INDIAN INSTITUTE OF MANAGEMENT SHILLONG Umsawli, Shillong-793018

Website: www.iimshillong.ac.in

Tender No: K1-12013/1/2023-ENGG/ 2183

Dated: 23/08/2023



Notice Inviting e-Tender (NIeT) For

Annual Operation & Maintenance Contract of three 11/0.415 kV Substations with HT & LT UG Cables, Feeder Pillars, Building Main Panels at Indian Institute of Management Shillong, Umsawli.

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DETAILED NOTICE INVITING e-TENDER

Online bids are invited on behalf of Director, IIM Shillong from the registered, eligible and licensed Authorized Agency for "Annual Operation & Maintenance Contract of three 11/0.415 kV Substations with HT & LT UG Cables, Feeder Pillars, Building Main Panels at Indian Institute of Management Shillong, Umsawli".

NIT No	K1-12013/1/2023-ENGG/ 2183
Name and Location of Work	Annual Operation & Maintenance Contract of three
	11/0.415 kV Substations with HT & LT UG Cables,
	Feeder Pillars, Building Main Panels at Indian Institute
	of Management Shillong, Umsawli
Estimated Cost:	Rs. 81.25 Lakh
EMD (Ernest Money Deposit)	Rs. 1,62,483.00 /- to be paid via following Payment
	link Online:-
	https://erp.iimshillong.ac.in/fee/PaymentPortal/Gene
	ralPayment.aspx?p=unPpDMmNMgyLM9LLfrXUhXoS
	TjyLVw6DxTjCWVtMbdUcKbkE3r0UFM%2fzoaqUV3A
	2zqlogzt160KaHjpNsZ6qahIH4QMp4NCubEgmR1y3xD
	fCLvy0wNZCxZIPZtGCK9%2fmnhERygFceLeNgu4df9CX
	RIhZgoUuKgni
Duration of Construct	On a Viscon frame that data affinities of the L/Wiscondary
	Contract Agreement whichever is later
Date of Issue/e-Publishing at CPPP	24, 08, 2023 at 01,00 PM
website	
(https://eprocure.gov.in/eprocure/app)	
Document Download Start Date and	24.08.2023 at 01.00 PM
time at CPPP website	
(https://eprocure.gov.in/eprocure/app).	
Document Download End Date and	14.09.2023 at 01.00 PM
Time at CPPP website	
(https://eprocure.gov.in/eprocure/app).	
Tender Queries should reach by	07.09.2023 at 01.00 PM
	Tender queries received later than the date and time
	as mentioned above shall not be entertained.

	Pre-Bid queries should only be emailed to spo@iimshillong.ac.in, sm@iimshillong.ac.in, td@iimshillong.ac.in
Pre Bid Meeting	07.09.2023 at 03.00 PM
Last Date and Time for receipts of Tender online at CPPP website (https://eprocure.gov.in/eprocure/app).	14.09.2023 at 01.00 PM
Date and Time for opening of Technical Bid at CPPP website (https://eprocure.gov.in/eprocure/app).	15.09.2023 at 01.00 PM
Date and Time for Financial Evaluation at CPPP website (https://eprocure.gov.in/eprocure/app).	To be declared after successful evaluation of technical bid documents.
No. of Bids	02 (Two bids) {Technical and Financial}
Bid Validity days	90 days (From the date of opening of financial bid)
Address for Correspondence	Store and Purchase Office, IIM Shillong, Umsawli, East Khasi Hills, Shillong-793018, Meghalaya Office Contact No : 0364-2308012/2308070 Email: <u>spo@iimshillong.ac.in</u>

Sd/-Chief Administrative Officer IIM Shillong

1.0 INSTRUCTIONS FOR ONLINE BID SUBMISSION:

1.1 Bidders would be required to register on the Central Public Procurement Portal at https://eprocure.gov.in/eprocure/app using a valid Digital Signature Certificate (DSC) and valid email address to be able to participate in the bidding process. On registration with the Portal they will be provided with a user id and password by the system through which they can submit their bids online.

1.2 Digital Signature Certificate (DSC) may be obtained from any authorized agencies registered with the Certifying Authority (CA), through National Informatics Center (NIC) in India.

1.3 Bidders can download the bid document from Central Public Procurement Portal website at https://eprocure.gov.in/eprocure/app and required to submit the bid online by scanning and uploading all the relevant documents through the online Portal only.

1.4 Tender information is also available in the Institute's website at https://www.iimshillong.ac.in/tender-notices/. Any further detail regarding Amendment /Addendum /Extension/ Corrigendum (if any) will be upload online only at both the given websites.

1.5 Earnest Money Deposit (EMD)(Refundable) as mentioned at **Detailed Notice Inviting e-Tender** above, has to be deposited as per online link provided. Bidders are required to upload the transaction receipts. A copy of the same has to be mailed spo@iimshillong.ac.in and accountsofficer@iimshillong.ac.in clearly mentioning the firm's name and Tender ID no. along with tender description, **No other mode of EMD payment will be accepted.**

1.6 The bid submitted shall become invalid if-

i The bidder doesn't pay EMD to the Institute on or before the last date and time of online submission of the tender document.

ii The bidder doesn't upload all the relevant testimonials as mentioned in this tender document.

iii The Bidders will be required to produce the original copies of the eligibility criteria documents along with other document mentioned in the tender whenever needed at the various stages of tendering {if required}. Any discrepancy is noticed in the uploaded documents with reference to the original documents, the bid will be treated as invalid.

1.7 The tender document shall be uploaded in two parts as follows:

1.7.1 "**TECHNICAL BID**": This stage shall contain the Techno-Commercial Bids comprising with list of the documents.

1.7.2 "FINANCIAL BID": This stage shall contain only the Price Bids

1.8 Payment to the vendor for supply of items/services at IIM SHILLONG shall be made through E-payment only.

Sd/-Chief Administrative Officer IIM Shillong

2.0 GENERAL TERMS & CONDITIONS:

2.1 INSTRUCTIONS TO BIDDERS

General Conditions of Tendering

2.1.1 Tender document: One set of tender documents along with one set of BOQ are uploaded in the CPPP portal along with the drawings/ specifications etc. (if any). Bidder shall download the tender documents and are advised to read the instructions carefully to ensure that his response complies fully before participating in the CPPP portal along with their offer letter.

2.1.2 Tender validity: Tender shall remain valid for a period of **90 days** from the date of opening of the financial bid. The bidder shall not be entitled during the said period to revoke or cancel his tender or to vary the tender given. In case of bidder revoking or cancelling his tender, the Institute will forfeit the earnest money paid by him along with the tender. Bids shall be revalidated for extended period as required by Institute and will be published in CPP Portal and Institute's website.

2.1.3 Tender submission:

- Bidders must uploaded their scanned seal & signed/ e-signed documents by the time and date mentioned in the Notice Inviting e-Tender in the CPP Portal (www.eprocure.gov.in), within stipulated time. Bidder may go through the given special instruction before participation in e-Tendering.
- 2. The tender and all details submitted subsequent to the tender shall be e-signed by any one, legally authorised to enter into commitment on behalf of the bidder.
- 3. If bidder have a relative or relatives or in the case of a firm or a company, one or more of its shareholders or a relative or relatives of the shareholder(s) employed in IIM SHILLONG, the authority inviting tenders shall be informed of the fact at the time of submission of the tender, failing which the tender may be disqualified or, if such fact subsequently comes to light, the Institute reserves the right to take any other action as it deems fit in accordance with any applicable law, rules, regulations or the like in force for the time being.

2.2 BIDDER'S RESPONSIBILITY FOR BID & CLARIFICATION:

2.2.1 The details presented in this tender document consisting of conditions of works/ supply/ service contract, scope of work, technical specifications/ requirements have been compiled with due understanding of the requirement, it is also the bidder's responsibility to ensure that the information provided are clearly understood.

2.2.2 The bidder shall be deemed to have inspected, examined and understood the site of / supply/ service and including surroundings and other information in connection therewith and to have satisfied himself before submitting his/her tender as to all the prevailing conditions and deemed to have obtained all necessary information as to the risks, contingencies and other circumstances which may influence or effect his/her tender.

Bidder's quote is the responsibility of bidder and no relief or consideration can be given for errors and omissions.

2.2.3 Bidder may request clarification at any time up to the mentioned last date of seeking Clarification. Such clarification requests shall be addressed to the **Store & Purchase Officer**, **IIM Shillong (Email: spo@iimshillong.ac.in)**

2.3 Pre-Bid meeting : Techno-commercial discussion with the Bidders will be arranged {if required}. The bidder shall depute his representative(s) with authority for attending the discussion.

2.4 Amendments.

Institute may issue clarifications/ amendments in the form of addendum/ corrigendum during the tendering period. For the addendum/ corrigendum issued during the tendering period, bidders are required to check CPP Portal (<u>https://eprocure.gov.in/eprocure/app</u>) and the Institute's website (<u>www.iimshillong.ac.in</u>) for details. No other mode of notice will be given.

2.5 Scope of Tender

The complete scope of works/ supply/ service has been defined in the tender document. Only those Bidders who undertake total responsibility for the complete scope of works/ supply/ service in line with basic scheme and scope as defined in the tender document shall be considered.

2.6 Deviations in terms and condition

Bidders are required to submit offers strictly as per the terms and conditions and specifications given in the tender document and not to stipulate any deviations/ exceptions. **Conditional tenders are liable to be summarily rejected**.

2.7 Institute's right

Institute reserves the right to accept a tender other than the lowest and to accept or reject any tender in whole or in part, or to reject all tenders with or without notice or reasons. Such decisions by Institute will bear no liability whatsoever consequent upon such decisions.

2.8 Earnest money

2.8.1 The tender is to be accompanied by Earnest Money (interest free) for the amount indicated in NIeT. EMD is 2% of Tender Value/ Estimated Value.

2.8.2 The intending bidder registered with the competent government authorities as a Micro or Small Enterprises under MSME Scheme (having Valid Registration) shall be

exempted from payment of EMD as per the existing government policies. Such intending bidder shall furnish valid registration certificate issued by the competent government authorities and the registration certificate must cover the item/work/service tendered to get EMD exemptions. If the bidder fails to submit valid registration certificate his claim for EMD exemptions shall not be entertained and will be treated as EMD not submitted.

2.8.3 If the bidder, after submitting his/her tender, revokes his/her offer or modifies the terms and conditions thereof during the validity of his/her offer except where the Institute has given opportunity to do so, the earnest money shall be liable to be forfeited.

2.8.4 After placement of Work Order/ Supply Order on successful bidder, the earnest money will be refunded to the unsuccessful Bidders. For successful bidder, the EMD will be converted to Security Deposit without any interest and will be refunded after one month of successful completion of Contract Period.

2.8.5 In case of cancellation/ withdrawal of this 'NIeT' i.e. Notice Invitation to e-Tender by the Institute, which it shall have the right to do at any time, the earnest money paid with the tender will be refunded to Bidders without any interest.

2.9 Tender requirement

2.9.1 Technical and Price Bid

- 2.9.1.1 The technical bids will be opened online by a committee duly constituted for the purpose at the time and date as specified in the tender document. In the event of the date being declared as a closed holiday for purchaser's office, the due date for opening of bids online will be the following working day at the appointed times. All required documents against Notice Inviting e-Tendering documents need to be uploaded at CPP Portal as per checklist at Annexure I by the bidders and verified by the Digital Signature Certificate (DSC). The same will be downloaded for technical evaluation and the result of technical bid evaluation will be displayed on https://eprocure.gov.in/eprocure/app in which can be seen by all bidders who participated in the tender.
- 2.9.1.2 It is important that bidder clearly demonstrates his ability, giving to Institute a high level of confidence that the bidder will be able to perform the works/ supply/ service within the schedule and meeting the other requirements listed in the tender document. Failure to do so may result in disqualification of the tender.
- 2.9.1.3 Rates for all the services or items must be on DOOR DELIVERY Basis, which should be inclusive of all taxes, duties and levies. Priced bid of technically qualified bidders will be opened on designated date.

2.9.1.4 The descriptions given in the Schedule of Quantities shall, unless otherwise stated, be held to include obligations towards fulfilling the scope & objective of the Tender, wastage on materials, carriage and cartage, carrying and return of empties, hoisting, setting, fitting and fixing in position and all other labor necessary in and for the execution and completion of the work as aforesaid in accordance with good practice and recognized principles.

2.10 PERFORMANCE GUARANTEE:

An amount equal to 3% of Work Order/ Contract Value requires to furnish within 2 weeks of receipt of Work Order as Performance Security. The Performance Security & EMD of the successful bidder shall be retained by the Institute as a Performance Guarantee. At the successful completion of contract, the Performance Guarantee will be refunded to the bidder after one month of completion of Contract. For Performance Security, MSME registered firms who have sought exemption for submission of EMD will also requires to furnish a Performance Bank Guarantee (PBG) to the amount of 3% of the contract / Work Order value within 2 weeks of receipt of Work Order.

2.11 Completion Certificate:

Upon satisfactory completion of contact/supply/work, a Completion Certificate will be issued by the Institute.

2.12 Work/ Purchase at Risk and Cost

The institute reserves the right to get the whole or part of the contract/ purchase executed by some other agency at the risk and cost of the bidder to whom the contract has been awarded if it is found that the quality and/or the progress in respect of whole or part of the Work/ contract/ supply is not satisfactory.

2.13 Insurance

The bidder shall take insurance to cover any accident or accidents of nature, for an amount as required for the type of Work/ contract/ supply against damage /loss/ injury to property or person or loss of life during the complete period of the contract.

2.14 Indemnity

The bidder shall indemnify and keep indemnified the Institute against all losses and claims for injuries and or damages to any person or property.

2.15 Jurisdiction

Any dispute or difference which may arise shall be referred to the Director IIM Shillong for settlement whose decision shall be final and binding. Any dispute are subject to Shillong court's jurisdiction only.

2.16 Sufficiency of Tender

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 the Schedule of Quantities, which rates and prices shall, except as otherwise provided, cover all his obligations under the Contract and all the matters and things necessary for the proper completion and maintenance of the works.

3. ELIGIBILITY CRITERIA AND TERMS & CONDITIONS:

Bidders who fulfill the following requirements shall only be eligible to apply (joint ventures are not eligible):

3.1 Work Experience: The bidders having experience of successfully completed similar works during the last 5 years ending Mar 2023.

The bidder must have done at least 1 (ONE) similar work of value of 80% of the contracted cost or 2 (TWO) similar works having each of value 60% of the contracted cost or 3(THREE) similar work having each of value 40% of the contracted cost with Organization or Institution of Central Government/ State-government/PSU/Central Govt. Autonomous Institutes (IIM/IIT/AIIMS/ Central Universities).

Certificates of work experience and other relevant documents such as valid Work Order, Completion Certificate etc. shall be countersigned, scanned and uploaded to the e-Tendering website.

The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to previous day of last date of submission of bids.

Important Note: Similar work shall mean SITC, Repair & Maintenance or Annual Operation & Maintenance of 11/0.415kV Substation Equipment, Dry Type Transformer, HT & LT UG Cables, Outdoor Feeder Pillars, Building main LT Panels.

3.2 Essential Certificate/ Documents:

1. OEM Authorize Service Agency certificate for HT Equipment (Kirloskar Electrics).

2. Electrical Contractor License.

3. All other Documents/ Certificates as mentioned in the **"List of Document to be submitted Online"** at clause 3.5 below.

3.3 Should have an average financial turnover of Rs. 90 lakhs during the last three years ending March 31, 2023. (Copy of Financial turnover certificate issued from Charted Accountant with UDIN on his letter head to be submitted)

3.4 Other terms & Conditions:

- 1. The intending bidder must read the terms and conditions carefully. The Bidder should only submit his/her bid if the bidder considers himself/herself eligible and he/she is in possession of all the documents required.
- 2. Information and instructions for bidders posted on websites (CPPP & Institute) shall form part of bid document.
- 3. The bid document consisting of plans, specifications, the schedule of quantities of various types of items under O&M contract and the set of terms and conditions of the contract to be complied with and other necessary documents (if any) can be seen and downloaded from website <u>www.eprocure.gov.in</u> and iimshillong.ac.in.

3.5 List of Documents to be submitted online: Tenders without any of the following mentioned documents shall be summarily rejected and financial bids will not be opened.

The bidder shall arrange his valid documents and **upload the scanned** copies in the CPPP portal **www.eprocure.gov.in** in the following order and digitally signed at the portal during upload. *All signed & sealed Tender pages also need to upload.*

1. Offer letter in the bidder's letter head duly sealed & signed (Ref page no. 42).

- 2. Payment receipt for EMD (as per instruction given in the Notice Inviting e-Tender)
- 3. Valid Certificate of Registration for company/firm.
- 4. Valid GST registration certificate.
- 5. PAN Card.
- 6. Valid Certificate of Registration for EPF.
- 7. Valid Certificate of Registration for ESIC.

8. Copy of Financial turnover certificate issued from Charted Accountant with UDIN as mentioned.

- 9. ANNEXURE I to ANNEXURE-IV (duly filled in and/or signed).
- 10. Certificates of experience for the values as mentioned in the Tender eligibility criteria.
- 11. Valid Electrical Contractor License.
- 12. Valid OEM Authorised Service Agency Certificate of HT Equipments (Kirloskar Electric).
- 13. Self-declaration of owning functional precision HT & LT UG Cable Fault Locator.
- 14. An affidavit, in original, duly certified by a Notary that the bidder has never been black-
- listed and the name of the firm or company has not been changed.
- 15. Any other applicable documents (valid MSME etc.) if any.

Sd/-Chief Administrative Officer IIM Shillong

4. SCOPE/TECHNICAL SPECIFICATIONS / DETAILED DESCRIPTION FOR SCHEDULE OF WORKS

4.1 Introduction:

The Institute has presently three nos. of 11/0.415 kV Substations namely MRS (Main Receiving Substation), LCS-1 (Local Control Substation-1) & LCS-2 are being used for primary 11kV arterial distribution of Power with Under Ground Cables throughout the Campus after receiving main Supply from 132/11kV MePTCL (State Grid) Substation. The Institute is receiving Electricity at 11kV level from MePTCL Substation and further being step down to 415 V AC by these Substations for end utilization.

The whole system is associated with various HT equipments such as Transformers, HT VCB Breakers, HT Panels with Relays & Chargers etc. along with LT Equipments like Composite Distribution Panels having ACBs, MCCBs, Relays, PF Corrections Panels, Feeder Pillars, Main LT Distribution Panels of Buildings etc. apart from Protection System like Grid Earthing & LA System. The whole network of Power is connected with HT & LT Under Ground Cables.

4.2 Objective:

Hence for reliable electricity supply throughout the Campus, scheduled maintenance like servicing, testing, adjustment & calibrations etc. of Equipments, Panels & UG Cables are very much important by professional experts including manned by specialized operators on 24X7 environment.

4.3: Scope of Works:

<u>Job Title:</u> Annual Operation & Maintenance Contract of three 11/0.415kVA Substations with HT & LT UG Cables, Feeder Pillars, Building Main Panels at Indian Institute of Management Shillong, Umsawli.

The maintenance brief of major equipments are listed out below. The list are indicative only, detailed maintenance to be followed as per manufacture's recommendations and applicable electrical maintenance norms & best practice.

4.3.1 Maintenance brief for HT Panel & VCBs:

1. Visual Inspection: Perform a visual inspection of the equipment to check for any signs of wear and tear, corrosion, loose connections, or other abnormalities.

2. Cleaning: Clean the equipment to remove any dust, dirt, or debris that may have accumulated on the surface of the equipment. Use a soft brush or cloth to avoid damaging any components.

3. Lubrication: Lubricate the moving parts of the equipment, such as hinges, latches, and sliding contacts, with a suitable lubricant to ensure smooth operation.

4. Operating Mechanism: Check the operating mechanism of the VCBs for smooth operation. Inspect the trip mechanisms, springs, and latch mechanisms for proper functioning. Clean and lubricate them as necessary. Check all the connections of mechanical & electrical and tighten them as necessary to ensure that they are properly functional.

5. Insulation Resistance Test: Perform an insulation resistance test to ensure that the insulation resistance of the equipment is within acceptable limits.

6. Contact Resistance Test: Perform a contact resistance test to ensure that the contacts of the VCB breaker are in good condition and have low resistance.

7. Functional Test: Perform a functional test of the equipment including CT ratio test etc. to ensure that it is operating as intended and all the protective devices are functioning properly.

8. Calibration of Protective Relays: Perform a calibration of the protective relays to ensure that they are set to the correct trip levels and time delays.

9. Metering: Check the metering equipment, such as voltage and current meters, for accuracy and proper operation. Calibrate or replace any faulty or inaccurate meters as required.

10. Replacement of Components: Replace any components that are worn out, damaged or have exceeded their service life, such as fuses, contacts, or circuit breakers.

11. Record Keeping: Maintain a record of all maintenance activities performed on the equipment, including the date, nature of the activity, and the person who performed the activity.

12. Follow Manufacturer's Guidelines: Always refer to the manufacturer's maintenance manual and guidelines for specific instructions and recommendations regarding the maintenance of the Panels & VCBs.

4.3.2 Maintenance brief for Dry Transformer:

1. Regular Inspection: Conduct regular visual inspections of the transformer to check for any signs of physical damage, loose connections, or abnormal conditions.

2. Cleaning: Keep the transformer clean and free from dust and debris. Use a soft cloth or brush to gently clean the exterior surfaces. Avoid using water or solvents unless specifically recommended by the manufacturer.

3. Cooling System: If the transformer/ transformer room is equipped with a cooling system, such as fans or vents, ensure that they are functional. Proper airflow is essential for efficient cooling and preventing overheating.

4. Temperature Monitoring: Monitor the operating temperature of the transformer regularly using the provided temperature gauges or infrared thermometers. If you notice any significant increase in temperature, investigate and address the cause promptly.

5. Electrical Connections: Inspect the electrical connections, including terminals, cables, , signs of loose or corroded connections. tighten any loose connections, etc. Testing of Tap changer, resistance, voltage ratio, Polarity test etc. per the manufacturer's guidelines.

6. Insulation Testing: Perform insulation resistance tests periodically using a suitable insulation tester. This helps ensure the integrity of the transformer's insulation system. Follow the manufacturer's instructions for the recommended test intervals and voltage levels.

7. Overload Protection: Verify that the transformer's overload protection mechanisms, such as relays and fuses, are in good working condition. Replace any faulty or damaged components promptly.

8. Maintenance Records: Maintain detailed records of all inspections, maintenance activities, and repairs performed on the transformer. These records can help identify trends, track the transformer's performance, and assist in scheduling future maintenance tasks.

9. Follow Manufacturer's Guidelines: Always refer to the manufacturer's maintenance manual and guidelines for specific instructions and recommendations regarding the maintenance of the dry transformer.

4.3.3 Maintenance brief for 24V Battery Charger:

1. Regular Inspection: Conduct visual inspections of the charger to check for any signs of physical damage, loose connections, or abnormal conditions. Look for any loose or corroded terminals, frayed cables, or damaged components.

2. Cleaning: Keep the charger clean and free from dust, debris, and any corrosive substances. Use a soft cloth or brush to gently clean the exterior surfaces. Avoid using water or solvents unless specifically recommended by the manufacturer.

3. Electrical Connections: Inspect the electrical connections, including terminals and cables, for signs of looseness or corrosion. Ensure that all connections are tight and secure. Clean any corroded terminals using a wire brush or appropriate cleaning solution.

4. Ventilation: Ensure that the charger is properly ventilated to prevent overheating. Keep the vents and cooling fans (if applicable) clean and free from obstructions. Adequate airflow is crucial for the charger's performance and longevity.

5. Charging Parameters: Inspection of charging parameters and recommended charging profiles for the specific batteries with the charger. Ensure that the charger settings align with the requirements of the batteries. Avoid overcharging or undercharging the batteries.

6. Temperature Monitoring: Monitor the operating temperature of the charger during the charging process. If the charger becomes excessively hot, investigate and address the cause promptly. High temperatures can affect the charger's performance and lifespan.

7. Battery Maintenance: Follow the manufacturer's guidelines for battery maintenance, including periodic inspections, cleaning, specific gravity, Voltage, Current, Charging status like float or boost etc.

8. Protective Devices: Verify that the charger has appropriate protective devices, such as fuses or circuit breakers, to prevent overcurrent or short-circuit situations. Check these devices regularly to ensure they are functioning correctly.

9. Maintenance Records: Maintain detailed records of all inspections, maintenance activities, and any repairs performed on the charger.

10. Always refer to the manufacturer's maintenance manual and guidelines for specific instructions and recommendations regarding the maintenance of the 24V DC battery charger.

4.3.4 Maintenance brief for Composite LT Panels/ Feeder Pillars/ Building Main Panels:

1. Visual Inspection: Conduct regular visual inspections of the composite LT panels to check for any signs of physical damage, loose connections, or abnormal conditions. Look for any loose or corroded terminals, frayed cables, or damaged components.

2. Cleaning: Keep the panels clean and free from dust, debris, and any corrosive substances. Use a soft cloth or brush to gently clean the exterior surfaces. Avoid using water or solvents unless specifically recommended by the manufacturer.

3. Electrical Connections: Inspect the electrical connections, including terminals, cables, and bus bars, for signs of looseness or corrosion. Ensure that all connections are tight and secure. Clean any corroded terminals using a wire brush or appropriate cleaning solution.

4. Metering and Indication: Check the meters, indicators, and control devices on the panels for accuracy and proper operation. Calibrate or replace any faulty or inaccurate components as required.

5. Protective Devices: Verify that the panels have appropriate protective devices, such as fuses, relays, or circuit breakers, to prevent overcurrent or short-circuit situations. Check these devices regularly to ensure they are functioning correctly.

6. Insulation Testing: Perform insulation resistance tests periodically using a suitable insulation tester. This helps ensure the integrity of the panels' insulation system. Follow the manufacturer's instructions for the recommended test intervals and voltage levels.

7. Maintenance Records: Maintain detailed records of all inspections, maintenance activities, and any repairs performed on the composite LT panels.

4.3.5 Maintenance brief for ACBs & MCCBs:

1. Visual Inspection: Conduct regular visual inspections of the ACBs & MCCBs to check for any signs of physical damage, loose connections, or abnormal conditions. Look for any loose or corroded terminals, worn-out contacts, or damaged components.

2. Cleaning: Keep the ACBs & MCCBs clean and free from dust, debris, and any corrosive substances. Use a soft cloth or brush to gently clean the exterior surfaces. Avoid using water or solvents unless specifically recommended by the manufacturer.

3. Lubrication: The ACBs & MCCBs have moving parts, such as contacts or mechanisms, ensure that they are properly lubricated as per the manufacturer's recommendations. Use the appropriate type and amount of lubricant.

4. Operating Mechanism: Check the operating mechanism of the ACBs for smooth operation. Inspect the trip mechanisms, springs, and latch mechanisms for proper functioning. Clean and lubricate them as necessary.

5. Electrical Connections: Inspect the electrical connections, including terminals and cables, for signs of looseness or corrosion. Ensure that all connections are tight and secure. Clean any corroded terminals using a wire brush or appropriate cleaning solution.

6. Protective Devices: Verify that the ACBs & MCCBs have appropriate protective devices, such as under voltage releases, shunt trips, or ground fault protection, if applicable. Check these devices regularly to ensure they are functioning correctly.

7. Testing and Calibration: Periodically test and calibrate the trip settings and protection functions of the ACBs. Follow the manufacturer's guidelines and use suitable test equipment for accurate testing and calibration.

8. Maintenance Records: Maintain detailed records of all inspections, maintenance activities, and any repairs performed on the ACBs.

9. Always refer to the manufacturer's maintenance manual and guidelines for specific instructions and recommendations regarding the maintenance of the ACBs & MCCBs.

4.3.6 Maintenance brief for APFC Panels:

1. Visual Inspection: Conduct regular visual inspections of the APFC panel to check for any signs of physical damage, loose connections, or abnormal conditions. Look for any loose or corroded terminals, frayed cables, or damaged components.

2. Cleaning: Keep the APFC panel clean and free from dust, debris, and any corrosive substances. Use a soft cloth or brush to gently clean the exterior surfaces. Avoid using water or solvents unless specifically recommended by the manufacturer.

3. Electrical Connections: Inspect the electrical connections, including terminals, cables, and bus bars, for signs of looseness or corrosion. Ensure that all connections are tight and secure. Clean any corroded terminals using a wire brush or appropriate cleaning solution.

4. Capacitor Banks: Check the condition of the capacitor banks installed in the APFC panel. Inspect for any physical damage, leakage, or bulging capacitors. Replace any faulty capacitors with appropriate replacements.

5. Protective Devices: Verify that the APFC panel has appropriate protective devices, such as fuses, relays, or circuit breakers, to prevent overcurrent or short-circuit situations. Check these devices regularly to ensure they are functioning correctly.

6. Power Factor Monitoring: Monitor the power factor of the electrical system regularly using the meters or indicators provided on the APFC panel. Compare the measured power factor with the desired target power factor and take corrective actions if deviations are observed.

7. Reactive Power Compensation: Verify that the APFC panel is adequately compensating for the reactive power in the electrical system. Monitor the performance of the capacitor banks and adjust their switching or steps as needed to maintain the desired power factor.

8. Maintenance Records: Maintain detailed records of all inspections, maintenance activities, and any repairs performed on the APFC panel.

9. Always refer to the manufacturer's maintenance manual and guidelines for specific instructions and recommendations regarding the maintenance of the APFC panel.

4.3.7 Maintenance brief for HT & LT UG Cables and Terminations:

1. Visual Inspection: Conduct regular visual inspections of the UG cables to check for any visible signs of damage, such as cracks, cuts, or exposed conductors. Inspect terminations, and any other accessories associated with the UG cables.

2. Cable Markers: Ensure that the UG cables are properly marked and labeled for easy identification and location tracking.

3. Cable Route Clearing: Keep the cable routes clear from any debris, vegetation, or construction materials that may pose a risk of damage to the UG cables. Regularly inspect the surroundings to prevent accidental digging or excavation near the cables.

4. Cable Insulation Testing: Perform insulation resistance tests on the UG cables periodically using suitable insulation testers. This helps identify any insulation degradation or moisture ingress. Follow the manufacturer's guidelines for test intervals and voltage levels.

5. Cable Termination Inspection: Inspect terminations regularly for any signs of damage or loose connections. Check for proper insulation, tightness of connections, and the

integrity of cable seals in Panels & Substation In & Out ducts. Repair or replace any faulty terminations promptly.

6. Cable Fault Location: In case of a cable fault, use appropriate cable fault location techniques, such as Time Domain Reflectometry (TDR), to accurately locate the fault. Promptly repair or replace the damaged section of the cable.

7. Cable Protection: Ensure that the UG cables are adequately protected from potential hazards, such as sharp objects, chemicals, excessive heat, or moisture. Use appropriate cable protection measures, such as conduits, ducts, or cable trays, depending on the specific requirements of the cable.

8. Maintenance Records: Maintain detailed records of all inspections, maintenance activities, and any repairs performed on the UG cables.

4.3.8 A-Checks for Diesel Generators:

1. Fuel System: Check the fuel level and ensure that an adequate supply of clean fuel is available. Verify that the fuel lines and connections are secure and free from leaks.

2. Lubrication System: Monitor the engine oil level and quality regularly. Check for any leakage.

3. Cooling System: Check the coolant level and concentration regularly. Inspect the radiator, hoses, and clamps for any leaks or damage.

4. Battery System: Inspect the battery terminals for any corrosion or loose connections. Clean the terminals and apply a corrosion inhibitor if necessary. Check the battery electrolyte level and specific gravity. Check the battery Charger, charging voltage periodically.

5. Exhaust System: Inspect the exhaust system for leaks, loose connections, or any signs of corrosion. Check the exhaust pipes and muffler.

6. Control Panel and Electrical Connections: Check the control panel for any error messages or alarms for Pressure, Temperature, Speed, AC & DC Voltage etc. Inspect the wiring, terminals, and connectors for signs of overheating, loose connections, or corrosion. Verify that all electrical components, such as relays and circuit breakers, are functioning correctly.

Day to day check for AMF Panel:

7. Visual Inspection: Conduct regular visual inspections of the AMF panel to check for any signs of physical damage, loose connections, or abnormal conditions. Look for any loose or corroded terminals, frayed cables, or damaged components.

8. Control Functions: Verify that the AMF panel is correctly sensing the mains power supply.

9. Battery Charging System: Inspect the battery charging system & terminals for any corrosion or loose connections.

10. Protective Devices: Verify that the AMF panel has appropriate protective devices, such as circuit breakers, overcurrent relays, and earth fault protection and functioning correctly.

11. Maintenance Records: Maintain detailed records of all inspections and daily Test run records of the Diesel Generator and AMF panel.

The above points are basic day to day checking of the Diesel Generator. The Generators need to be test run for at least 5-10 minutes everyday. The annual servicing of the Diesel Generators (One no. 750kVA & two nos. 250kVA) are under the scope of OEM separately and not covered under this tender Scope. Any observation recorded must be immediately relayed to the Institute or OEM Service Agency. Consumption of Fuel & daily A-check status of each DGs need to be submitted at regular interval to the Institute.

4.3.9 Maintenance brief for Lightning Arrestors Systems.

1. Visual Inspection: Conduct regular visual inspections to check for any signs of physical damage, such as cracks, loose connections, or corrosion. Ensure that the arrester is properly mounted and supported.

2. Cleaning: Keep the arrester clean and free from dirt, dust, and other contaminants. Use a soft cloth or brush to remove any accumulated debris.

3. Electrical Testing: Perform periodic electrical tests to assess the integrity of the lightning arrester. This can include measurements of leakage current, conductivity test, insulation resistance, and voltage withstand capability. Follow the applicable guidelines and industry standards for conducting these tests.

4. Grounding System Inspection: Verify the integrity and effectiveness of the grounding system, Earthing electrode chamber connected to the lightning arrester. Ensure that the grounding connections are secure and free from corrosion or loose connections.

4.3.10 Maintenance brief for Earthing Systems.

1. Visual Inspection: Conduct regular visual inspections to check for any signs of physical damage or corrosion in the earthing system. Inspect the grounding electrodes, connections, conductors, and grounding pits to ensure they are in good condition.

2. Resistance Testing: Periodically measure the resistance of the earthing system using specialized equipment like an earth tester. This test helps determine the effectiveness of the grounding system in dissipating fault currents and maintaining low ground resistance. Follow the recommended testing frequency and values specified by relevant standards.

3. Maintain Moisture Levels: Ensure that the area around the earthing system remains adequately moist. Dry soil can increase the resistance and reduce the effectiveness of the grounding system. Water the grounding pits or consider using appropriate methods to maintain moisture levels.

4. Corrosion Prevention: Take measures to prevent or minimize corrosion in the earthing system. Apply protective coatings or compounds to exposed metal surfaces, especially in corrosive environments. Regularly inspect connections and re-tighten if necessary, ensuring they are secure and free from corrosion.

5. Verify Bonding: Confirm the proper bonding between different components of the earthing system and other metallic structures in the substation. This includes verifying the

connections between grounding electrodes, conductors, equipment, and structures. Ensure that bonding is in accordance with relevant standards and specifications.

6. Maintain Record Keeping: Keep comprehensive records of the maintenance activities performed on the Substation & other Building earthing system. This includes resistance test results, visual inspections, repairs, and any modifications made to the grounding system. These records will help track the maintenance history and identify any recurring issues.

Regular maintenance of the substation earthing system including other Building earthing are vital to ensure proper grounding and protect personnel, equipment, and the electrical system from the hazards of fault currents and transient over voltages. The contractor/ agency need to make ensure that appropriate checking and record keeping are being observed.

For all maintenance of the Electrical equipments & Circuits, the Contractor/ Agency need to adhere to applicable industry standards, codes, and regulations. These guidelines provide specific requirements and best practices to ensure the integrity and safety of the system, maintenance personnel & the users.

4.4. Scope of the Works- Core Activities:

a. Operation, manning and maintenance on round the clock basis of the 11/0.433 kV ESS-03 Nos, UG Cables, Feeder Pillars & Building Main Panels to ascertain maximum availability of Power supply with bare minimum breakdown.

b. All Equipment shall be maintained as per the maintenance schedule & O&M Manual of various equipments. *The detailed maintenance schedule format must be shared with the Institute before commencement of works for approval.*

c. In addition to activities as per the maintenance schedule of equipments, general quarterly / half yearly / yearly maintenance shall also include cleaning activities of surroundings.

d. Preventive maintenance shall be carried out as per the requirement during the year, by a specialist Engineer from OEM or authorized System house/Service partner of OEM for relay calibration, checking CT of 11 kV, testing of 11KV vacuum circuit breakers, transformers, ACBs, OLTC (as applicable), Battery chargers etc. The detailed Schedule of Items & technical specification are given in Schedule of Quantities. The obsolete equipments for which OEM and their authorized system house is not available, an experienced person can be deputed during preventive maintenance of particular equipment. The contractor shall submit the documents showing the experience of the deputies for similar equipments.

e. The contractor's shall trace, identify any vulnerability, take necessary action to prevent any breakdowns.

f. On observation of the faulty response, if required, testing of the CT for ratio test, insulation resistance (IR) and all other test required for system shall be carried out.

g. All the meters / equipments which will be used at site by the Agency shall be calibrated, also shall be furnished to the Institute as & when required.

h. Verification/testing of interlocks, as feasible. Verification/testing of control and protection scheme logic, as feasible.

i. The scope of work also includes co-ordination with the MePTCL (State Electricity Board) official from where the present power at 11kV is taken. If there is a deficiency in power supply from MePTCL or there is a failure or breakdown of their Substation etc. the contractor/ Agency should ensure that the Electricity is restored at the earliest possible time with the Backup Diesel Generators. Co-ordination activity will be deemed to be covered under the Price quoted by the contractor.

j. All the information of any event, incident, activity, planning, etc. shall be provide to the Institute as per approved procedure.

k. In case of LT UG Cable fault, arrangement of temporary Diesel Generator for backup Electricity to the affected building till the fault is rectified need to be provided by the Contractor/ Agency.

I. Utmost Care should be taken so that the system does not leads to any breakdown and in case the system goes into fault, it should be rectified within the shortest stipulated time period as under-

Sr.No.	Particulars	Specified Time	Penalty
		Period	
1	Minor break down which leads to partial	3 hrs.	Rs. 1000.00 per
	Electricity supply outage. But Campus DG	(for restore normal	hour of delay
	power back-up are available without any	Power supply)	
	interruption.		
2	Major break down which leads to	6 hrs.	Rs. 5000.00 per
	Electricity supply outage. But DG power	(for restore normal	hour of delay
	back-up is arranged externally by the	Power supply)	
	contractor within one hour.		

m. If the power supply to any 11/0.415kV Substations suffers for a day (24 hrs.), an additional amount equal to 3% of the monthly contracted amount per day (reckoned from the day of breakdown up to restoration) will be deducted from the monthly payment.

n. If maintenance work is not carried out as per the schedule, 3% of monthly contracted amount of this contract will be deducted from the monthly bill.

o. In case of short deployment of manpower against the stated quantity in the contract, the Institute will make suitable deduction from the monthly bills.

p. Scope of work also includes housekeeping, cleaning, cutting of grasses near each substation.

q. Checking & recommending of monthly electricity bills of the Institute.

r. All log books, maintenance records, fuel consumption details etc. should be maintained in hard copy as well as to be submitted in soft copy.

Designation of	Total Nos.	Category	Qualification	Experience
Maintenance staff				
O&M In- charge	1 Nos. (General shift)	Highly Skilled	Possessing 3-year Polytechnic Diploma in Electrical Engineering from Central Govt./ State Govt./AICTE approved Institute. Certificate from Private Polytechnic/ Private Diploma Institutes shall not be accepted which are not recognised by Central Govt/State Govt/AICTE.	Minimum 5 years hands- on experience in Operation & Maintenance works of Dry Transformer, DG Set, HT Panel, Relay Testing & Calibrations, DC Supply System, LT Panel, VCB, ACB, MCCB, Earth leakage Module, HT/LT Cable jointing as per specification, Earthing & LA Systems, Feeder Pillar etc.
Electrician	3 Nos.	Skilled	Possessing 2-year ITI certificate in Electrician Trade from Central Govt./State Govt./NCTVT/AICTE approved Institute. Certificate from Private ITI Institutes shall not be accepted which are not recognised by Central Govt/State Govt/AICTE.	Minimum 3 years hands- on experience in maintenance works of Transformer, DG Set, HT Panel, Relay Testing & Calibrations, DC Supply System, LT Panel, VCB, ACB, MCCB, Earth leakage Module, HT/LT Cable jointing as per specification, Earthing & LA Systems, Feeder Pillar etc.
O&M Assistant (Electrical & Mechanical Trade)	6 Nos.	Semi- Skilled	Possessing 10+2/Intermediate pass certificate in science stream or higher qualification of 2- year ITI certificate in Electrician or Fitter/Mechanical Trades.	1 year Working experience in electrical works is must.

4.5 Scope of Works- Manpower for Operations in 24X7 Environment:

O&M In-charge: O&M In-charge shall be deployed by the selected Bidder/Agency and shall work as overall in-charge for all Operation and Maintenance related activities including recording of all vital Substation parameter including consumables as per standard Substation O&M and Safety norms. Also he have to maintain a log book of all the Substations regarding daily/weekly/monthly/quarterly/ half-yearly/yearly operation and maintenance activities as per standard safety & reliability norms. All other Operational and Maintenance staff shall directly report to him and follow his/her directions and he shall guide his subordinates working under him for both operational and maintenance matters. He shall look after all Operation and Maintenance related activities works. He shall check the attendance (on daily basis) of staff working under him for operational work as well as maintenance works after visiting the substation or site of maintenance. He shall be equally responsible for any discussion and coordination with IIM Shillong in finalization of matters.

Though O&M In-charge shall work in general shift (9.00 AM-6 PM) but in case of any emergency related to both operational and/or maintenance works, O&M In-charge shall be present at site to supervise the works for early restoration of power supply to affected areas. Attendance & absence records must be maintained and forwarded to the Institute on monthly basis.

All the above personnel shall be deployed by Agency on full time basis at IIM Shillong Electrical Sub-stations. No sub-letting is allowed for carrying out O&M works by any other person on temporary basis and who is not under direct employment of the agency without informing Employer well in advance and without obtaining approval of Employer for deploying any expert on temporary basis. However, no charges shall be payable for such persons/ OEM experts deployed temporarily by Agency for any maintenance or operational matters. All tests and maintenance are to be carried out by personnel deployed only by the Contractor agency. No other person shall be allowed to carry out maintenance or testing works except OEM authorized personnel where required. So, Contractor are advised to bid only after having personnel with adequate qualification and suitable experience to do such maintenance works of Electrical Sub-stations.

Schedule of Activities for associated equipments:

During shift operation of the substation it is the duty of the available staff to monitor the installation and take safe remedial action that does not require disconnection of the apparatus. A check should be made for the locks & doors in the substation are in good condition, no leaks have developed in the building roof, the ventilating systems are operating normally. The checks shall also be made for the prescribed safety aids like First Aid Box, Safety Gloves etc. are in place and in good condition, the earthing connection intactness, packing of the cables entering or leaving a cable trench or tunnel within the premises are intact, the equipment ventilating louvers clean, the access roads leading to the oil/fuel filled apparatus are unobstructed and maintain approach for the fire fighting. For any extra requirement (which is not in contract) the contractor shall inform the institute official well in time. Checking of working condition of hand held Fire Extinguishers in each substation is must.

4.6 Scope of Works- Availability of tools, tackles and instruments:

The bidder should submit the tools credential with the List of tools, tackles and instruments in possession for undertaking the substations AMC activities.

Minimum Requirements:

- ACB primary and Secondary Current injection testing kit.
- Relay Testing kit.
- Advanced Digital Insulation Resistance Tester.
- Transformer test kit.
- Capacitance meter.
- Mili ammeter for leakage current test
- Clamp Meter.
- Thermal Image Camera.
- Earth Tester.
- Digital Multimeter
- Precision HT & LT UG Cable Fault Locator.
- Hi Pot upto 33kV
- Screw Drivers, Pliers, Spanner, Wrench, hydraulic Crimping Tools kits, Allen Key set etc.
- Cable crimping tools.
- Hand held Blowers.

4.7 Compliance with Regulations and Indian Standards:

All works shall be carried out in accordance with relevant regulation both statutory and those specified by the Indian Standards related to the works covered by this specification in particular, the equipment and installation will comply with the following:

- 4.7.1 Employment of Labour/Contract Labour Act.
- 4.7.2 Workmen's compensation Act.
- 4.7.3 Minimum Wages Acts.
- 4.7.4 Act covering EPF & ESI.
- 4.7.5 Factories Act & Safety Rules.
- 4.7.6 Indian Electricity Rules
- 4.7.7 B.I.S. & other standards as applicable
- 4.7.8 General Specification for Electrical Maintenance Works of CPWD (relevant Parts)
- 4.7.9 Statutory norms prescribed by CEA and local bodies like Fire department, CPCB etc.
- 4.7.10 Any other act or legislation as may be in force from time to time.

4.8 Interpreting Specification

In interpreting the specification, the following order of decreasing importance shall be followed in case of contradictions:

- 1. Schedule of quantities.
- 2. Technical Specification.
- 3. Drawings (if any).
- 4. General Specification for Electrical Works of CPWD (relevant Parts)
- 5. Relevant BIS or other international code in case BIS code is not available.

5.1 Special conditions of the contract

The following special instructions/ conditions are applicable to bidder/tenderer.

1. Tools, tackles and consumables:

• Testing equipments required for the work shall be in good condition (calibrated periodically) and arranged by the contractor. The testing instruments shall be of sufficient capacity and quantity as per the site requirements.

• The contractor shall be fully responsible for arranging the supply of required tools & tackles. In addition to above, the personal protective equipments of proper rating (PPE) like helmets, safety belts, HV hand gloves, safety shoes, torch, ladder etc. shall also need to be arranged.

The consumable items like Distilled water, Battery Acid, Synthetic Grease, jelly, cotton waste, dungry cloth, emery paper, CRC & CTC and material required for housekeeping including detergents, phenyl, soap etc. shall be provided by the contractor.

2. The contractor shall employ the required number of technical and non-technical manpower as mentioned in the tender. During contract period, the Agency shall depute qualified, experienced and competent manpower as per the site set-up/staff requirement for executing the work. During execution of repair & maintenance, testing activities etc, in case some additional manpower is required, contractor shall provide the same free of cost. For entry in institute, contractor shall submit the details of the employees i.e. Address proof, I.D. proof, photo etc. for gate pass of all deputies.

3. The contractor shall not be entitled for any additional payment during the tenure of the contract due to increase in cost of manpower or any.

4. The price offered by the contractor shall include the charges for any minor replacement & repair maintenance works, minor painting works, the details of which may not be explicitly available in the tender specification but it is essential for this work. Some essentials components namely Thimble, UG Cable indoor termination kit, Protection Relays & Contactors, Instruments & Meters, Push Button, LED Color Indicators, Selector Switch, Knob etc., Terminal Blocks, Temperature Sensor, Earthing terminals, HV Bushing, VCB Housing, Trip Coil, Closing Coil, TNC module, Insulation Materials, Control Switches, Fuses, Auxiliary Contacts, Components of Annunciator, AC/ DC MCBs, MCCBs upto 125A, UG Cable Glands, MCCB Rotary Handle, Ampere Meter, Volt Meter, Indicator Lamp, Selector Switch, Digital Energy Meters, MCCB Spider Links, Earth Leakage Fault module, Insulation partition, Earthing Cover Plate, LA Rod, Charger Card, Battery (12V VRLA/ 2V Lead Acid), Cover plate for UG Cable entry, Numbering & Identification tags, Panel Locks, Hinge etc. Maintaining the availability of critical spare parts is mandatory.

5. Housekeeping: The contractor shall maintain the installations, commissioning, testing activities clean and tidy inside as well as around the installations and substation buildings. This shall also include sweeping, mopping, cleaning of cobwebs, removal of scrap generated during contract period, etc. in the substations building. All required materials for housekeeping like broom, cobweb broom, mop, bucket, soap, detergents, phenyl, etc. shall be arranged by the contractor.

No rags and waste etc. shall be thrown near the building. This shall be deposited in the scrap yard and dustbins provided nearby, as per the department instructions. Also furniture and fixture therein shall be maintained.

It is the responsibility of the contractor to hand over the entire system to IIM Shillong on completion of the contract period in working condition.

6. The final handing over / taking over will be done after joint inspection by IIM Shillong representative/ Engineer in Charge and contractor on the completion of contract period. The liability towards damage/ replacement due to wear and tear shall be limited to 05% (Five percent) of the order value. Intentional damage of any property are liable to be deducted on actual assessment during inspection.

7. **Inspection**: Inspection will be carried out by IIM Shillong as and when required. Inspection by statuary bodies/ authorities will be under the scope of contractor. Contractor shall intimate IIM Shillong authority the schedule of such statuary bodies/ authorities inspection.

8. Safety

• Safety Specifications and standards: The installations, maintenance, testing activities shall be in conformity with relevant Indian Standard specification, National Electric codes, Indian Electricity Rules.

• The contractor, his agents, representatives, workmen etc. shall strictly observe the orders pertaining to fire/LV/HV/EHV (Electrical) precautions prevailing within the restricted areas/electrical substations etc.

• The contractor, his agents, representatives, workmen etc. shall strictly adhere to the fire/electric shock precautionary measures while working near the explosive areas/HV/LV/Electrical substation areas. During such times, the workmen should be headed by their site in-charge/ supervisor as a precautionary measure. The regular team of the contractor shall be very well aware of firefighting, Cardio-Pulmonary Resuscitation, first aid etc.

• While working at height, Personal Protective Equipments (PPE) like safety belts, helmet, ladder and scaffoldings etc. shall be used as per the recommended safety guidelines.

9. Accident or injury to workmen:

• IIM Shillong shall not be responsible for any injury or loss of any workers of the contractor/Agency that may take place while on work. Any compensation or expenditure towards treatment for such injury or loss of life shall be the sole responsibility of the contractor/ Agency. The contractor is solely responsible for any damage or injury or accident that may occur to any of his personnel working under this contract. He will not claim any compensation from the Institute.

• In order to meet any type of emergency, a dedicated vehicle along with driver shall be made available by the contractor.

10. Theft of Parts:

Contractor shall be fully responsible for theft, burglary, fire or any mischievous deeds by his workers/ staff and shall replace the items under such category. Any loss occurred due to negligence will be recovered from the contractor. Security/ Safety of all installations in substations will be the responsibility of contractor.

11. During the period of contract, failure of any major component or equipment which results from any negligence of preventive maintenance will not be entertained by the Institute. Therefore, no extra payment what so ever towards replacement of parts or consumables etc. shall be paid to the contractor. However, any major failure of equipment/ components due to genuine reason or reason beyond the control of the contractor/ agency, the same may be immediately informed with justification to the Institute for approval prior to replacement.

12. Rates quoted in the financial bid must be inclusive of all central, state and local taxes etc. including trade tax on works contract. Rate are also inclusive of payment to the Labor Department in accordance with the prevailing Labor law, including all statutory liability fixed by the Labor commissioner or any other law enforcement agency. Also, if new taxes are introduced, same also would be applicable.

13. All the statutory fees/ charges if any need to be paid for functional/ operational of the equipments shall be paid to government bodies by contractor. Institute will reimburse the same after the submission of original receipt.

14. Rates quoted in the financial bid must be include re-setting of relays by secondary injection of current and tighten the screws, nuts/bolts, HT/LT Connections, HT cable gantry, rising mains, bus gantry etc. of the electric substation.

15. Contractor shall be solely responsible for payment of wages/salaries and allowances to their personnel as per the rules or act applicable under Central government order. All central, state, local laws & bye laws applicable will be observed by the contractor and IIM Shillong will be kept indemnified of such payable by the contractor.

16. Any unauthorized person (or visitor) shall not be allowed to come inside the campus without the approval of Engineer in charge and Security officer. For the purpose of proper identification of the employees of the contractor deployed for the work, contractor shall issue identity cards bearing their photographs/ identification etc. and such employees shall display their identity cards at the time of duty. The ID card must be get approved from the Institute before issuing by the Contractor.

17. Engineer-in-charge, IIM Shillong shall be at liberty to carry out surprise check on the persons as deployed by the contractor in order to ensure that persons deployed by him are doing their duties.

18. For performing the assigned work, the contractor shall deploy medically and physically fit persons (Preferably below the age of 50). The contractor shall ensure that the persons are punctual and disciplined and remain vigilant in performance of their duty. Persons so engaged by the contractor shall be from amongst properly trained professional & electrician of high integrity and good conduct, and shall be conversant in English & Hindi. In no circumstances, persons below 18 years of age should be employed.

19. The contractor shall further keep the IIM Shillong indemnified against any loss to the IIM Shillong property and assets. IIM Shillong shall have further right to adjust and/or deduct any of the amounts as aforesaid from the payments due to the contractor under this contract.

20. The contractor shall ensure that the persons so deployed do not allow any property of the IIM Shillong related to Equipment's to be taken out of the premises without a Gate Pass signed by the Engineer in-charge of the IIM Shillong.

21. Saturdays / Sundays should be utilized primarily for the installations, repairing, testing activities, where shutdown is required, in consultation with & approval of the engineer-in-charge of IIM Shillong.

22. In case, any staff not found up to the mark and not able to work properly or behave improperly, he will have to be changed as per the instruction of the Engineer in charge, IIM Shillong.

23.**PENALTY** : IIM Shillong may impose penalty of maximum 10% of the total cost of the work order to the contractor for non-compliance of any work / non submission of required documents or violation of applicable rules & standards. Penalty for power outage will be imposed as defined in Scope of Works.

24. **SUSPENSION**: - IIM Shillong may by written notice of suspension to the contractor, suspend all payments to contractor hereunder if the later fails to perform any of its obligations under this contract, including the carrying out of the services provided that such notice of suspension (i) shall specify the nature of the failure and (ii) request the contractor to remedy such failure within the period not exceeding fifteen (15) days, after such notice of suspension.

25. **TERMINATION**: - Termination to the contractor may be given after the occurrence of any of the events specified below:

a) If the contractor fails to remedy a failure in the performance of their obligations.

b) If the contractor fails to comply with any final decision reached as a result of arbitration proceedings.

c) If the Institute, in its sole discretion and for any reason whatsoever, decides to terminate this contract.

d) If the contractor, in the judgment of the IIM Shillong has engaged in corrupt or fraudulent practices in executing the contract.

e) In case the contract is terminated, the balance amount of fee if any, paid earlier (advance) shall be paid back by the contractor to the Institute within thirty days of termination letter, failing which

the same shall be recovered by en-cashing the existing performance bank guarantee/security deposit submitted by contractor.

26. The persons deployed by the contractor for the services mentioned above shall be the employees of the contractor for all intents and purposes and that the persons so deployed shall remain under the control and supervision of the contractor.

27. The contractor shall at his own cost, if required, take necessary insurance cover up to the handing over in respect of the aforesaid services rendered to IIM Shillong and shall comply with the statutory provisions of Contract Labor (Regulation & Abolition) Act, 1970; Employees State Insurance Act; Workman's Compensation Act, 1923; Payment of Wages Act, 1936; The Employees Provident Fund (and Miscellaneous Provisions) Act, 1952; Payment of Bonus Act, 1965; The Minimum Wages Act, 1948; Employer's Liability Act, 1938; and/or any other rules/ regulations and/ or statues that may be applicable to them. The contractor shall indemnify the Institute against all claims which may be made upon the Institute whether under the aforesaid statutes or any other statute in force during the currency of this contract.

28. Contractor shall deploy his persons in such a way that they get weekly rest. The working hours / leave, for which the work is taken from them, do not violate relevant provisions of Shops and Establishment Act. The contractor shall arrange to provide reliever equally qualified in case of absence/leave/off etc. The contractor shall in all dealings with the persons in his employment have due regards to all recognized festivals, days of rest and religious or other customs. In the event of the contractor committing a default or breach of any of the provisions of the Labor Laws including the provisions of Contract Labor (Regulation and Abolition) Act, 1970 as amended from time to time or in furnishing any information, or submitting or filling any statement under the provisions of the said regulations and rules which is materially incorrect, he shall without prejudice to any other liability pay to the Director, IIM Shillong, a sum as may be claimed by IIM Shillong.

29. Contractor shall keep the IIM Shillong indemnified against all claims whatsoever in respect of the employees deployed by the contractor, in case any employee of the contractor so deployed enters in dispute of any nature whatsoever, it will be the primary responsibility of the contractor to contest the same. Further, the contractor shall ensure that no financial or any other liability comes on IIM Shillong in this respect of any nature whatsoever and shall keep IIM Shillong indemnified in this respect.

30. No accommodation except rooms available in Substation & no transportation facility will be provided by the IIM Shillong.

31. **PAYMENT**: - Payment will be made as per satisfactory completion of operation & maintenance and servicing with repair done (if any) on presentation of bill for the following heads. The contractor shall submit bills as defined below and the payment will be released within 15 working days from the date of submission of bill, if the bill is complete and correct in all respects and in accordance with the terms and conditions of the contract. All payments will be made after deduction of taxes and duties at source as applicable from time to time. **a)** Bill paid by the Contractor towards monthly Salary/ Wages for the deputed staff as per the tender document.

The monthly bills submitted by the contractor shall be for actual salary, allowances, uniform content, margin etc. The benefits like PF, ESI, ELI etc., can be claimed every month with proof of appropriate transaction documents.

b) Quarterly charges for the maintenance, repair & servicing of the equipments in proportion to the quoted annual rates against the items/ equipments that have executed.

The Bills must be accompanied by maintenance record, log books, attendance sheet & any other relevant documents like Diesel Consumption records etc. Penalty (if any) will deducted as per Penalty Clause.

No advance payment will be made. Income tax and all other statutory tax deduction at source as per the rules in force will be deducted from the bill.

32. Institute reserves the right to curtail or enhance the scope of work either by deletion of certain items entirely or by reducing/ increasing the quantities of certain items as required and reviewed by the Institute from time to time and therefore, the final value of the work shall be worked out and paid to the extent of work actually carried out.

33. In the event of any question, dispute/ difference arising under the agreement or in connection herewith (except as to matters the decision of which is specially provided under the agreement) the same shall be referred to the sole arbitration by the Director, IIM Shillong & his decision will be final and binding to the contractor.

34. The Arbitrator may give interim awards and/or directions, as may be required, Subject to the aforesaid provisions the Arbitrator & Conciliation Act, 1996 and the rules made hereunder and any modification thereof from time to time being in force shall be deemed to apply to the arbitration proceedings under this clause.

35. **Period of Contract**: Contract period will be initially for one year. This period may be extended by another one-year extension on same rate and terms & conditions subject to the satisfactory performance. The quoted rates shall remain firm throughout the tenure of the contract including extension period and no revision is permissible without any justification.

36. **Exit Clause**: The contract can be terminated by giving one-month notice period by the Institute and three-month notice by the contractor. However, in any instant contract will be terminated if service of the vendor will not found satisfactory.

Place: Date:

Name: Bidder Signature

5.2 Additional conditions of the contract

5.2.1 Safety Codes and Labor Regulations

i) In respect of all labor employed directly or indirectly on the work for the performance of contractor's part of work, the contractor at his own expense, will arrange for the safety provisions as per the statutory provision, B.I.S. recommendations, factory act, workman's compensation act, CPWD code and instructions issued from time to time. Failure to provide such safety requirements would make the tenderer liable for penalty for Rs. 2000/- for each violation.

ii) The contractor shall provide necessary barriers, signals and other safety measures while executing any repair & maintenance or wherever necessary so as to avoid accident. He shall also indemnify Department against claims for compensation arising out of negligence in this respect. Contractor shall be liable, in accordance with the Indian law and Regulations for any accident occurring due to any cause. The department shall not be responsible for any accident occurred or damage incurred or claims arising their form during the execution of work. The contractor shall also provide all insurance including third party insurance as may be necessary to cover the risk. No extra payment would be made to the contractor due to the above provisions thereof.

5.2.2 Mobilization Advance:

No mobilization advance shall be paid for this work.

5.2.3 Care of the Building

Care shall be taken by the contractor during execution of the work to avoid damage to the building. Care shall also be taken by the contractor to avoid the damage to any of these existing service/service lines, any part of the building etc. If any damage is caused to any of the existing services/service lines, or any part of the building the same shall be repaired/rectified and made functional or restored so its original finish by the contractor immediately at his own expenses failing which the same shall be repaired/ rectified and made functional by department at the risk and cost of the contractor. The decision of the Engineer-in-charge in this regard shall be final & binding. He shall also remove all unwanted and waste materials arising out of the installation from the site of work from time to time.

5.2.4 After Sales Services:

The contractor shall ensure adequate and prompt after sales service free of cost during guarantee period of replaced spare or parts. In case of equipment supplied by other manufacturers, the firm shall submit the guarantee from manufacturer for the same.

5.2.5 Liasoning and Co-operation with other agencies:

The successful tenderer/ bidder shall co-ordinate with other contractors and agencies engaged in the operation and maintenance of the buildings including other related services so as to make the execution of this works contract smooth. If any unreasonable hindrance is caused to other agencies / damage is caused to the existing installation resulting in loss of work or disruption in services during the course of work, such expenditure incurred upon restoration and loss of work shall be recovered from the successful tenderer/ bidder.

5.2.6 All the debris due to the works shall be cleared every now and then and site shall be kept clean by the contractor at all times.

5.2.7 Termination of wires/cables shall be crimped properly with copper/aluminum lugs connection. All the stranded wires must be terminated to the boards/ MCB's etc. through suitable lugs by crimping for which no extra payment will be made.

5.2.8 Bad - workman ship is liable to be rejected in total.

5.2.9 The contractor or his authorized representative will have to sign the site status book and comply with the remarks therein every now and then.

5.2.10 Contractor has to follow the local security/safety rules and regulations and such instructions on restricted hours of work as may be imposed on him by the department / local authorities, while working in security/restricted zones, and no claim on account of the loss of labor/ idle labor will be entertained.

5.2.11 All repairs and patch works shall be neatly carried out to match with the original finish by the contractor to the entire satisfaction of the Engineer -in-Charge.

5.2.12 The agency has to obtained approval of the department/Engineer-in-Charge to make available of any drawings & subsequent changes, additions, deviations etc. as required without extra charge.

5.2.13 No quantity deviation is permitted without written approval of the competent authority. Permissible deviation shall be sanctioned by the competent authority as per the agreement.

5.2.14 The quantities given in schedule of quantity/ work for all the items are tentative. The work shall be carried out as per actual requirement and as approved by the Engineer -in – Charge.

6. <u>SCHEDULE OF QUANTITIES FOR MAITENANCE & SERVICING</u> for Annual Operation & Maintenance Contract of three 11/0.415kVA Substations with HT & LT UG Cables, Feeder Pillars, Building Main Panels at Indian Institute of Management Shillong, Umsawli:

	Description Of Item	Unit	Quantity
(I)	SUBSTATIONS		
Α	Name of Substation: Main Receiving Station (MRS)		
1	Annual maintenance & <u>Two times</u> Servicing (Cleaning, tightness, greasing, adjustment, etc.), Testing & Calibration, Minor Repairing/ replacement of components including required consumables etc. for 11 KV, 630 Amp VCB (indoor type) panel complete with all accessories, Metering and protection Relays, CT & PT, Meggering, Earth Testing etc. along with incoming and outgoing Cables & connections. Configuration: (1 I/C + 5 O/G)	Set	1

2	Annual maintenance & Servicing, Testing, Minor Repairing/ replacement of components including required consumables etc. for 24V DC Battery Charger complete with Metering, DCDB with 100AH Battery Bank with accessories & connections for HT VCB Panel Board.	Set	1
3	Annual maintenance & <u>Two times</u> Servicing (Cleaning, tightness, greasing, adjustment, etc.), Testing & Calibration, Minor Repairing/ replacement of components including required consumables etc. for 750 KVA, 11 / 0.433 KV Dry Type transformer with all accessories including incoming and outgoing Cable & Connections	Set	1
4	Annual maintenance & Servicing (Cleaning, tightness, greasing, adjustment, etc.), Testing & Calibration, Minor Repairing/ replacement of components including required consumables etc. for Main cubical type LT Distribution Panel along with Metering, Relays, incoming and outgoing Cables & connections with three nos. I/C 1250A 4P ACB (including associated metering equipments & accessories and Bus Coupler), O/G Configuration: 1000A 4P ACB (2 Nos. including associated metering equipments & accessories), 630A 4P MCCB (2 Nos.), 400A 4P MCCB (2 Nos.), 160A 4P MCCB (3 Nos.), 100A 4P MCCB (4 Nos.) & 63A 4P MCCB (1 No.)	Set	1
5	Annual maintenance & Servicing, Testing, Minor Repairing/ replacement of components including required consumables etc. for Capacitor Bank & APFC Panel (350 KVAR, 415V) complete with all Switch gears, relays, Capacitors etc. along with incoming & outgoing Cables & Connections	Set	1
6	High Pot & IR Testing of HT Cable (11kV, Al Conductor , XLPE insulated UG armored):		
а	3C x 185 sq.mm (from MRS to MePTCL Grid S/S)	Runs	2
b	3C x 185 sq.mm (from MRS to LCS-1 S/S)	Runs	1
С	3C x 185 sq.mm (from MRS to LCS-2 S/S)	Runs	1
7	IR Testing of LT Cable (1.1kV, Al Conductor , XLPE insulated UG armored):		
а	3.5C x 300 sq.mm (from MRS to Academic Block)	Runs	5
b	3.5C x 185 sq.mm (from MRS to Academic Block)	Runs	2
с	3.5C x 185 sq.mm (from MRS to Elevated Pump House)	Runs	2
d	3.5C x 95 sq.mm (from MRS to Main Gate Feeder Pillar)	Runs	1
е	3.5C x 95 sq.mm (from MRS to St. Light Feeder Pillar #1)	Runs	1
f	3.5C x 50 sq.mm (from MRS to Female Barrack Building)	Runs	1
8	Servicing & Testing of Earthing & LA:		
а	Copper Plate earthing set with 50x5mm strip (2 set for TR Neutral & 2 Set for DG Neutral)	Set	4
b	Copper Plate earthing set with 25x5mm strip (2 set for TR & 2 Set for DG & 2 Set for HT VCB Panel)	Set	6
с	GI Pipe earthing with 25x5mm strip (for body earthing of LT Panel)	Set	2
d	GI Pipe earthing with 32x6mm strip (for Lightning Arrestor)	Set	2
e	20x3mm Lightning protection with LA Finial	Set	4
В	Name of Substation: Local Control Substation-1 (LCS-1)		

1	Annual maintenance & <u>Two times</u> Servicing (Cleaning, tightness, greasing, adjustment, etc.), Testing & Calibration, Minor Repairing/ replacement of components including required consumables etc. for 11 KV, 630 Amp VCB (indoor type) panel complete with all accessories, Metering and protection Relays, CT & PT, Megerring, Earth Testing etc. along with incoming and outgoing Cables & connections. Configuration: (1 I/C Cum O/G)	Set	1
2	Annual maintenance & Servicing, Testing, Minor Repairing/ replacement of components including required consumables etc. for 24V DC Battery Charger complete with DCDB with 2 Nos. 65AH Maintenance Free Battery with accessories & connections for HT VCB Panel Board.	Set	1
3	Annual maintenance & <u>Two times</u> Servicing (Cleaning, tightness, greasing, adjustment, etc.), Testing & Calibration, Minor Repairing/ replacement of components including required consumables etc. for 315 KVA, 11 / 0.433 KV Dry Type transformer with all accessories including incoming and outgoing Cable & Connections	Set	1
4	Annual maintenance & Servicing (Cleaning, tightness, greasing, adjustment, etc.), Testing & Calibration, Minor Repairing/ replacement of components including required consumables etc. for Main cubical type LT Distribution Panel along with Metering, Relays, incoming and outgoing Cables & connections with Two nos. I/C 630A 4P 36KA MCCB (including associated metering equipments & accessories etc), O/G Configuration: 300A 4P, 36KA MCCB (2 Nos.), 250A 4P, 36KA MCCB (1 No.), 160A 4P, 36KA MCCB (2 Nos.), 100A 4P, 36KA MCCB (4 Nos.) & 63A 4P MCCB (1 No.)	Set	1
5	Annual maintenance & Servicing & Testing of Capacitor Bank & APFC Panel (125 KVAR, 415V) complete with all Switch gears, relays, Capacitors etc. along with incoming & outgoing Cables & Connections	Set	1
6	IR Testing of LT Cable (1.1kV, Al Conductor , XLPE insulated UG armored):		
а	3.5C x 185 sq.mm (from LCS-1 to Type-II Quarter Feeder Pillar)	Runs	2
b	3.5C x 95 sq.mm (from LCS-1 to Directors' Residence Feeder Pillar)	Runs	2
с	3.5C x 95 sq.mm (from LCS-1 to Cafeteria St. Light Feeder Pillar #2)	Runs	1
d	3.5C x 95 sq.mm (from LCS-1 to St. Light Feeder Pillar #3)	Runs	1
7	Servicing & Testing of Earthing & LA:		
а	Copper Plate earthing set with 25x5mm copper strip (4 set for TR & 4 Set for DG and 2 set for HT VCB)	Set	10
b	GI Pipe earthing with 25x5mm GI strip (for body earthing of LT Panel)	Set	2
с	GI Pipe earthing with 32x6mm GI strip (for Lightning Arrestor)	Set	2
d	20x3mm Lightning protection with LA Finial	Set	4
С	Name of Substation: Local Control Substation-2 (LCS-2)		

1	Annual maintenance & <u>Two times</u> Servicing (Cleaning, tightness, greasing, adjustment, etc.), Testing & Calibration, Minor Repairing/ replacement of components including required consumables etc. for 11 KV, 630 Amp VCB (indoor type) panel complete with all accessories, Metering and protection Relays, CT & PT, Megerring, Earth Testing etc. along with incoming and outgoing Cables & connections. Configuration: (1 I/C Cum O/G)	Set	1
2	Annual maintenance & Servicing, Testing, Minor Repairing/ replacement of components including required consumables etc. for 24V DC Battery Charger complete with DCDB with 2 Nos. 65AH Maintenance Free Battery with accessories & connections for HT VCB Panel Board.	Set	1
3	Annual maintenance & <u>Two times</u> Servicing (Cleaning, tightness, greasing, adjustment, etc.), Testing & Calibration, Minor Repairing/ replacement of components including required consumables etc. for 750 KVA, 11 / 0.433 KV Dry Type transformer with all accessories including incoming and outgoing Cable & Connections	Set	1
4	Annual maintenance & Servicing (Cleaning, tightness, greasing, adjustment, etc.), Testing & Calibration, Minor Repairing/ replacement of components including required consumables etc. for Main cubical type LT Distribution Panel along with Metering, Relays, incoming and outgoing Cables & connections with: I/C Configuration: (i) One 1250 Amp 4P 50KA MDO Type ACB complete with all accessories and metering equipment etc. (ii) One 400Amp 4P, 36KA MCCB Bus-Coupler. O/G Configuration: 630A 4P, 36KA MCCB (2 Nos.), 400A 4P, 36KA MCCB (2 No.), 100A 4P, 36KA MCCB (4 Nos.), & 63A 4P MCCB (1 No.)	Set	1
5	Annual maintenance & Servicing, Testing, Minor Repairing/ replacement of components including required consumables etc. for Capacitor Bank & APFC Panel (350 KVAR, 415V) complete with all Switch gears, relays, Capacitors etc. along with incoming & outgoing Cables & Connections	Set	1
6	IR Testing of LT Cable (1.1kV, Al Conductor , XLPE insulated UG armored):		
а	3.5C x 185 sq.mm (from LCS-2 to Hostel Block: 2 Nos. Geyser Panels, 1 No. Essential Panel and 2 Nos. Non-Essential Panel)	Runs	5
b	3.5C x 185 sq.mm (from LCS-2 to Dining Hall)	Runs	1
с	3.5C x 185 sq.mm (from LCS-2 to Tri Junction Feeder Pillar)	Runs	1
d	3.5C x 95 sq.mm (from LCS-2 to St. Light Feeder Pillar #4)	Runs	1
е	3.5C x 95 sq.mm (from LCS-2 to St. Light Feeder Pillar #5)	Runs	1
7	Servicing & Testing of Earthing & LA:		
а	Copper Plate earthing set with 50x5mm cooper strip (2 set for TR Neutral)	Set	2
b	Copper Plate earthing set with 25x5mm copper strip (2 set for TR & 4 Set for DG and 2 set for HT VCB)	Set	8
с	GI Pipe earthing with 25x5mm GI strip (for body earthing of LT Panel)	Set	2
d	GI Pipe earthing with 32x6mm GI strip (for Lightning Arrestor)	Set	2
е	20x3mm Lightning protection with LA Finial	Set	4
(11)	Building Main Connections & Main Panels		

D	Outdoor Feeder Pillar for Quarter Connection		
1	Annual maintenance & Servicing (Cleaning, tightness, greasing, adjustment, etc.), Testing & Calibration, Minor Repairing/ replacement of components including required consumables etc. for 320A Feeder Pillar near Type-IIA Block (Outdoor LT Distribution Panel) along with Metering, Relays, incoming and outgoing Cables & connections with One nos. I/C 320A 4P 36KA MCCB (including associated metering equipments, Indicators & accessories etc) and 9 Nos. O/G 100A 4P 18KA MCCBs & 1 No. O/G 125A 4P 18KA MCCB.	Set	1
2	IR Testing of LT Cable (1.1kV, Al Conductor , XLPE insulated UG armored):		
а	3.5C x 50 Sq.mm (from Feeder Pillar to Type-II, III & IV Quarters having three Blocks each)	Runs	9
3	Various Types of Earthing (Panels, Equipments etc.)	Set	2
4	Annual maintenance & Servicing (Cleaning, tightness, greasing, adjustment, etc.), Testing & Calibration, Minor Repairing/ replacement of components including required consumables etc. for 320A Feeder Pillar near Type-VI Block (Outdoor LT Distribution Panel) along with Metering, Relays, incoming and outgoing Cables & connections with One nos. I/C 320A 4P 36KA MCCB (including associated metering equipments, Indicators & accessories etc) and 6 Nos. O/G 63A 4P 18KA MCCBs & 2 Nos. O/G 100A 4P 18KA MCCBs.	Set	1
5	IR Testing of LT Cable (1.1kV, Al Conductor , XLPE insulated UG armored):		
а	3.5C x 50 Sq.mm (from Feeder Pillar to Type-VI (Four Blocks) & Director's Bungalow.	Runs	5
b	3.5C x 70 Sq.mm (from Feeder Pillar to Commercial Complex	Runs	1
6	Various Types of Earthing (Panels, Equipments etc.)	Set	2
E	Outdoor Feeder Pillar for Other Connection		
1	Annual maintenance & Servicing (Cleaning, tightness, greasing, adjustment, etc.), Testing & Calibration, Minor Repairing/ replacement of components including required consumables etc. for 125 A Feeder Pillar near Main Gate (Outdoor LT Distribution Panel) along with Metering, Relays, incoming and outgoing Cables & connections with One nos. I/C 125A 4P 25KA MCCB (including associated metering equipments, Indicators & accessories etc) and 2 Nos. O/G 63A 4P 18KA MCCBs & 3 Nos. O/G 32A 4P MCBs.	Set	1
2	IR Testing of LT Cable (1.1kV, Al Conductor , XLPE insulated UG armored):		
а	3.5C x 35 Sq.mm (from Feeder Pillar to Main Gate)	Runs	1
b	3.5C x 50 Sq.mm (from Feeder Pillar to Bank)	Runs	1
с	3.5C x 35 Sq.mm (from Feeder Pillar to Post Office)	Runs	1
3	Various Types of Earthing (Panels, Equipments etc.)	Set	2

4	Annual maintenance & Servicing (Cleaning, tightness, greasing, adjustment, etc.), Testing & Calibration, Minor Repairing/ replacement of components including required consumables etc. for 125 A Feeder Pillar near Tri-Junction (Outdoor LT Distribution Panel) along with Metering, Relays, incoming and outgoing Cables & connections with One nos. I/C 125A 4P 25KA MCCB (including associated metering equipments, Indicators & accessories etc) and 2 Nos. O/G 63A 4P 18KA MCCBs & 3 Nos. O/G 32A 4P MCBs.	Set	1
5	IR Testing of LT Cable (1.1kV. Al Conductor . XLPE insulated UG armored):		
а	3.5C x 35 Sq.mm (from Feeder Pillar to Covered Cooridor Part-I)	Runs	1
b	3.5C x 35 Sq.mm (from Feeder Pillar to Covered Cooridor Part-II)	Runs	1
6	Various Types of Earthing (Panels, Equipments etc.)	Set	2
F	Building Main Panel- Academic Building		
1	Annual maintenance & Servicing (Cleaning, tightness, greasing, adjustment, etc.), Testing & Calibration, Minor Repairing/ replacement of components including required consumables etc. for 400A Main LT Panel of A Block along with Metering, Relays, incoming and outgoing Cables & connections with One no. I/C 400A 4P 36KA MCCB (including associated metering equipments, Indicators & accessories etc) and 1 No. O/G 250A 4P 36KA MCCBs & 7 Nos. O/G 160A 4P 36KA MCCBs.	Set	1
2	IR Testing of LT Cable (1.1kV, Al Conductor , XLPE insulated UG armored):		
а	3.5C x 50 Sq.mmto Various Sub Panels	Runs	6
b	3.5C x 95 Sq.mm to Various Sub Panels	Runs	2
3	Annual maintenance & Servicing (Cleaning, tightness, greasing, adjustment, etc.), Testing & Calibration, Minor Repairing/ replacement of components including required consumables etc. for 400A Main LT Panel of C Block along with Metering, Relays, incoming and outgoing Cables & connections with One no. I/C 400A 4P 36KA MCCB (including associated metering equipments, Indicators & accessories etc) and 1 No. O/G 250A 4P 36KA MCCBs & 7 Nos. O/G 160A 4P 36KA MCCBs.	Set	1
4	IR Testing of LT Cable (1.1kV, Al Conductor , XLPE insulated UG armored):		
а	3.5C x 50 Sq.mm to Various Sub Panels	Runs	7
b	3.5C x 95 Sq.mm to Various Sub Panels	Runs	1
5	Various Types of Earthing (Panels, Equipments, LA etc.)	Set	21
6	Lightning Arrestors including Finials, Stip Joints/ Check Terminals etc	Set	6
G	Building Main Panel- Hostel Building		
1	Annual maintenance & Servicing (Cleaning, tightness, greasing, adjustment, etc.), Testing & Calibration, Minor Repairing/ replacement of components including required consumables etc. for 400A Main LT Panel (Raw Power) of Hostel Building along with Metering, Relays, incoming and outgoing Cables & connections with Two no. I/C 400A 4P 36KA MCCB (including associated metering equipments, Indicators & accessories etc) and 8 Nos. O/G 160A 4P 25KA MCCBs & 4 Nos. O/G 63A 4P 25KA MCCBs.	Set	1

2	IR Testing of LT Cable (1.1kV. Al Conductor . XLPE insulated UG armored):		
а	3.5C x 50 Sq.mm to Various Sub Panels	Runs	2
b	3.5C x 95 Sq.mm to Various Sub Panels	Runs	4
3	Annual maintenance & Servicing (Cleaning, tightness, greasing, adjustment, etc.), Testing & Calibration, Minor Repairing/ replacement of components including required consumables etc. for 250A Main LT Panel (Essential Power) of Hostel Building along with Metering, Relays, incoming and outgoing Cables & connections with Two no. I/C 250A 4P 36KA MCCB (including associated metering equipments, Indicators & accessories etc) and 4 Nos. O/G 100A 4P 25KA MCCBs, 4 Nos. O/G 63A 4P 25KA MCCBs & 3 Nos. O/G 40A 4P 25KA MCCBs.	Set	1
4	IR Testing of LT Cable (1.1kV, Al Conductor , XLPE insulated UG armored):		
а	3.5C x 50 Sq.mm to Various Sub Panels	Runs	2
b	3.5C x 95 Sq.mm to Various Sub Panels	Runs	4
5	Various Types of Earthing (Panels, Equipments etc.)	Set	6
Н	Building Main Panel- Dining Block		
1	Annual maintenance & Servicing (Cleaning, tightness, greasing, adjustment, etc.), Testing & Calibration, Minor Repairing/ replacement of components including required consumables etc. for 125A Main LT Panel of Dinning Hall Building along with Metering, Relays, incoming and outgoing Cables & connections with One no. I/C 125A 4P 18KA MCCB (including associated metering equipments, Indicators & accessories etc) and 5 Nos. O/G 32A 4P MCBs.	Set	1
2	Various Types of Earthing (Panels, Equipments etc.)	Set	2
I	Building Main Panel- Director's Bungalow		
1	Annual maintenance & Servicing (Cleaning, tightness, greasing, adjustment, etc.), Testing & Calibration, Minor Repairing/ replacement of components including required consumables etc. for 100A Main LT Panel of Director's Bungalow along with Metering, Relays, incoming and outgoing Cables/ Wires & connections with One no. I/C 100A 4P 18KA MCCB (including associated metering equipments, Indicators & accessories etc) and 2 Nos. O/G 40A 4P MCBs, 1 No. O/G 40A 2P MCBs, 1 Nos. O/G 6A 1P MCB & One no. (10-60A) Three Phase Energy Meter.	Set	1
2	Various Types of Farthing (Panels, Equipments etc.)	Set	2
J	Building Main Panel- Type-VI Quarters (4 Units)		
1	Annual maintenance & Servicing (Cleaning, tightness, greasing, adjustment, etc.), Testing & Calibration, Minor Repairing/ replacement of components including required consumables etc. for 63A Main LT Panel of Type-VI Quarters along with Metering, Relays, incoming and outgoing Cables/ Wires & connections with One no. I/C 63A 4P 18KA MCCB (including associated metering equipments, Indicators & accessories etc) and 2 Nos. O/G 40A 4P 18kA MCCBs & Two nos. (10- 60A) Three Phase Energy Meters.	Set	4
2	Various Types of Earthing (Panels, Equipments etc.)	Set	8
К	Building Main Panel- Type-IV Quarters (3 Units)		

1	Annual maintenance & Servicing (Cleaning, tightness, greasing, adjustment, etc.), Testing & Calibration, Minor Repairing/ replacement of components including required consumables etc. for 100A Main LT Panel of Type-IV Quarters along with Metering, Relays, incoming and outgoing Cables/ Wires & connections with One no. I/C 100A 4P 18KA	Set	3
	MCCB (including associated metering equipments, Indicators & accessories etc) and 6 Nos. O/G 63A 2P MCBs & Six nos. (5-30A) Single Phase Energy Meters.		
2	Various Types of Earthing (Panels, Equipments etc.)	Set	6
L	Building Main Panel- Type-III Quarters (3 Units)		
1	Annual maintenance & Servicing (Cleaning, tightness, greasing, adjustment, etc.), Testing & Calibration, Minor Repairing/ replacement of components including required consumables etc. for 100A Main LT Panel of Type-III Quarters along with Metering, Relays, incoming and outgoing Cables/ Wires & connections with One no. I/C 100A 4P 18KA MCCB (including associated metering equipments, Indicators & accessories etc) and 6 Nos. O/G 63A 2P MCBs & Six nos. (5-30A) Single Phase Energy Meters.	Set	3
2	Various Types of Earthing (Panels, Equipments etc.)	Set	6
М	Building Main Panel- Type-II Quarters (3 Units)		
1	Annual maintenance & Servicing (Cleaning, tightness, greasing, adjustment, etc.), Testing & Calibration, Minor Repairing/ replacement of components including required consumables etc. for 100A Main LT Panel of Type-II Quarters along with Metering, Relays, incoming and outgoing Cables/ Wires & connections with One no. I/C 100A 4P 18KA MCCB (including associated metering equipments, Indicators & accessories etc) and 6 Nos. O/G 63A 2P MCBs & Six nos. (5-30A) Single Phase Energy Meters.	Set	3
2	Various Types of Earthing (Panels, Equipments etc.)	Set	6
N	Building Main Panel- Cafeteria Building		
1	Annual maintenance & Servicing (Cleaning, tightness, greasing, adjustment, etc.), Testing & Calibration, Minor Repairing/ replacement of components including required consumables etc. for 100A Main LT Panel of Cafeteria Building along with Metering, Relays, incoming and outgoing Cables/ Wires & connections with One no. I/C 100A 4P 18KA MCCB (including associated metering equipments, Indicators & accessories etc) and 6 Nos. O/G 63A 2P MCBs & 6 Nos. O/G 40A 2P MCBs	Set	1
2	Various Types of Earthing (Panels, Equipments etc.)	Set	3
0	Building Main Panel- Commercial Complex		
1	Annual maintenance & Servicing (Cleaning, tightness, greasing, adjustment, etc.), Testing & Calibration, Minor Repairing/ replacement of components including required consumables etc. for 100A Main LT Panel of Commercial Complex along with Metering, Relays, incoming and outgoing Cables/ Wires & connections with One no. I/C 100A 4P 18KA MCCB (including associated metering equipments, Indicators & accessories etc) and 2 Nos. O/G 63A 2P MCBs & 4 Nos. O/G 40A 2P MCBs	Set	1
2	Various Types of Earthing (Dapols Equipments at a)	Set	3
Р	Building Main Panel- Elevated Pump Room Building		

1	Annual maintenance & Servicing (Cleaning, tightness, greasing, adjustment, etc.), Testing & Calibration, Minor Repairing/ replacement of components including required consumables etc. for 400A Main LT Panel (Pump Supply) of Elevated Pump Room Building along with Metering, Relays, incoming and outgoing Cables & connections with One no. I/C 400A 4P 36KA MCCB (including associated metering equipments, Indicators & accessories etc) and 2 Nos. O/G 200A 4P 25KA MCCBs & 4 Nos. O/G 100A 4P 25KA MCCBs.	Set	1
2	IR Testing of LT Cable (1.1k) Al Conductor XLPE insulated LIG armored):		
а	3.5C x 50 Sq.mm to Various Sub Panels	Runs	3
b	3.5C x 95 Sq.mm to Various Sub Panels		2
3	Various Types of Earthing (Panels, Equipments etc.)	Set	2
(111)	UG Cable Repair Works (predicted)		
A	Locating & Rectification of UG Cable Fault		
1	Diagnosis of UG Cable fault & Fault location by Precision Cable Fault Locator, cost of transportation, specialized operator with required accessories complete.	Set	3
2	SITC of 11kV (HT) Straight Jointing Kit with associated works like excavation, trimming, back filling with sand brick protection complete with all required accessories.		2
3	SITC of 1.1kV (LT) Straight Jointing Kit with associated works like excavation, trimming, back filling with sand brick protection complete with all required accessories.		8
(IV)	24 X 7 Operation Manpower (Gross Monthly Wages as per Central Govt. Minimum wages act plus Overheads)		
1	Providing operational services of following shifts on all days including Sundays & Holidays (24X7 Environment) for attending day to day routine operation, general maintenance of 11/0.415 kV Sub-Stations, UG Cables, LA, Earthing, Outdoor Feeder Pillars, Building Main LT Panels etc.		
1.1	Operation & Maintenance In-charge (Highly Skilled) in General Shift	No X Months	12
1.2	Skilled staff (Electrical) in Shifts as below (One per Shift)		
1.2.1	6 AM- 2 PM	No X Months	12
1.2.2	2 PM - 10 PM	No X Months	12
1.2.3	10 PM- 6AM	No X Months	12
1.3	Semi -Skilled staff (Electrical & Mechanical) in Shifts as below (Two per Shift)		
1.3.1	6 AM- 2 PM	No X Months	24
1.3.2	2 PM - 10 PM	No X Months	24
1.3.3	10 PM- 6 AM	No X Months	24

Note:- i) The quantity shown above are indicative only and may vary as per actual site conditions.

ii) Refer Annexure –III for representative Substation SLD Layouts (Bidder may assess the actual site condition during Site Visit)

iii) The above Schedule of Quantities/ Works are inclusive of obligations as defined in Scope of Works & as stated Terms & Conditions defined in the Tender document.

Signature of the tenderer with seal

INDIAN INSTITUTE OF MANAGEMENT SHILLONG Umsawli, Shillong-793018

Tender No: K1-12013/1/2023-ENGG/ 2183 Dated: 23/ 08/2023 PROFORMA FOR SUBMISSION OF OFFER LETTER OF e -TENDER DOCUMENT (THIS "OFFER LETTER" TO BE SUBMITTED IN BIDDER'S LETTER HEAD)

Ref no.

Date:

To The Chief Administrative Officer IIM Shillong Umsawli, Shillong – 793 018.

<u>Sub</u>: "Annual Operation & Maintenance Contract of three 11/0.415 kV Substations with HT & LT UG Cables, Feeder Pillars, Building Main Panels at Indian Institute of Management Shillong, Umsawli." against Tender No: K1-12013/1/2023-ENGG/2183 dated 23/ 08 /2023.

1. In reference to above, I/We are enclosing our irrevocable tender for execution of the work "Annual Operation & Maintenance Contract of three 11/0.415 kV Substations with HT & LT UG Cables, Feeder Pillars, Building Main Panels at Indian Institute of Management Shillong, Umsawli." as per tender document within the time schedule mentioned therein and accepted by me/us, at the value quoted by me/us for the whole work in accordance with terms and conditions, specifications as detailed in the tender document. Having examined the detail given in Tender Notice and Bid Document for the above work, I/We hereby submit the relevant information.

2. I/We had paid the EMD (if applicable). [Amount with details]

3. I/ We had read entire tender documents and unconditionally accept all the terms and conditions laid down in the Tender document.

4. I/We enclosed herewith evidence of my/our experience of execution of work of similar nature and magnitude carried out by me/us in the prescribed Performa along with the other documents mentioned in the tender document.

5. It is certified that all the information given hereby as well as in the enclosed eligibility bid documents are correct to the best of my knowledge and believe. It is also certified that I/We shall be liable to be debarred, disqualified in case any information furnished by me/us found to be incorrect.

Date.....2023

Name of the Bidder with Address:

Name & Address:

Signature of Tenderer, with the seal of Firm

LIST OF MANDATORY DOCUMENTS (CHECK LIST) TO BE FILLED, SIGNED & UPLOADED:

(FOR TECHNICAL BID EVALUATION)

Sl. no.	Documents required	REMARKS (Please √)	Page nos. (compulsory)
1	Offer letter in the bidder's letter head duly sealed & signed (as per given Proforma)	YES/NO:	
2	Receipt of payment of Earnest Money Deposit (as per instruction given in the Notice Inviting e-Tender)	YES/NO:	
3	Valid Certificate of Registration for company/firm		
4	Valid GST registration certificate.	YES/NO:	
5	PAN Card in the name of firm/proprietor.	YES/NO:	
6	Valid Certificate of Registration for EPF.		
7	Valid Certificate of Registration for ESIC		
8	Copy of Financial turnover certificate issued from Charted Accountant with UDIN as mentioned.		
9	ANNEXURE I to ANNEXURE-III (duly filled in and signed).	YES/NO:	
10	Valid Trade License for Non-tribal Contractor/ Agency	YES/NO:	
11	Certificates of experience for the values as mentioned in the Tender. (Work Orders & Completion Certificates)	YES/NO:	
12	Valid Electrical Contractor License.	YES/NO:	
13	Valid OEM Authorised Service Agency Certificate for HT Equipments (Kirloskar Electrics).	YES/NO:	
14	Self-declaration of owning HT & LT UG Cable Fault Locator and functional status.	YES/NO:	
15	Any other applicable documents (MSME etc.) if applicable.	YES/NO:	
16	An affidavit, in original, duly certified by a Notary that the bidder has never been black-listed and the name of the firm or company has not been changed.	YES/NO:	
17	The Price Bid in the form of BOQ.xls to be uploaded in CPPP in the Financial Bid section.	YES/NO:	NA
18	Whether, site visit has been done to assess the condition.	YES/NO:	

Signature of the tenderer with seal

BIDDER's DETAILS

1.	Name of the Firm/Agency	
2.	Full address with Pin code, Telephone No/Mobile No. E-mail.	
3.	Name & Designation of Contact Persons Office Phone Number: Mobile Number: E Mail:	
4	Registration Details for Constitution of the Firm/ Agency/ Proprietorship (Attached copy)	
5	Nature of Business:	
6	Debarred/black listed any State/ Central Government agencies or autonomous bodies or Universities / Educational Institutions. (Self declaration to be submitted)	(Yes/No)
7	a. GSTIN: b. PAN:	
8	Bank Account Particulars:Name of the A/c holderBank Account No.Account type (SB/ CA)Name of the BankBranch & AddressBranch contact phone Nos.11 digit IFS code:(Please attached a copy of cancelled cheque)Details of EMD paid:	
	EMD Amount: Rs.	
	Receipt No.	

Signature of the tenderer with seal

1. Schematic Block Diagram (HT Distribution)



2. SLD of MRS Substation



3. SLD of LCS-1 Substation



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4. SLD of LCS-2 Substation



5. Schematic SLD with Earthing Layout.



6. SLD of Outdoor Feeder Pillars



PERFORMANCE BANK GUARANTEE FORMAT

(To be executed on non-judicial stamped paper of an appropriate value) Date : Bank Guarantee No :

Amount of Guarantee :
Guarantee Period : From to
Guarantee Expiry Date :
Last date of Claim Lodged :

AND WHEREAS one of the conditions of the Contract is that the Contractor shall furnish to the Owner a Bank Guarantee from a scheduled bank in India having a branch at Shillong for a sum of Rs.______ (the amount guaranteed under this bank guarantee shall hereinafter be referred to as the "Guaranteed Amount") against due and faithful performance of the Contract including the performance bank guarantee obligation and other obligations of the Contractor for the supplies made and the services being provided and executed by under the Contract. This bank guarantee shall be valid from the date of issuance and up to after 30 days of the expiry of the Contract defect liability Period including any extension thereof.

AND WHEREAS the Contractor has approached [*insert the name of the scheduled bank*](here in after referred to as the "Bank") having its registered office at [*insert the address*].....and at the request of the Contractor and in consideration of the promises made by the Contractor, the Bank has agreed to give such irrevocable guarantee as hereunder:

- (i) The Bank hereby undertakes to pay under this guarantee, the Guaranteed Amount claimed by the Owner without any further proof or conditions and without demur, reservation, contest, recourse or protest and without any enquiry or notification to the Contractor merely on a demand raised by the Owner stating that the amount claimed is due to the Owner under the Contract. Any such demand made on the Bank by the Owner shall be conclusive as regards the amount due and payable by the Bank under this bank guarantee and the Bank shall pay without any deductions or setoffs or counterclaims whatsoever, the total sum claimed by the Owner in such Demand. The Owner shall have the right to make an unlimited number of Demands under this bank guarantee provided that the aggregate of all sums paid to the Owner by the Bank under this bank guarantee shall not exceed the Guaranteed Amount. In each case of demand, resulting to change of PBG values, the Owner shall surrender the current PBG to the bank for amendment in price.
- (ii) However, the Bank's liability under this bank guarantee shall be restricted to an amount not exceeding Rs._____
- (iii) The Owner will have the full liberty without reference to the Bank and without affecting the bank guarantee to postpone for any time or from time to time the exercise of any powers and rights conferred on the Owner under the Contract and to enforce or to forbear endorsing any powers or rights or by reasons of time being given to the contractor which under law relating the Surety would but for the provisions have the effect of releasing the surety.
- (iv) The rights of the Owner to recover the Guaranteed Amount from the Bank in the manner aforesaid will not be affected or suspended by reasons of the fact that any dispute or disputes have been raised by the Contractor and / or that any dispute(s) are pending before any office, tribunal or court in respect of such Guaranteed Amount and/ or the Contract.
- (v) The guarantee herein contained shall not be affected by the liquidation or winding up,
 dissolution, change of constitution or insolvency of the Contractor but shall in all respects

and for all purposes be binding and operative until payment of all money due to the Owner in respect of such liability or liabilities is affected.

- (vi) However, in the opinion of the Owner, if the Contractor's obligations against which this bank guarantee is given are not completed or fully performed by the Contractor within the period prescribed under the Contract, on request of the Contractor, the Bank hereby agrees to further extend the bank guarantee, till the Contractor fulfils its obligations under the Contract.
- (vii) We(indicate the name of the bank) hereby agree that any claim due and arising under this guarantee shall be enforceable against our bank's branch(mentioning the name & address of the branch) at Shillong, Meghalaya and they shall honour such demand in any case not later than next working day.
- (viii) We have the power to issue this bank guarantee in your favour under Memorandum and Article of Association and the Undersigned has full power to do so under the Power of Attorney dated

[*date of power of attorney to be inserted*].....granted to him by the Bank.

Date:

Bank

(Corporate Seal of the Bank)

By its constituted Attorney Signature of a person duly authorized to sign on behalf of the Bank

PART-B

FINANCIAL BID

The bidder should download the <u>BOQ.xls</u> from CPP portal and fill in the blank spaces provided for mentioning the name of bidder and bid item values to be quoted. The bidder need **not** to modify any other text or background shown in the BOQ template. CPPP portal (<u>www.eprocure.gov.in</u>) will accept the given BOQ template only and *hence the value should not be quoted in any other places except the BOQ template*.

Tenderer may go through the given special instruction on CPPP website before participation in e-Tendering.

The Financial bid (price bid) ie. Bill of Quantity (BOQ) of only technically qualified bidder will be opened online by a committee and the result will be displayed on the <u>www.eprocure.gov.in</u> which can be seen by all bidders who participated in the tender.

For BOQ item details please refer the Schedule of Quantities of works at Point No. 6.