents forming the tender and acceptance thereof and the formal agreement executed between the competent authority on behalf of Assam University and the Contract, together with the documents referred to therein including these conditions, the specifications, designs, drawings and instructions issued from time to time by the Registrar, Assam University and all the these documents taken together, shall be deemed to form one contract and shall be complementary to one another.

b) Client means Assam University acting through The Executive Engineer Assam University, Silchar.

c) The Contractor shall mean the individual, firm or company, whether incorporated or not, undertaking the works and shall include the legal personal representative of such individual or the persons composing such firm or company, or the successors of such firm or company and the permitted assigns of such individual, firm or company,

d) The expression works or work shall, unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the works by or by virtue of the contract contracted to be executed whether temporary or permanent, and whether original, altered, substituted or additional.

e) The site shall mean the land/ or other places, on, into or through which work is to be executed under the contract or any adjacent land, path or street which may be allotted or used for the purpose of carrying out the contract.

f) Tender Value means the value of the entire work as stipulated in the letter of award.

g) Where the context so requires, words imparting the singular only also include the plural and vice versa. Any reference to masculine gender shall whenever required include feminine gender and vice versa.

h) As stated in Section III, Clause 1.1, the General Conditions of Contract for Central PWD Works shall be the guiding principles for this tender. The Clauses of Contract mentioned therein shall also be applicable herein and only those Clauses that need addition, emphasis and modification in context of this tender are enumerated below. Contractors are once again advised to familiarize themselves with the General Conditions of Contract for Central PWD Works.



2. SIGNING OF CONTRACT AGREEMENT

- i. On the tender being accepted by the Client, a formal contract may be signed and executed by and between the Client and the successful tendered within a time to be fixed by the Client, which shall anyhow be within 15 days from the stipulated date of start of the work.
- ii. The contractor shall be furnished, free of cost one certified copy of the contract documents except standard specifications, Schedule of Rates and such other printed and published documents, together with all drawings as may be forming part of the tender papers. None of these documents shall be used for any purpose other than that of this contract.

3. SCOPE OF WORK

- i. The work to be carried out under the Contract shall, except as otherwise provided in these conditions, include all labor, materials, tools, plants, equipment and transport which may be required in preparation of and for and in the full and entire execution and completion of the works. The descriptions given in the Schedule of Quantities shall, unless otherwise stated, be held to include wastage on materials, carriage and cartage, carrying and return of empties, hoisting, setting, fitting and fixing in position and all other labours necessary in and for the full and entire execution and completion of the work as aforesaid in accordance with food practice and recognized principles.
- ii. The contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices quoted in price bid which rates and prices shall, except as otherwise provided, cover all his obligations under the Contract and all matters and things necessary for the proper completion and maintenance of the works.

4. DISCREPANCIES AND ADJUSTMENT OF ERRORS

- i. The several documents forming the Contract are to be taken as mutually explanatory of one another, detailed drawings being followed in preference to small scale drawing and figured dimensions in preference to scale and special conditions in preference to General Conditions.
- ii. If there are varying or conflicting provisions made in any one document forming part of the contract, the Registrar, Assam University shall be the deciding authority with regard to the intention/ interpretation of the document and his decision shall be final and binding on the contractor.
- iii. Any error in description, quantity or rate in Schedule of Quantities or any omission there from shall not vitiate the contract or release the Contractor from the execution of the whole or any part of the works comprised therein according to drawings and specifications or from any of his obligations under the contracts.

5. TERMS OF PAYMENT

Subject to any deduction, which the client may be entitled to make under the Contract, all payments to contractor for the work would be made through individual account transfer in favour of the contractor on satisfactory completion report of Site (i/c) of the proposed work.

6. SECURITY DEPOSIT



10% Security Deposit will be retained by the University from the bill value, which shall be released after one year from the date of completion of the work. During this defect liability period, any defect(s) in the work done shall be rectified by the Contractor at his/her own cost and expenses, failing which the Security Deposit will be forfeited.

7. RELEASE OF SECURITY DEPOSIT

Release of the security deposit will be done after 01 (One) year of final acceptance of the work by the Assam University, Silchar.

8. SUB CONTRACTING OF THE WORK

The Contractor is not permitted to assign or transfer his/ their obligation or benefit under the contract either in full or in part to other individuals/ firms / agencies. However, under extreme circumstances where sub-contracting of part of the work is unavoidable, prior written permission of Client shall be taken by the Contractor.



Special Instructions for Online Bid Submission.

The bidders are required to submit soft copies of their bids electronically on the e-bid Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the e-Procurement Portal <https://mhrd.euniwizarde.com>, prepare their bids in accordance with the requirements and submitting their bids online on the e- Procurement Portal.

REGISTRATION

1. Bidders are required to enroll on the e-Procurement Portal (<https://mhrd.euniwizarde.com>) by clicking on the link “Online bidder Registration” on the e-bid Portal by paying the Registration fee of Rs. 2360/- per year charge.
2. As part of the enrolment process, the bidders will be required to choose a unique user name and assign a password for their accounts.
3. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication with the bidder.
4. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Only Class III Certificates with signing + encryption key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.),with their profile.
5. Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse.
6. Bidder then logs in to the site through the secured log-in by entering their user ID/password and the password of the DSC / e-Token.
7. The scanned copies of all original documents should be uploaded on portal.
8. **For any Query contact to our helpdesk Number 011-49606060, Email:ewizardhelpdesk@gmail.com**

SEARCHING FOR BIDDING DOCUMENTS



9. There are various search options built in the e-bid Portal, to facilitate bidders to search active bids by several parameters. These parameters could include Bid ID, Item/work id, Last date of submission, etc.
10. Once the bidders have selected the bids they are interested in, the bidder can pay the processing fee by net-banking / Debit / Credit card and then download the required documents / bid schedules, Bid documents etc. as mentioned on website. Once processing fee is paid, it will be moved to the respective “requested” Tab. This would enable the e-bid Portal to intimate the bidders through e-mail in case there is any addendum and corrigendum issued to the bidding document.

PREPARATION OF BIDS

11. Bidder should take into account any addendum and corrigendum published on the bid document before submitting their bids.
12. Please go through the bid advertisement and the bid document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
13. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the bid document / schedule and generally, they can be in PDF /JPEG formats. Bid Original documents may be scanned with 100 dpi with Colored option which helps in reducing size of the scanned document.
14. To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders should use “My Documents” available to them to upload such documents.
15. These documents may be directly submitted from the “My Documents” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

SUBMISSION OF BIDS



16. Bidder should log into the website well in advance for the submission of the bid so that it gets uploaded well in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
17. The bidder has to digitally sign and upload the required bid documents one by one as indicated in the bidding document.
18. Bidder has to select the payment option as “Online mode or Bank Guarantee” as to pay the EMD as applicable and enter details of the instrument.
19. In case of Bank Guarantee scanned copy of BG should be uploaded along with bid. . The original Bank Guarantee shall be submitted to office of the concerned official of **Assam University Silchar** as per schedule mentioned in the bid document. Non submission of original Bank Guarantee within the specified period shall lead to summary rejection of bid. The details of the BG, physically submitted should match with the details available in the scanned copy and the data entered during bid submission time. Otherwise bid will be rejected.
20. ***Bidders** are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BOQ format with the bid document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BOQ file, open it and complete (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BOQ file is found to be modified by the bidder, the bid will be rejected.
21. The server time (which is displayed on the bidder’s dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
22. All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid opener public keys. Overall, the uploaded bid documents become readable only after the bid opening by the authorized bid openers.



23. The uploaded bid documents become readable only after the bid opening by the authorized bid openers.
24. Upon the successful and timely submission of bid click “Complete“(i.e. after Clicking “Submit” in the portal), the portal will give a successful Bid submission acknowledgement & a bid summary will be displayed with the unique id and date & time of submission of the bid with all other relevant details.
25. The bid summary has to be printed and kept as an acknowledgement of bid submission.

ASSISTANCE TO BIDDERS

1. For any Query contact to our helpdesk Number 011-49606060, Email ewizardhelpdesk@gmail.com

SPECIAL INSTRUCTIONS TO BIDDERS FOR E-TENDERING

General:

These Special Instructions (for e-Tendering) supplement ‘General Instructions to Bidders’ (GIB), as given in the Tender Documents. Submission of Bids only through online process is mandatory for this Tender. e-Tendering is a new methodology for conducting Public Procurement in a transparent and secured manner. Suppliers/ Vendors will be the biggest beneficiaries of this new system of procurement. For conducting electronic tendering, **Assam University Silchar** has decided to use the <https://mhrd.euniwizarde.com> through Central Public Procurement Portal, Ministry of H.R.D., and Government of India. Benefits to Suppliers are outlined on the Homepage of the E-portal.

Instructions:

a. Tender Bidding Methodology:

Through electronic tendering.

b. Broad outline of activities from Bidders prospective:

- I. Procure a Digital Signing Certificate (DSC)
- II. Register on <https://mhrd.euniwizarde.com>
- III. Create Users and assign roles on <https://mhrd.euniwizarde.com>
- IV. View Notice Inviting Tender (NIT) on <https://mhrd.euniwizarde.com> or www.aus.ac.in and also <https://eprocure.gov.in/epublish/app>



- V. Download Official Copy of Tender Documents from <https://mhrd.euniwizarde.com> or www.aus.ac.in and also <https://eprocure.gov.in/epublish/app>
- VI. Bid-Submission on <https://mhrd.euniwizarde.com>: Prepare & arrange all document/paper for submission of bid online only.
- VII. Utmost care may be taken to name the files/documents to be uploaded on <https://mhrd.euniwizarde.com>
- VIII. It is advised that all the documents to be submitted are kept scanned or converted to PDF format in a separate folder on your computer before starting online submission. BOQ(Excel Format) shall be filled online only.

For participating in this tender online, the following instructions need to be read carefully..

c. Digital Certificates:

For integrity of data and its authenticity/ non-repudiation of electronic records, and to be compliant with IT Act 2000, it is necessary for each user to have a Digital Certificate (DC), also referred to as Digital Signature Certificate(DSC), of Class 3, issued by a Certifying Authority (CA) licensed by Controller of Certifying Authorities (CCA).

d. Registration:

To use the MHRD Portal (<https://mhrd.euniwizarde.com>).Vendor needs to register on the portal. The vendor should visit the home-page of the portal (<https://mhrd.euniwizarde.com>) .

Note: Please contact Helpdesk (as given below), to get your registration accepted/activated.

Help Desk No.:

Number 011-49606060, Email ewizardhelpdesk@gmail.com,

e. Bid related Information for this Tender

The entire bid-submission would be online on <https://mhrd.euniwizarde.com>. Broad outline of submissions area follows:

i. Submission of Bid Security/Earnest Money Deposit (EMD)

Note:1.The Bidder has to upload the Scanned/ self-attested copy of all above mentioned original documents during Online Bid-Submission.

Note:2. Special Note on Security of Bids: The bid EMD/Bid Security/Security

Deposit can be submitted online only. Through available modes of payment on the e-Procurement portal. Refer to the instructions to the bidders and bidder manuals for more details.



f. Other Instructions:-

For further instructions, the vendor should visit the home-page of the portal

(<https://mhrd.euniwizarde.com>) or www.aus.ac.in).

The following 'Four Key Instructions' for BIDDERS must be assiduously adhered to –

- a) Obtain individual Digital Signing Certificate (DSC) well in advance of your first tender Submission. Register your organization on <https://mhrd.euniwizarde.com> well in advance of your first tender submission deadline.
- b) Get your organization's concerned executives trained on <https://mhrd.euniwizarde.com> using online training module well in advance of your tender submission deadline on <https://mhrd.euniwizarde.com>.
- c) Submit your bids well in advance of tender submission deadline on <https://mhrd.euniwizarde.com> (Assam University Silchar should not be responsible any problem arising out of internet connectivity issues).

Note: While the first three instructions mentioned above are especially relevant to first-time users of the <https://mhrd.euniwizarde.com>, the fourth instruction is relevant at all times.

g. PRICE SCHEDULE:

1. PRICE fills online only.

2. The rate of items shall be filled online only. Scanned copy of this document is not to be attached along with other enclosures.



Price Bid.

Name of Work: **e-Tender for Electrical Energy Audit at Assam University Silchar.**

Estimated Cost: Rs. 2, 63,371/-

Note: Price Bid need not be enclosed with tender document.





Assam University Silchar

PRICE BID

Tender No:- AU/ENGG/MAINT/ELECT-100/2015		Tender Publish Date:-			
Tender Closing Date:-02-06-2022 11:00 AM		Tender Opening Date:- 11:30 AM			
Name of Work:-		<u>e-Tender for Electrical Energy Audit at Assam University Silchar</u>			
Estimate Amount		Rs. 2,63,371.00			
Name of the Firm / Company / Bidder:-					
Address of the Firm / Company / Bidder:-					
Sl No	Item Description	UOM	Quantity	Unit Rate	Amount
1	<u>The energy audit of the electrical installation shall cover the following activities:</u> i) Building Energy Bills Analysis: Analysis of energy consumption pattern in the building with respect to peak demand, Load pattern, and power factor. ii) Electricity Supply and Distribution network- Distribution Transformer(s) Study and analysis of the utility pattern of transformer(s), checking no load loss of the transformers, measuring all Day Efficiency for each transformer etc. and LT Distribution Panels 1. General inspection of the LT distribution panel(s) for its maintenance and working including checking all the meters mounted on it. 2. Measurement and analysis of demand	Job	1		



and power factor, suggestions to reduce the demand and improve the power factor.

3. Study on Metering system and suggestion for improvement.

4. Study on V, I, KW fluctuation and profiling & I imbalances in the network.

5. Detailed examination of the existing energy use of the facility with break up.

6. Study and examination of use of electric energy, cost balance with break up.

iii) Performance evaluation of Split Air Conditioning Systems/Centralised Air Conditioning System:

1. Calculation of operating Input KW per TR and Comparison of actual parameters with the design values, and suggestion for corrective actions to be implemented.

iv) UPS Systems: Measurement and analysis UPS loading, redundancy, operating efficiency, load pattern to suggest measures for energy cost reduction.

v) Lightning system:

1. Examination of the performance of existing lighting system in all the areas, Measurement of illumination levels, etc.

2. To look possibilities to reduce energy use by incorporating energy efficient lighting system.

3. Study of operating electrical parameters like voltage, current etc. in the lightning Circuits.

vi) Diesel generator sets:

1. General Inspection of DG set.

2. The DG sets are to be tested for operational performance and parameters including fuel consumption, power generated, Voltage, Ampere, KW, KWh, KVA should be recorded during the audit.

D. Energy Audit Report

The report shall contain complete building information, inventory of all equipment's. It should include the log sheet data



<p>collected/measured at site, analysis of data (Log sheet and actual measured), observations of operational performance of various equipment's, findings and recommendations for achieving energy and cost saving. The recommended energy saving measures shall be categorized as (i) short term, (ii) medium term and (iii) long term measures for energy conservation. The report should provide the estimated cost, estimated savings and simple pay back for each recommended energy saving measures in a chart. A detailed description of each energy conservation measure and supporting calculation with energy use and savings calculations, economic analysis and any assumptions that are made regarding operation or equipment efficiency shall be included. The recommendations for energy efficiency shall include the technical particulars of the equipment, life expectancy and details of manufacturer etc.</p>				
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