

ASSAM ELECTRICITY GRID CORPORATION LIMITED

Regd. Office: 1st floor, Bijulee Bhawan, Paltanbazar, Guwahati-781001

CIN: U40101 AS2003SGC007238

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Bidding Document

For

**Supply 3 (three) Nos. of 132 kV Potential Transformer (PT) for 132kV
Main Bus to be kept as spare at 132 kV Karimganj GSS, AEGCL**

**DEPUTY GENERAL MANAGER
SILCHAR T&T CIRCLE
AEGCL, SILCHAR-788026**

Tender Cost: ₹ 1000.00
EMD: ₹ 19,000.00

BID NO: AEGCL/STTC/TECH-12/2026-27/10

Date: 13.08.2025

For & on behalf of the **Managing Director, AEGCL, the Deputy General Manager, Silchar T&T Circle, AEGCL, Silchar**, invites tenders in prescribed form, from reputed Firms/Contractors/Manufacturers with sound technical and financial capabilities for the following work. A single stage two envelope procedure (**Techno-Commercial and Price Bid**) will be adopted for this tender.

Sl. No.	Name of work	Estimated Cost In INR	Time of Completion In Days	Bidding Address
1	Supply 3 (three) Nos. of 132 kV Potential Transformer (PT) for 132kV Main Bus to be kept as spare at 132 kV Karimganj GSS, AEGCL	9,36,684.00	150 days from the date of issue of Supply order	O/o The DGM, Silchar T&T Circle, AEGCL, Silchar, Srikona, Silchar-26

1.0 Cost of Bidding Document:

Bidder has to pay Non-Refundable tender document cost of **Rs.1000.00 (Rupees One Thousand)** only in the form of A/C payee Demand draft (Non-refundable) pledged in favour of “Managing Director, AEGCL, Paltan Bazar, Guwahati-01”, payable at Guwahati.

2.0 Bidding Address:

Tender papers can be purchased on application in plain paper from the **Deputy General Manager, Silchar T&T Circle, AEGCL, Silchar**.

3.0 Key Dates: -

- | | |
|--|--------------------------|
| a) Bid Document available in Website: | 12:00 hrs. of 14-08-2026 |
| b) Bid Submission Start Time & date: | 12:00 hrs. of 14-08-2026 |
| c) Bid Submission end time & date: | 14:00 hrs. of 07-09-2026 |
| d) Techno-Commercial Bid Opening time: | 11:30 hrs. of 08-09-2026 |

4.0 Bidding Procedure :

- All Tenders shall have to be submitted in prescribed forms attached herewith eventually to be drawn up in the rules of AEGCL.
- Two different envelopes to be used as follows:-
Envelope-1 (Technical Bid): Bid document signed by the bidder on all pages, Tender fee, Earnest Money, Techno-commercial data of the Bidder, GTP and other mandatory documents must be enclosed.
Envelope-2 (Price Bid): As per format of the Price Bid attach.
- All tenders shall have to be submitted under **sealed & signed** covers super-scribing the **Tender Notice No** and **Name of the Work** completely and clearly on the top of the corner.
- All tenders shall have to be submitted/drop in the concerned tender box on or before the last date and time of submission of tenders either by post or in person.
- If Bidders desire to submit their Bid by post, at their own expenses, it should be posted well in advance so as to ensure that their tenders reach the office of the tendering address on or before the

specified date and time of submission of tender. AEGCL will not take any responsibility for loss, damage, tempering or delay of tenders sent by post.

- f) Bidder submitting Bid in person should submit their Bid in the tender box during the working hours on or before the last date and time of submission of tender.
- g) Tender will be rejected if submitted beyond the aforesaid time and date.
- h) AEGCL has the right to cancel the tender at any moment, without assigning any reason thereof. Bidder will not be entitled to claim any expenses and AEGCL will not be responsible for any costs or expenses incurred on the preparation and submission of the Bids.

5.0 Validity of Bids and Bids Prices:

- 5.1 Bids shall remain valid for a period of **180 days** after the bid submission deadline date prescribed by AEGCL. In exceptional circumstances, prior to the expiration of the bid validity period, AEGCL may request Bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. If a bid security shall also be extended for a corresponding period.
- 5.2 Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request shall not be required or permitted to modify its bid.

6.0 Bid Security:

- 6.1 All bids must be accompanied by a bid security amounting to **Rs 19,000.00 (Rupees Nineteen Thousand)** only in the form of **Demand Draft** from any Nationalized Bank payable at Guwahati in favour **“Managing Director, AEGCL, Paltan Bazar, Guwahati-01”, payable at Guwahati.**
- 6.2 Any bid not complying with the terms and conditions then his bid shall be rejected by the Employer as non-responsive.
- 6.3 The earnest money of the successful Bidder shall be returned when the successful Bidder has signed the Contract and furnished the required performance security.
- 6.4 The earnest money of the unsuccessful Bidders shall be returned as promptly as possible when the successful Bidder has signed the Contract.
- 6.5 The earnest money may be forfeited:
 - a) If a Bidder withdraws its bid during the period of bid validity specified by the Bidder.
 - b) If the successful Bidder fails to Sign the Contract with in the specified period.
- 6.6 The Bid Security of a JV shall be in the name of the JV that submits the bid.

7.0 Format and Signing of Bid:

- 7.1 The Bidder shall prepare one original copy of the Technical Bid and one original copy of the Price Bid comprising the Bid and clearly mark it —ORIGINAL - TECHNICAL BID and —ORIGINAL - PRICE BID.

In addition, the Bidder shall submit three copies of the bid, in the number specified and clearly mark each of them —COPY. In the event of any discrepancy between the original and the copies, the original shall prevail.
- 7.2 The original and all copies of the Bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation as specified in the Bid Document and shall be attached to the bid. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the bid where entries or amendments have been made shall be signed or initialed by the person signing the bid.
- 7.3 A bid submitted by a JV shall be signed so as to be legally binding on all partners.

- 7.4 Any interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the bid.

8.0 Eligible Bidders:

- 8.1 A Bidder may be a private entity or a government-owned entity or any combination of such entities with the intent to enter into an agreement supported by a letter of intent or under an existing agreement in the form of a joint venture, consortium, or association (JV). In the case of a JV:
- a) all partners shall be jointly and severally liable, and
 - b) the JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the partners of the JV during the bidding process and, in the event the JV is awarded the Contract, during contract execution.
- 8.2 A Bidder, and all partners constituting the Bidder, shall have Indian nationality. A Bidder shall be deemed to have the nationality of a country if the Bidder is a national or is constituted, incorporated, or registered and operates in conformity with the provisions of the laws of Republic Of India. This criterion shall also apply to the determination of the nationality of proposed subcontractors or suppliers for any part of the Contract including related services.
- 8.3 AEGCL considers a **conflict of interest** to be a situation in which a party has interests that could improperly influence that party's performance of official duties or responsibilities, contractual obligations, or compliance with applicable laws and regulations, and that such conflict of interest may contribute to or constitute a prohibited practice under Anticorruption Policy of Government of India and Government Of Assam. In pursuance Anticorruption Policy's requirement that Employer as well as bidders, suppliers, and contractors observe the highest standard of ethics. AEGCL will take appropriate actions if it determines that a conflict of interest has flawed the integrity of any procurement process. Consequently, all Bidders found to have a conflict of interest shall be disqualified. A Bidder may be considered to be in a conflict of interest with one or more parties in this bidding process if, including but not limited to:
- (a). they have controlling partners in common; or
 - (b). they receive or have received any direct or indirect subsidy from any of them; or
 - (c). they have the same legal representative for purposes of this bid; or
 - (d). they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder, or influence the decisions of the Employer regarding this bidding process; or
 - (e). a Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which it is involved. However, this does not limit the inclusion of the same subcontractor, not otherwise participating as a Bidder, in more than one bid; or
 - (f). a Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the plant and services that are the subject of the bid.
- 8.4 A firm that is under a declaration of ineligibility by the AEGCL or any Government Entity or PSU at the date of the deadline for bid submission or thereafter i.e. on or before contract signing date shall be disqualified.
- 8.5 Bidders shall provide such evidence of their continued eligibility satisfactory to the AEGCL, as the Employer shall reasonably request.

9.0 Financial Capability:

- 9.1 Bidder will require to submit along with the bid the **audited balance sheets, IT return and other legal financial statements** acceptable to AEGCL, for the **last 3 (three) years** to demonstrate the current soundness of the Bidders financial position and its prospective long-term profitability. As a minimum,

an Applicant's net worth calculated as the difference between total assets and total liabilities should be positive.

- 9.2 **Average Annual Turnover:** Minimum average annual turnover **Rs.2,81,005.20** calculated as total certified payments received for contracts in progress or completed, within the last 3 (Three) Years.

10.0 Work Experience:

- 10.1 The Bidder should have successfully completed similar works within last 5 (Five) Financial years. Documentary evidence such as Work Order, Completion Certificate, etc. should be submitted as per below mentioned criteria:

- (a) **Three (3) similar** completed works costing not less than **Rs.3,74,673.60**
- (b) **Two (2) similar** completed works costing not less than **Rs. 4,68,342.00**
- (c) **One (1) similar** completed works costing not less than **Rs. 7,49,347.20**

- 10.2 The Bidder must have experience of executing work of similar nature previously. The bidder must submit experience and completion certificate for scrutiny by AEGCL.

11.0 Evaluation Criteria:

- 11.1 **Evaluation will be done on the basis of *Bid Clause* No. 8.0 : Eligible Bidders, Cl. No. 9.0 : Financial Capability, Cl. No. 10.0 : Work Experience and in accordance with the Annexure I to be duly filled in, signed and submitted by the bidder.**

- 11.2 Price Bid of only **Responsive and Qualified Techno-Commercial Bidders** will be opened.

- 11.3 **Price Bid Envelope of the Non-responsive Techno Commercial Bidders will be returned** to the respective bidders against submission of a written request by the bidder.

12.0 Correction of Errors in the Price Bid:

- 12.1 **Arithmetical Error**, if observed while in Price Bid evaluation, same will only be corrected.

- 12.2 Arithmetic Errors in the Price Bid will be rectified on the following basis:

- (a) If there is a discrepancy between the unit rate and the total cost that is obtained by multiplying the unit rate and quantity, the unit rate shall prevail and the total cost will be corrected unless in the opinion of AEGCL there is an obvious misplacement of the decimal point in the unit rate, in which case the total cost as quoted will govern and the unit rate corrected. If there is a discrepancy between the total bid amount and the sum of total costs, the sum of total costs shall prevail and the total bid amount will be corrected.
- (b) The amount stated in the Price Bid will be adjusted by AEGCL in accordance with the above procedure for the correctness of errors and shall be considered as binding upon the bidder. If the bidder does not accept the corrected amount of bid, its bid will be rejected, and the bid security may be forfeited.

- 12.3 **Any post bid correction request will NOT BE ENTERTAINED.**

13.0 Bid Evaluation Process for Abnormally Low Bids (ALB):

The following methodology will be practiced for identification and treatment of the Abnormally Low Bids (ALB) in this tender process of AEGCL:

- (a) **Identification:** For the Identification of the Abnormally Low Bids, two approaches as applicable shall be adopted :-

- (i) **Absolute Approach:** When there are fewer than five substantially responsive bidders and if the bid price is 20% or more below the AEGCL's cost estimate then AEGCL's tender evaluation committee should clarify the Bid price with the bidder to determine whether the Bid is Abnormally low.

- (ii) **Relative approach:**-When there are at least 5(five) nos. of substantially responsive

bids and the lowest bid price is 20% or more below AEGCL's cost estimate. In this approach, first the Average bid price is determined and then by deducting the standard deviation from the Average bid price, potentially ALB may be determined.

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(b) In case of an ALB, the tender evaluation committee of the respective tenders shall undertake the following three stage review process which are as below:

- i. Identify ALB as per the steps mentioned in Clause No. (a). (i) and (a). (ii), whichever is applicable.
- ii. To seek and analyses the clarifications from the abnormally low Bidder in terms of resource inputs and pricing, including overheads, contingencies and profit margins. In that respect, the committee may refer to guideline of World Bank, AIIB, ADB etc. prescribed for ALB.
- iii. To decide whether to accept or reject the bid.

(c) Additional Performance Security In case of acceptance of ALB:

- i. If any abnormally low bid is accepted with additional performance security, it is to be noted that the total performance security should not exceed 20% of the total contract value.
- ii. The additional performance security shall be treated as part of the original performance security and shall be valid for a period similar to that applicable for defect liability period of the contract.
- iii. Non submission of the additional performance security shall constitute sufficient ground for rejection of the bid and similar assessment shall then be initiated for next ranked bidder if that bidder is also identified as ALB.

14.0 Late Bid:

- 14.1 Any bid submitted ***after the due date and time*** will be rejected without any prejudice.
- 14.2 AEGCL will not be responsible for any Postal and/or Courier Delay in delivering the bid. The same received after the scheduled closing date and time will be rejected without any prejudice.
- 14.3 Bidding through **EMAIL WILL NOT BE ACCEPTED.**

15.0 Clarification on Bid Documents and Contacting AEGCL:

- 15.1 A prospective Bidder requiring any clarification of the Bidding Document shall contact the AEGCL in writing at the AEGCL's address (**O/o the Deputy General Manager, Silchar T&T Circle, AEGCL, Silchar-788026**) and raise his enquiries prior to 7 (seven) days of closing of the bid. The Employer will respond to any request for clarification, provided that such request is received no later than seven (7) days prior to the deadline for submission of bids. The AEGCL's response shall be in writing with copies to all Bidders who have acquired the Bidding Document including a description of the inquiry but without identifying its source. Should AEGCL deem it necessary to amend the Bidding Document as a result of a request for clarification, it shall do so.
- 15.2 The Bidder is advised to visit and examine the site where the work is to be Carried out and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the bid and entering into a contract for the provision of plant and services. The costs of visiting the site shall be at the Bidder's own expense.
- 15.3 The Bidder and any of its personnel or agents will be granted permission by the Employer to enter upon its premises and lands for the purpose of such visit, but only upon the express condition that the Bidder, its personnel, and agents will release and indemnify the Employer and its personnel and agents from and against all liability in respect thereof, and will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the inspection.

16.0 Amendment of Bidding Document:

- 16.1 At any time prior to the deadline for submission of bids, the Employer may amend the Bidding Document by issuing addenda.
- 16.2 Any addendum issued shall be part of the Bidding Document and shall be communicated in writing to all who have obtained the Bidding Document from AEGCL.
- 16.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their bids, AEGCL may, at its discretion, extend the deadline for the submission of bids.

17.0 Preparation of Bids by the Bidders:

- 17.1 **Cost of bidding:** The Bidder shall bear all costs associated with the preparation and submission of its Bid, and AEGCL shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.
- 17.2 **Language of Bid:** The Bid, as well as all correspondence and documents relating to the bid exchanged by the Bidder and AEGCL, shall be written in the English language.

18.0 Bid Prices and Discounts:

- 18.1 Bidders shall quote price inclusive of GST and all other applicable taxes. No extra calculation for discounts or other taxes will be done during evaluation.
- 18.2 Unless otherwise specified in the Bid Document and/or AEGCL's Requirements, bidders shall quote for the entire plant and services on a —single responsibility basis such that the total bid price covers all the Contractor's obligations mentioned in or to be reasonably inferred from the bidding document in respect of the including procurement and subcontracting (if any), delivery, construction, installation and completion of the Work. This includes all requirements under the Contractor's responsibilities for completing the work and where so required by the bidding document, the acquisition of all permits, approvals and licenses, etc.; the operation, maintenance and training services and such other items and services as may be specified in the Bidding Document, all in accordance with the requirements of the General Conditions. Items against which no price is entered by the Bidder will not be paid for by the Employer when executed and shall be deemed to be covered by the prices for other items.
- 18.3 Bidders are required to quote the price for the commercial, contractual and technical obligations outlined in the bidding document.
- 18.4 Sales Tax, GST and all other taxes (as applicable) payable on the work should be indicated separately. In case of failure to indicate so AEGCL will consider such taxes are included in the Offered Price.
- 18.5 Since the work being "work contract" which is one and individual and which involves no separate contract for the sale of materials, the contractor shall have not be entitled to get any VAT and or any other taxes, levies reimbursed from the AEGCL for the supply of the materials.
- 18.6 Taxes like work contract, income tax etc. which need to be deducted at source as per the prevailing law of the land, will be deducted at source.
- 18.7 **The Prices shall be FIXED and FIRM:**
The Bided Price should on Fixed Price basis, prices quoted by the Bidder shall be fixed during the Bidder's performance of the contract and not subject to variation on any account. A bid submitted with an adjustable price quotation will be treated as non-responsive and rejected.

19.0 Mandatory Documents:

- (i) Bidders(s) knowledge from actual personal investigation of the resources of the region or District (S) in which he/they offers the work.
- (ii) The Bidder shall furnish copy of their **PAN Card**. In case the bidder is a partnership Firm, the PAN card must be in the name of firm.
- (iii) In case the bidder is a partnership Firm, the **work experience, solvency and turn over** shall be in the name of **partnership Firm** only.
- (iv) **GST registration No.**
- (v) **Registered Power of attorney, if any.**
- (vi) **IT Return for last three Years.**
- (vii) **Audited Balance Sheet for last three years.**
- (viii) **Bank Solvency certificate.**
- (ix) **GTP of the equipment to be supplied.**
- (x) **Manufacturer's authorization.**

20.0 TECHNICAL REQUIREMENTS

20.1 Intent of specification

This section of the specification deals with the technical information & criteria for “**Supply 3 (three) Nos. of 132 kV Potential Transformer (PT) for 132kV Main Bus to be kept as spare at 132 kV Karimganj GSS, AEGCL**”.

- a) The Contractor's proposal shall be based on the use of materials complying fully with the requirements specified herein.

20.2 Scope of Works :-

- a) The scope of work involves “**Supply 3 (three) Nos. of 132 kV Potential Transformer (PT) for 132kV Main Bus to be kept as spare at 132 kV Karimganj GSS, AEGCL**”.
- b) Freight and Transit insurance, storage at site and site insurance of all materials at site shall be in the scope of the contractor.

20.3 Supplier to Inform himself fully:-

- The supplier should ensure that he has examined the specifications and schedules as brought out in this section as well as other sections of the Bidding Document and has satisfied himself as to all the conditions and circumstances affecting the contract price and fixed his price according to his own views on these matters and acknowledge that no additional allowances except as otherwise provided therein will be levied.
- The Purchaser shall not be responsible for any misunderstanding or incorrect information obtained by the contractor other than information given in writing by the Purchaser.

20.4 Service Conditions:-

The plant and materials supplied shall be suitable for operation under the following climatic and other conditions:

Peak ambient day temperature in still air	: 45⁰C
Minimum night temperatures	: 0⁰C
Reference ambient day temperature	: 45⁰C
Maximum Relative Humidity	: 100%
Minimum Relative Humidity	: 10%
Altitude	: Below 1000 M above MSL
Maximum Wind Pressure	: As per IS:802 latest code
Seismic Intensity	: ZONE-V as per IS 1893

20.5 Conformity with Indian Electricity Rules & Other Local Regulations:-

- The Supplier shall note that all substation works shall comply with the latest provisions of Indian Electricity Rules and with any other regulations. Local authorities concerned in the administration of the rules and regulations relating to such works shall be consulted, if necessary, about the rules and regulations that may be applicable.
- All registration and statutory inspection fees, if any, in respect of his work pursuant to this Contract shall be to the account of the contractor.

20.6 Standards:-

- The equipment covered under this Bidding Document shall, unless otherwise stated be designed, constructed and tested in accordance with the latest revisions of relevant Indian Standards and shall conform to the regulations of local statutory authorities.
- In case of any conflict between the standards and this specification, this specification shall govern.
- Equipment conforming to other International or authoritative Standards which ensure equivalent or better performance than that specified above shall be accepted. In that case relevant extracts of the same shall be forwarded with the bid.

20.7 Engineering Data:-

- The furnishing of engineering data by the supplier shall be in accordance with the Bidding Document. The review of these data by the Purchaser will cover only general conformance of the data to the specifications and not a thorough review of all dimensions, quantities and details of the materials, or items indicated or the accuracy of the information submitted. This review by the Purchaser shall not be considered by the supplier as limiting any of his responsibilities and liabilities for mistakes and deviations from the requirements, specified under these specifications.
- All engineering data submitted by the supplier after review by the Purchaser shall or part of the contract document.

20.8 Drawings and Documents for approval:-

- The supplier shall submit all drawings and documents of all equipment to be supplied include drawings of foundation, steel structure and any other drawings that may be required for successful completion of the project and get it approved by the Purchaser.
- In addition, the following sub clauses shall also apply in respect of Contract Drawings.
- All drawings submitted by the Supplier including those submitted at the time of Bid shall be with sufficient detail to indicate the type, size, arrangement, dimensions, material description, bill of materials, weight of each component break-up for packing and shipment, fixing arrangement required, the dimensions required for installation and any other information specifically requested in these specifications.
- Each drawing submitted by the Supplier shall be clearly marked with the name of the Purchaser, the specification title, the specification number and the name of the project. All titles, noting, markings and writings on the drawing shall be in English. All the dimensions should be to the scale and in S.I. units.
- The drawing submitted for approval to the Purchaser shall be in quadruplicate. One print of such drawings shall be returned to the supplier by the Purchaser marked “approved/approved with corrections”. The Supplier shall there upon furnish the Purchaser additional prints as may be required along with one reproducible in original of the drawings after incorporating all corrections.

20.9 Final Drawings and Documents:-

The successful supplier shall require providing following documents and drawings for each bay constructed in printed form:

- a) *Instruction manuals of all equipment in 3 (Three) copies.***
This instruction manual shall generally consist of
 - ***Operation Manuals***
 - ***Maintenance Manuals and***
 - ***Spare Parts Bulletins***
- b) *Copies of routine test reports (in triplicate) of relevant equipment.***
- c) *Final guaranteed and other technical particulars of relevant equipment.***

In addition to the above, the contractor shall provide 5 **(Five)** sets of all drawings and documents to Purchaser in printed form for his reference and record.

20.10 Quality assurance, Inspection & Testing:-

To ensure that the supply of manufactured equipment(s) and services under the scope of this contract whether manufactured or performed within the contractor's works or at his subcontractor's premises or at site or at any other place of work are in accordance with the specifications, the contractor shall adopt suitable quality assurance programme to control such activities at all points necessary. Such programme shall be outlined by the contractor and shall be finally accepted by the Purchaser after discussions before award of contract. A quality assurance programme of the contractor shall generally cover but not limited to the following:

- His organization structure for the management and implementation of the proposed quality assurance programme.
- Documentation control system.
- Qualification data for contractor's key personnel
- The procedure for purchase of materials, parts components and selection of subcontractor's services including vendor analysis, source inspection, incoming raw material inspection, verification of material purchases, etc.
- System for shop manufacturing including process controls and fabrication and assembly controls.
- Control of non-conforming items and system for corrective action
- Control of calibration and testing of measuring and testing equipment
- Inspection and test procedure for manufacture
- System for indication and appraisal of inspection status
- System for quality audits
- System for authorizing release of manufactured product to the Purchaser
- System of maintenance of records
- System for handling storage and delivery
- A quality plan detailing out the specific quality control procedure adopted for controlling the quality characteristics relevant to each item of supply. The quality plan shall be mutually discussed and approved by the Purchaser after incorporating necessary corrections by the contractor as may be required.

20.11 Quality Assurance Documents:-

- The contractor shall be required to submit all the quality assurance documents as stipulated in the quality plan at the time of Purchaser's inspection of equipment/material.

- The Purchaser or his duly authorized representatives reserves the right to carry out quality audit and quality surveillance of the systems and procedures of the contractors/his vendors quality management and control activities.

20.12 Employer's Supervision:-

- To eliminate delays and avoid disputes and litigation it is agreed between the parties to the Contract that all matters and questions shall be resolved in accordance with the provisions of this document.
- The manufacturing of the product shall be carried out in accordance with the specifications. The scope of the duties of the Employer, pursuant to the contract, will include but not be limited to the following.
 - a) Interpretation of all the terms and conditions of these Documents and Specifications.
 - b) Review and interpretation of all the Contractors drawings, engineering data etc.
 - c) Witness or authorize his representative to witness tests at the manufacturer's works or at site, or at any place where work is performed under the contract.
 - d) Inspect, accept or reject any equipment, material and work under the Contract, in accordance with the Specifications.
 - e) Issue certificate of acceptance and/or progressive payment and final payment certificate.
 - f) Review and suggest modification and improvement in completion schedules from time to time,
 - g) Supervise the Quality Assurance Programme implementation at all stages of the works.

20.13 Inspection and Inspection Certificate:-

- The Employer, his duly authorized representative and/or outside inspection agency acting on behalf of the Employer shall have, at all reasonable times, access to the premises and works of the Contractor and their sub-contractor(s)/sub-vendors and shall have the right, at the reasonable times, to inspect and examine the materials and workmanship of the product during its manufacture.
- All routine and acceptance tests whether at the premises or works of the Contractor or of any Sub Contractor, the Contractor except where otherwise specified shall carry out such tests free of charge. Items such as labours, materials, electricity, fuel, water, stores apparatus and instruments as may be reasonably demanded by the Employer/inspector or his authorized representative to carry out effectively such tests in accordance with the Contract shall be provided by the Contractor free of charge.
- If desired by the Employer, the Contractor shall also carry out type tests as per applicable Standards for which Employer shall bear the expenses except in cases where such tests have to be carried out. The Contractor is required to quote unit rates of type test charges in a separate Schedule (if such schedule is provided in the Bidding Document). However, these type test charges shall not be taken into account in comparing Price Bid.
- The inspection by Employer and issue of Inspection Certificate thereon shall in no way limit the liabilities and responsibilities of the Contractor in respect of the agreed Quality Assurance Programme forming a part of the Contract.

20.14 Tests:-

The type, acceptance and routine tests and tests during manufacture to be carried-out on the material and equipment shall mean as follows:

- a) **Type Tests:** - Type Tests shall mean those tests, which are to be carried out to prove the process of manufacture and general conformity of the material to this Specification. These tests shall be carried out on samples prior to commencement of commercial production against the order. The Bidder shall indicate his schedule for carrying out these tests.
- b) **Acceptance Tests:** - Acceptance Tests shall mean those tests, which are to be carried out on samples taken from each lot offered for pre-dispatch inspection, for the purposes of acceptance of that lot.
- c) **Routine Tests:** - Routine Tests shall mean those tests, which are to be carried out on the material to check requirements, which are likely to vary during production.

- d) **Tests during Manufacture:** - Tests during manufacture shall mean those tests, which are to be carried out during the process of manufacture and end inspection by the Contractor to ensure the desired quality of the end product to be supplied by him.
- The norms and procedure of sampling for these tests will be as per the Quality Assurance Programme to be mutually agreed to by the Contractor and the Employer.
 - The standards and norms to which these tests will be carried out are specified in subsequent Sections of this Specification. Where a particular test is a specific requirement of this Specification, the norms and procedure of the test shall be as specified or as mutually agreed to between the Contractor and the Employer in the Quality Assurance Programme.
 - For all type and acceptance tests, the acceptance values shall be the values specified in this Specification or guaranteed by the Bidder or applicable Standards, as applicable.

20.15 Type Test Reports:-

- Materials, which have never been tested for critical performance, shall not be accepted. In such cases, a promise or agreement by a bidder to have the equipment tested after award of a contract is not acceptable.
- All Bids must be accompanied by the Type Test Certificates of materials offered. Such type test certificates shall be acceptable only if:
 - i) Tests are conducted in an independent testing laboratory with NABL accreditation/CPRI,
 - ii) Tests are conducted in manufacturer's own laboratory.In this case
 - (a) The laboratory must have NABL accreditation; and
 - (b) Tests have been witnessed by technically qualified representatives of earlier clients or purchaser.
- Test reports to be acceptable must be related directly to the equipment offered i.e. it is fully identical in design, rating and construction with the equipment for which the type test certificates have been submitted. Test reports for higher class (by capacity/voltage etc.) of equipment are acceptable with commitment to perform the type tests free of any charge on the particular equipment after the award of contract.
- Type Test Reports older than five (5) years on the date of Technical bid opening shall not be accepted.

20.16 Guaranteed Technical Particulars:-

- The Guaranteed Technical Particulars of the various items shall be furnished by the Bidders with the Technical Bid in the prescribed Schedules attached in this bidding document. The Bidder shall also furnish any other information's as in their opinion is needed to give full description and details to judge the item(s) offered by them.
- The data furnished in Guaranteed Technical Particulars should be the minimum or maximum value (as per the requirement of the specification) required. A Bidder may guarantee a value more stringent than the specification requirement. However, for testing purpose or from performance point of view, the material shall be considered performed successfully if it achieves the minimum/maximum value required as per the technical specification. No preference whatsoever shall be given to the bidder offering better/more stringent values than those required as per specification except where stated otherwise.

20.17 Materials Handling and Storage:-

- All the supplies under the Contract as well as Employer supplied items (if any) arriving at site shall be promptly received, unloaded and transported and stored in the stores by the Contractor.
- Contractor shall be responsible for examining all the shipment and notify the Employer immediately of any damage, shortage, discrepancy etc. for the purpose of Employer's information only. The Contractor shall submit to the Employer every week a report detailing all the receipts during the week.

However, the Contractor shall be solely responsible for any shortages or damages in transit, handling and/or in storage and erection at site. Any demurrage, and other such charges claimed by the transporters, railways etc., shall be to the account of the Contractor.

- The Contractor shall maintain an accurate and exhaustive record-detailing out the list of all items received by him for the purpose of erection and keep such record open for the inspection of the Employer.
- All items shall be handled very carefully to prevent any damage or loss. The materials stored shall be properly protected to prevent damage. The materials from the store shall be moved to the actual location at the appropriate time so as to avoid damage of such materials at Site.
- All the materials stored in the open or dusty location must be covered with suitable weather-proof and flameproof covering material wherever applicable.
- The Contractor shall be responsible for making suitable indoor storage facilities, to store all items/materials, which require indoor storage.
- The Contractor shall have total responsibility for all equipment and materials in his custody, stored, loose, semi-assembled and/or erected by him at site. The contractor shall make suitable security arrangements including employment of security personnel to ensure the protection of all materials, equipment and works from theft, fire, pilferage and any other damages and loss.

21.0 TECHNICAL SPECIFICATION FOR 33 KV, 132KV, 220KV & 400 KV CVT & IVT

21.1. SCOPE:

21.1.1. This specification provides for the design, manufacture, assembly inspection and testing at the manufacturer's works, packing and delivery at site, erection, testing and commissioning of outdoor mounted type, single phase, oil filled, self-cooled, single unit type Inductive voltage transformers for 33 KV & 132KV systems, & Capacitive Voltage Transformers for, 132KV, 220kV & 400 KV system to be used for voltage indication, supply of potential to energy meters, relays for feeder protection in Grid Sub-stations of AEGCL, ASSAM.. In addition to the above functions the 400 KV, 220kV, 132KV CVT shall be suitable for carrier coupling.

21.1.2. The IVTs shall be complete in all respects with insulators, bimetallic connectors, fixing details etc. as described herein.

21.1.3. Bidders are required to quote for 0.2 accuracy class [metering winding] for 33 KV and 132KV IVTs & 132KV, 220kV, 400kV CVTs in the following manner.

(a) Guaranteed Technical Particulars.

(b) Technical literatures, brochures and drawings as per this specification.

(c) Type Test reports.

(d) List of orders, executed and Users' certificates with **minimum 5years of field proven experience** failing submission of the above particulars with the offer, the tender may not be considered for evaluation.

21.2. Following is the list of documents constituting this Specification:

(i) Technical Specification (TS).

(ii) Technical requirements.

21.3. STANDARDS:

21.3.1 The IVTs & CVTs shall conform in all respects to high standards of Engineering, design, workmanship and latest revisions of relevant standards at the time of offer and the Purchaser shall have the power to reject any work or material which in his judgement is not in full accordance therewith.

21.3.2. Except to the extent modified in the specifications, the IVTS & CVTs shall conform to the latest editions and the amendments of the standards listed hereunder:

Sl. No.	Standard Ref. No.	Title
01	IEC-44(4)	Instrument Transformer– measurement of PDS.
02	IEC-60	High voltage testing techniques.
03	IEC-171	Insulation co-ordination.
04	IEC-186	Voltage Transformers.
05	IEC-186(A)	Voltage Transformers (first supp. to IEC-186)
06	IEC-270	Partial discharge measurement.
07	IS-335	Insulating oil for transformers and switchgears.
08	IEC-8263	Method for RIV Test on high voltage insulators.
09	IS-2071	Method of high voltage testing.
10	IS-2099	High Voltage porcelain bushings.
11	IS-2147	Degree of protection provided by enclosures for low voltage switchgear and control.
12	IS-2165	Insulation co-ordination for equipments of 100 KV and above.
13	IS-3156 (Part-I to IV).	Voltage transformers.
14	IS-3347	Dimensions of porcelain transformer bushings.
15	IS-4146	Application guide for voltage transformers.
16	IS-5547	Application guide for Capacitor Voltage Transformers.
17	IS-9348	Coupling Capacitor & Capacitor Devices.

21.3.3 All the above along with the amendments thereof shall be read and interpreted together. However, in case of a contradiction between the Technical Specification and any other volume, the provisions of this Technical Specification will prevail.

21.3.4. The voltage transformers with the requirements of other authoritative standards, which ensure equal or better quality than the standards, mentioned above shall also be acceptable. Where the equipments, offered by the supplier conform to other standards, salient points of difference between the standards shall be brought out in the offer. 4 (four) copies of the reference standards in English language shall be furnished along with the offer.

21.3.5. The supplier is to furnish the standards as mentioned above from Sl. 1 to 17 at their own cost, if required by the purchaser.

21.3.6: Accuracy specified shall be maintained at 25% of rated burden.

21.4. CLIMATIC AND SERVICE CONDITIONS:

21.4.1 Earthquake Incidence:

The CVT/VT are to be designed to withstand earthquake of intensity, equivalent to **minium** 0.5g in the horizontal and 0.6g in the vertical direction.

21.5. INSTALLATION:

The CVT/VT covered under this specification shall be suitable for outdoor installation without any protection from rain, dust, mist and direct rays of the sun.

21.6. GENERAL TECHNICAL REQUIREMENTS:

21.6.1 GENERAL TECHNICAL REQUIREMENTS FOR IVT:

21.6.1.1. Each IVT shall be supplied, filled with insulating oil and shall be hermetically sealed to prevent **atmospheric environment** in contact with oil, avoiding filtration and change of oil. Stainless steel diaphragm Bellow with bellow level indicator shall be provided.

21.6.1.2. Secondary Terminal Box:

21.6.1.2.1. The secondary terminals shall be brought out in a weatherproof terminal box with IP-55 **degree of protection enclosure**.

21.6.1.2.2 All secondary terminals shall be brought out in a compartment on one side of each IVT for easy access.

21.6.1.2.3. The exterior of this terminal box shall be hot dip galvanized.

21.6.1.2.4. The terminal box shall be provided with removable gland plate and glands suitable for 1100 volts grade. PVC insulated, PVC sheathed multi core of **2.5 sq.mm to 4 sq.mm** stranded copper conductor cable.

21.6.1.2.5. The terminal box shall be provided with a cover in front so as to have easy access of secondary terminals. The cover shall have a sealing/locking arrangement and shall be suitable to prevent penetration of moisture and rainwater.

21.6.1.2.6. The dimensions of the terminal box and its openings shall be adequate to enable easy access and sufficient working space for use of normal tools.

21.6.1.2.7. The terminal blocks shall be standard type and provided with ferrules indelibly marked or numbered and their identifications shall correspond to the designation on the relevant wiring diagram.

21.6.1.2.8. Secondary wiring terminal studs shall be provided with at least three nuts, plain and spring washers. The studs, nuts and washers shall be of brass, duly nickel plated. The minimum diameter of the studs shall be 6 mm. The length of at least 15 mm shall be available on the studs for inserting the leads.

21.6.1.2.9. Primary earthing link should be provided for measurement of capacitance & di-electric dissipation factor.

21.6.1.2.10 Polarity shall be indelibly marked on each primary and secondary terminal.

21.6.1.3 The IVT shall be vacuum filled with oil after processing and thereafter hermetically sealed to eliminate breathing and to prevent air and moisture from entering the tanks. The method adopted for hermetic sealing shall be described in the offer.

21.6.1.4. The castings of base, collar etc. shall be die cast and tested before assembly to detect cracks and voids, if any.

21.6.1.5. The characteristics of the IVTS shall be such as to provide satisfactory performance such as voltage error and phase displacement at rated frequency shall not exceed the values as per relevant standards at any voltage between 80% and 120% of rated voltage and with burdens of between 25% and

100% of rated burden at a power factor of 0.8 lagging. The error shall be determined at the terminals of the IVT and shall include the effects of any fuses or resistors as an integral part of the IVT.

21.6.1.6. Inductive voltage transformers shall be ferro-resonance proof and adequately designed to use in HT cable circuit wherever applicable.

21.6.1.7 Primary Winding:

Primary winding of the IVT will be connected phase to neutral with the neutral point solidly earthed. The arrangement for this shall be included in the scope of supply. The primary conductor shall be of adequate cross-section so that the maximum permissible current density shall not be exceeded even during short-circuit conditions. Primary Windings shall be made of Copper.

21.6.1.8 Secondary Winding:

Suitably insulated copper wire of electrolytic grade shall be used for secondary windings. The secondary conductor shall be of adequate cross section so that the maximum permissible current density shall not be exceeded even during short- circuit conditions. Secondary windings details, burden & accuracy class are mentioned in Appendix-I. Secondary windings shall be used for metering, relaying and synchronizing. Each winding shall comply requirements of both Part-II and III of up-to-date editions of IS-3156/IEC-186.

21.6.1.9 Core:

Core laminations shall be of cold rolled grain-oriented silicon steel to ensure 0.2 accuracy class at both normal and over voltage. The core material, thickness of lamination, the relevant graphs showing the characteristics of the core materials shall be submitted along with the offer.

21.6.1.10 Tank:

21.6.1.10.1. Both expansion chambers and tanks of the IVT shall be made of high-quality steel and shall be able to withstand full vacuum and pressure, and thermal and mechanical stresses resulting from maximum short circuit current during operation. The tanks along with all ferrous parts shall be hot- dip galvanized as per relevant standard.

21.6.1.10.2. The metal tanks shall have bare minimum number of welded joints so as to minimize possible locations of oil leakage. Welding in horizontal plane is to be avoided. Supplier has to obtain specific approval from the purchaser for any horizontal welding, used in the bottom tank

21.6.1.10.3. Paint inside the metallic housing shall be of anti-condensation type.

21.6.1.11 Porcelain Housing:

21.6.1.11.1. The housing shall be made up of homogeneous, vitreous porcelain of high mechanical and dielectric strength; glazing of porcelain shall be of uniform brown or dark brown colour with a smooth surface, arranged to shed away rainwater or condensed water particles (fog)

21.6.1.11.2. The bushings of the IVTS shall conform to latest edition of IS-2099. The hollow porcelain insulators shall conform to the latest edition of IS-5621

21.6.1.11.3. The insulators shall be cemented with Portland cement to the flanges resulting in high mechanical, tensile and breaking strength

21.6.1.11.4. The bushings shall have ample insulation, mechanical strength and rigidity for the condition under which they shall be used and shall be designed to prevent accumulation of explosive gases and provide adequate oil circulation to remove the internal heat.

21.6.1.10.5. Cast metal and caps for the bushings shall be of high strength hot dip galvanized malleable iron. They shall have smooth surface to prevent discharge taking place between the metal parts and porcelain as a result of ionisation.

21.6.1.10.6. End shields should be provided for distribution of stresses.

21.6.1.10.7. Corona shields for bushings, if required, should be provided.

21.6.1.12 Insulating Oil:

The quantity of insulating oil for the filling and the complete specification of the insulating oil shall comply in all respects with the provisions of the latest edition of IS-335. The IVTs shall be supplied filled with **new oil**.

21.6.1.13 Prevention of Oil Leakage and Entry of Moisture:

The supplier shall ensure that the sealing of the IVT is properly achieved. In this connection, the arrangement provided by the supplier at various locations including the following ones shall be described, supported by sectional drawings

- (a) Locations of emergence of primary & secondary terminals.
- (b) Interface between porcelain housing and metal tank(s).
- (c) Cover of the secondary terminal box.
- (d) Sealing around oil level indicator.

13.6.1.16.1. Nuts and bolts or screws used for fixation of the interfacing porcelain bushings for taking out terminals shall be provided on flanges, cemented to the bushings and not on the porcelain.

13.6.1.16.2. For gasketed joints, wherever used, **nitrite butyl rubber/Neoprene gaskets shall be used**. The gasket shall be fitted in properly machined groove with adequate space for accommodating the gasket under compression.

21.6.1.14 Fittings and Accessories:

Fittings and accessories listed below shall be supplied with each IVT. Any fitting required essential other than those listed below shall also be supplied along with each IVT.

- (a) Oil level gauge.
- (b) Oil filling hole and cap.
- (c) Pressure relieving device.
- (d) Lifting lugs.
- (e) Phase terminal connectors.

- (f) Tank earthing pads/terminals with necessary nuts and bolts and washers for connecting to Purchaser's strip.
- (g) Name/Rating plate.
- (h) H.R.C. fuse of Adequate rating
- i) Bellow

21.6.1.15 Provisions

21.6.1.15.1. Oil Level Gauge:

An oil level gauge shall be provided to indicate the oil level in the IVT. This gauge shall be mounted in such a way that the oil level can be seen from the ground level.

21.6.1.15.2. Pressure Relieving Device:

Each IVT shall be provided with a pressure relieving device so as to protect bushing of the IVT even under unfavourable conditions.

21.6.1.15.3. Oil Drain Cock:

An oil drain cock along with a stop cock shall be provided in the bottom flange so as to permit taking of oil samples for testing, if required.

21.6.1.15.4. Earthing: Metal tank of each IVT shall be provided with two separate earthing terminals for bolted connection to be provided by the Purchaser for connection to station earth-mat.

21.6.1.15.5. Lifting Arrangement:

The IVT shall be provided with suitable lifting arrangement to lift the entire unit. The lifting arrangement shall be clearly shown in the general arrangement drawing.

Lifting arrangement [Lifting eye] shall be positioned in such a way so as to avoid any damage to the porcelain housing or the tanks during lifting for installation/transport. Necessary string guides shall be offered which shall be of removable type.

21.6.1.15.6. Name Plate:

The IVT shall be provided with non-corrosive legible name plate with the information specified in relevant standards, duly engraved/punched on it.

21.6.1.15.7. Gasket Joint:

The manufacturer shall furnish the type of gasket used or setting methods.

21.6.1.15.8. Terminal Connectors:

All the IVTs shall be provided with bimetallic solder less clamp type, rigid type terminal connectors, suitable for ACSR Conductor as per site requirement. Each terminal connector shall be of universal type, suitable for both horizontal and vertical connections to the transmission line conductors/station bus bar.

21.6.1.15.8.1. Terminal Connectors shall be manufactured and tested as per IS:5561.

21.6.1.15.8.2. All castings shall be free from blow holes, surface blisters, cracks and cavities. All sharp edges and corners shall be blurred and rounded off.

21.6.1.15.8.3. No part of a clamp shall be less than 12mm. thick.

21.6.1.15.8.4. All ferrous parts shall be hot dip galvanized conforming to IS-2633

21.6.1.15.8.5. All current carrying parts shall be designed and manufactured to have minimum contact resistance.

21.6.1.15.8.6. Connectors shall be designed to be corona free in accordance with the requirements, stipulated in IS-5561.

21.6.1.15.9. Secondary Wiring: The Secondary wiring shall be enclosed in conduits and shall be brought to a terminal block ready for external connections. The wiring shall be of adequate cross-section and not less than 2.5 sq.mm copper wire.

21.6.1.15.10. The supplier shall supply necessary hardware, required for connection of phase side conductor to the line terminal and the grounding strip to the grounding terminal.

21.6.1.15.11. Necessary nuts and bolts for fixing the IVTS on the supporting structures shall be in tenderer's scope of supply.

21.6.2. GENERAL TECHNICAL REQUIREMENTS FOR 400KV, 220KV & 132KV CAPACITIVE VOLTAGE TRANSFORMER:

21.6.2.1. The CVT shall operate satisfactorily in system with high X/R ratio. ($T_p=100$ ms.).

21.6.2.2. The CVT transformer tanks along with top metallic shall be galvanized and painted to required shade.

21.6.2.3. Impregnation details along with tests and checks to ensure successful completion of impregnation cycle shall be furnished for purchaser's approval.

21.6.2.4. Bellows, if used to cater for expansion of insulating oil, shall be tested in accordance with relevant standards. The details shall be subject to the approval of the purchaser.

21.6.2.5. The CVT shall be capacitor voltage type with electromagnetic units and shall be suitable for carrier coupling.

21.6.2.6. All windings of voltage transformer secondaries shall be protected by HRC cartridge type fuses. The secondary terminals of the CVTs shall be terminated to stud type non-disconnecting terminal blocks in the individual phase secondary boxes via the fuse. Fuse ratings shall be clearly mentioned.

21.6.2.7. CVTs shall be suitable for high frequency (HF) coupling, required for power line carrier communication. The carrier signal must be prevented from flowing into potential transformer (EMU) circuit by means of a RF choke/reactor, suitable for effectively blocking the carrier signal over the entire carrier frequency range i.e. 40 to 500 KHZ. Details of the arrangement shall be furnished along with the bid. HF terminal of the CVT shall be brought out through a suitable bushing and shall be easily accessible for connection to the coupling devices of the carrier communication equipment, when utilized. The bushing shall be fully protected against rain and vermin so as to avoid the possibility of short circuits to earth. An earthing link with fastener shall be provided for HF terminal. **Test tap for Tan- delta and capacitance shall be provided.**

21.6.2.8. The electromagnetic unit, comprising compensating reactor, intermediate transformer and protective and damping devices should have a separate terminal box with all secondary terminals, brought out.

21.6.2.9. The accuracy of the windings (0.2/3P/3P) shall be maintained throughout the entire burden range preferably in the frequency range of 48 HZ to 51.5 HZ on all the three windings without any adjustment during operation. Preference will be given to such bidders who can offer for maintaining the above accuracy class in the frequency range i.e. 48 HZ to 51.5 HZ up to the above specified burden values.

21.6.2.10. Constructional Features:

21.6.2.10.1. The 400KV, 220KV & 132KV CVT shall be suitable for mounting on support structure of lattice type structures.

21.6.2.10.2. Access to secondary terminals shall be possible without any danger of access to high voltage circuit.

21.6.2.10.3. CVTs shall be hermetically sealed units.

21.6.2.10.4. **A protective surge Arrester/spark gap shall be provided to prevent break down of insulation by incoming surges and to limit abnormal rise of terminal voltage of shunt capacitor/primary winding, tuning reactor/RF choke etc. due to short circuit in transformer secondaries. Surge arrester shall be provided in the secondary winding also.**

21.6.2.10.5. The CVT secondary terminals shall be brought out into a weatherproof terminal box for ease of access. The terminal box shall have an IP rating of not less than IP 55. The terminal box shall be provided with a removable gland plate at the bottom and shall be suitable for accepting the required number of PVC insulated PVC sheathed, 10 core 2.5 mm² standard copper conductor cable.

21.6.2.10.6. All terminals shall be clearly marked to facilitate connection of secondary wiring.

21.6.2.10.7. Secondary fuses or MCBs shall be provided on or adjacent to each CVT, located such that they are accessible while the primary is live and shall be provided with labels indicating their function and their phase colours. CVT secondary circuits shall be complete in themselves and shall be earthed at one point only. A separate earth link shall be provided for each secondary winding and shall be situated at the CVT. Primary earthing links should be provided.

21.6.2.10.7. To prevent ferro resonance, suitable damping devices shall provide for connection to the transformer secondaries.

21.6.2.10.8. CVTs shall meet the requirements, given in this section of the specification.

21.6.2.10.9. The creepage and flashover distances of the high voltage insulator shall be suitable for the outdoor service conditions, specified in the schedules.

21.6.2.10.10. The bidder in the offer is to state the suitable precautions/methods, adopted during design stage of the CVT to avoid the un-desirable effects due to ferro resonance phenomena.

21.6.2.10.11. It should be stated in the bid offer regarding the steps taken in the design stage for elimination/minimization of the influence of the transient response on the behaviour of high-speed relays.

21.6.2.10.12. It shall be ensured by the bidder in the offer that the connection of carrier, frequency coupling device across the CVT will not affect the designated accuracy class of the CVT windings.

21.6.2.10.13. The capacitor divider unit shall comply to IS: 9348/1979.

21.6.2.10.14. It shall also be complied in the offer through a calculation sheet, proving that the designated accuracy class of the CVT (both metering and protection) are not affected by extreme temperatures, to be encountered in service conditions (Max. ambient temperature 50° C and minimum -0° C). The terminal connectors should be suitable for 'ACSR' Conductor as per site requirement.

21.7. TESTS:

21.7.1 Type Tests:

The offered 33 KV & 132KV Inductive voltage transformer 400kV, 220kV, 132KV capacitive voltage transformer should have been subjected to the following type tests in a Government approved Test Laboratory. The bidder shall furnish four sets of type test reports along with the offer. These tests must not have been conducted earlier than five years from the date of opening of the bid. For any change in the design/type already type tested and to the design/type offered against this specification, the purchaser reserves the right to demand repetition of some or all type tests/special tests without any extra cost to AEGCL in the presence of purchaser's representative at the cost of the supplier.

For 33 KV, 132 KV IVT:

- (a) Temperature rise test.
- (b) Lightning Impulse Test.
- (c) High Voltage power frequency wet withstand voltage tests.
- (d) Determination of errors.
- (e) IP-55 Test on secondary Terminal Box.

(f) RIV Test

(g) Creepage distance measurement test

N.B.: (i) The dielectric type tests should have been carried out on the **Same design and type of IVT**.

(ii) After the IVT was subjected to the dielectric tests, it should have been subjected to all routine tests as per relevant standards.

(iii) For Temperature Rise Test, the test must have been made with the appropriate rated burden, connected to each secondary winding.

For 400kV, 220kV & 132kV CVT.

Type Tests/Special Tests for 400kV, 220kV, 132kV CVT:

- a) Lightning Impulse voltage test on complete CVT unit.
- b) Power frequency over-voltage test on complete CVT unit.
- c) Partial discharge test.
- d) Radio interference voltage test.
- e) Corona extinction voltage test.

- f) Temperature rise test on complete CVT unit.
- g) Ferro resonance test on the complete C.V.T. unit.
- h) Transient response tests.
- i) Determination of Temperature Co-efficient test.
- j) High frequency capacitance and equivalent resistance measurement test (as per IEC-358)
- k) Stray capacitance and stray conductance test (as per IEC-358).
- l) Accuracy tests.
- m) Thermal stability test.
- n) Thermal Co-efficient test (as per IEC-358)
- o) Fast transient test.
- p) Seismic withstand test.
- q) IP-55 test on secondary Terminal Box.
- r) Magnetization and internal burden tests.
- s) Effectiveness of sealing tests.
- t) Mechanical Terminal load test on Bushing.
- u) Dielectric loss angle test (Tan Delta Test).
- v) Switching impulse withstand test
- w) Critical impulse withstand voltage of insulator housing.

N.B: 1. The dielectric type tests should have been carried out on the same CVT.

- 2. After the CVT was subjected to the dielectric tests, it should have been subjected to all routine tests as per relevant standards.
- 3. The ratio errors, phase displacements before, during and after the temperature rise test on complete CVT unit should have been determined with stipulated burdens and the same should comply with the designated accuracy class for each winding of the CVT.

21.7.2 Routine Tests:

The following routine tests shall be conducted on each VT in the presence of Purchaser's representative for which no charges will be payable by AEGCL. No sampling is allowed.

- (a) Verification of terminal markings.
- (b) Power frequency withstand tests on primary windings/capacitor voltage divider for CVT
- (c) Partial discharge measurement for 400kV, 220kV & 132kV CVT.

- (d) Power frequency withstand tests on secondary windings/Low voltage terminal of the capacitor divider for 400kV, 220kV & 132kV CVT.
- (e) Determination of errors on complete IVT/CVT.
- (f) Measurement of Insulation resistance.
- (g) Oil leakage test.
- (h) Measurement of capacitance and dielectric dissipation factor before and after dielectric tests (as per IEC-358)
- (j) Power frequency tests on electromagnetic unit for 400kV, 220kV & 132kV CVT.
- (j) Any other test as per relevant national & international standards.
- (k) Creepage distance measurement test.

N.B.: Determination of errors shall be performed after the other tests. The standard reference VT to be used during testing for determination of ratio error and phase angle error should of 0.05 accuracy class or better as per standard practice, presently adopted by AEGCL.

21.8. INSPECTION:

21.8.1. The Purchaser shall have access at all times to the works and all other places of manufacture, where the IVTs/CVTs are being manufactured and the supplier shall provide all facilities for unrestricted inspection of the supplier's works, raw materials, manufacturer of all the accessories and for conducting the necessary tests.

21.8.2. The Supplier shall keep the Purchaser informed in advance of the time of starting and of the progress of manufacture of equipment in its various stages so that arrangement could be made for inspection at the discretion of the Purchaser.

21.8.3. No material shall be dispatched from its manufacture unless the material has been satisfactorily inspected, tested and dispatch clearance issued. However, the Purchaser reserves the right to alter the despatch schedule attached to this Specification.

21.8.4. The acceptance of any quantity of equipment shall in no way relieve the supplier of his responsibility for meeting all the requirements of this Specification and shall not prevent subsequent rejection, if such equipments are found to be defective.

21.8.5. Clear 15 (Fifteen) days' notice shall be given to this office for deputing officer(s) for inspection. The Voltage Transformers shall be despatched only after the inspection is conducted by a representative of AEGCL and release order, issued from this office after approval of Routine Test Certificates. The shop routine test certificates in triplicate for all the Voltage Transformers along with the calibration certificates of all the meters and equipments to be used during testing (as per Annexure-B of the Specification) should be furnished along with the Inspection Offer. The Inspecting Officer will be authorised for inspection of the Voltage Transformers subject to the condition that the routine test certificates and calibration certificates of the testing equipments/meters will be found to be in order.

21.9. QUALITY ASSURANCE PLAN:

21.9.1. The Bidder shall invariably furnish following informations along with his offer.

- (i) Statement giving list of important raw materials, names of sub-suppliers for the raw materials, list of standards, according to which the raw materials are tested, list of tests, normally carried out on raw materials in presence of Bidder's representative, copies of test certificates.
- (ii) Information and copies of test certificates as in (i) above in respect of bought out items.
- (iii) List of manufacturing facilities available.
- (iv) Level of automation achieved and list of areas where manual processing exists.
- (v) List of areas in manufacturing process where stage inspections are normally carried out for quality control and details of such tests and inspection.
- (vi) Special features provided in the equipment to make it maintenance free.
- (vii) List of testing equipments, meters and test plant limitation, if any, vis-à-vis the type, acceptance and routine tests, specified in the relevant standards. These limitations shall be very clearly brought out in the offer.
- (viii) All the testing equipments, meters etc. should have been calibrated in a Government approved laboratory. The Bidder must submit the list of testing equipments and meters test as per the Technical Specification.
- (ix) QAP shall include acceptance criteria against all parameters with relevant clause of standards

21.9.2. The Supplier shall within 30 days of placement of order submit the following information to the Purchaser.

- (i) List of raw materials as well as bought out accessories and the names of the materials as well as bought out accessories and the name of Sub-suppliers selected from those, furnished along with the offer.
- (ii) Type test certificates of the raw materials and bought out accessories.
- (iii) Quality Assurance Plan (QAP) with hold points for the Purchaser's possible inspection. The QAP and hold points shall be discussed between the Purchaser and the Supplier before the QAP is finalised.

21.9.3. The Supplier shall submit the routine test certificates of bought out items and raw materials at the time of acceptance testing of the fully assembled equipment.

21.10. DOCUMENT:

The supplier shall furnish four sets of following drawings/documents along with his offer.

- (a) General outline and assembly drawings of the Inductive Voltage Transformers/ Capacitive Voltage Transformers.
- (b) Sectional views showing:
 - i) General constructional features.
 - ii) Materials/gaskets/sealing used.
 - iii) The insulation of the winding arrangements, method of connection of primary/ secondary winding to the primary/secondary terminals etc.

- (c) Schematic drawing.
- (d) Rating & diagram plate as per relevant IEC/ISS
- (e) Secondary Terminal Box.
- (f) Assembly Sectional view of Primary terminal/capacitor voltage divider
- (g) Assembly drawing for secondary terminal
- (h) The detailed dimensional drawing of Porcelain Housing such as ID, OD, thickness and insulator details such as height, profile of petticoats, angle of inclination and gap between successive petticoats, total creepage distance etc.
- (i) Sectional view of pressure release device.
- (j) Drawing showing details of Oil level.
- (k) All type test reports relating to the tests as specified in Clause-8.1 of the above.
- (l) Ratio and phase angle error curves for IVTS/ CVTS
- (m) Magnetization characteristic curves such as B-H curves and Sp. Loss vs. Flux density curves for core material, used for IVT & EMU unit of CVT.
- (n) Sectional view of EMU unit of 220KV&132KV CVT.
- (o) Schematic diagram showing the working of CVT in PLCC.

21.11. TEST REPORTS:

- (i) Four copies of type test/special test reports shall be furnished to the Purchaser with the tender offer.
- (ii) Copies of acceptance test reports and routine test reports shall be furnished to the Purchaser. One copy will be returned, duly certified by the Purchaser and only thereafter shall the materials be despatched.
- (iii) All records of routine test reports shall be maintained by the supplier at his works for periodic inspection by the Purchaser.
- (iv) All test reports of tests conducted during manufacture shall be maintained by the supplier. These shall be produced for verification as and when required for by the purchaser.
- (v) The necessary galvanized flanges, bolts etc. for the base of the Inductive/Capacitive Voltage Transformers shall be supplied without any extra cost to the purchaser.

21.12 TECHNICAL REQUIREMENTS FOR 33kV, 132kV & 220kV INDUCTIVE VOLTAGE TRANSFORMERS (PT) & 132kV, 220kV, 400kV CAPACITIVE VOLTAGE TRANSFORMER.

Sl. No	Particulars	33kV IVT	132kV IVT	132kV CVT	400kV/220kV CVT
I	II	III	IV	V	VI
1	Type	Single phase, 50Hz, oil filled, self-cooled, Hermetically sealed, outdoor porcelain type.	Single phase, 50Hz, oil filled, self-cooled, Hermetically sealed, outdoor porcelain type.	Single phase, 50Hz, oil Filled, self-cooled, Hermetically sealed, Outdoor porcelain type.	Single phase, 50Hz, oil Filled, self-cooled, Hermetically sealed, Outdoor porcelain type.
2	Nominal system voltage.	33kV	132kV	132kV	400 kV/220kV
3	Highest system voltage.	36kV	145kV.	145kV	420kV/245kV
4	Frequency.	50Hz± 5%	50Hz± 5%	50Hz ± 5%	50Hz± 5%
5	System earthing.	Effectively solidly earthed	Effectively solidly earthed	Effectively solidly earthed.	Effectively solidly earthed.
6	Number of phases.	3 [single phase]	3 [single phase]	3 [single phase]	3 [single phase]
7	(i) Number of secondary windings. (ii) Purpose of windings.	3 [three] Protection & metering.	3 [three] Protection & metering.	3 [three] Protection & metering.	3 [three] Protection & metering.
8	Rated primary voltage.	33/1.732kV	132/1.732kV	132/1.732kV	400/1.732 kV 220/1.732 kV
9	Rated secondary voltage.	Winding-II &III- 110/1.732V (Protection) Winding-I- 110/1.732V (Metering)	Winding-II &III- 110/1.732V (Protection) Winding-I- 110/1.732V (Metering)	Winding-I- 110/1.732V Winding-II- 110/1.732V Winding-III- 110/1.732V	Winding-I- 110/1.732V Winding-II- 110/1.732V Winding-III- 110/1.732V
10	Ratio	33kV/1.732: 110V/1.732 110V/1.732	132kV/1.732: 110V/1.732 110V/1.732	132kV/1.732: 110V/1.732 110V/1.732	400kV/1.732: 110V/1.732, 110V/1.732 220kV/1.732: 110V/1.732 110V/1.732
11	Rated burden.	Winding-I(M)- 100VA Winding-II(P)- 100VA Winding-III(P)- 100VA	Winding-I(M)- 100VA Winding-II(P)- 100VA Winding-III(P)- 100VA	Winding-I (M)- 100VA Winding-II (P)- 100VA Winding-III(P)- 100VA	Winding-I (M)-100VA Winding-II (P)-100VA Winding-III(P)100VA
12	Accuracy class	0.2/3P/3P	0.2/3P/3P	0.2/3P/3P	0.2/3P/3P
13	Rated voltage factor at rated frequency.	1.2 continuous. 1.5 for 30second.	1.2 continuous. 1.5 for 30second.	1.2 continuous. 1.5 for 30second.	1.2 continuous. 1.5 for 30second.

14	Temperature rise at 1.2 times the rated primary voltage, rated frequency & rated burdens.	As per IEC- 186.	As per IEC-186.	As per IEC-186/61869	As per IEC-186/61869
15	Temperature rise at 1.5 times the rated primary voltage for 30 seconds, rated frequency & rated burden.	As per IEC- 186.	As per IEC-186.	As per IEC-186/61869	As per IEC-186/61869
16	One-minute power frequency dry/wet withstands test voltage for primary winding.	70kV[rms]	275kV[rms]	275kV[rms]	650kV[rms](400kV)/ 460kV[rms](220kV)
17					
18	1.2/50 micro second impulse withstand test voltage for primary winding	170kV[peak]	650kV[peak]	650kV[peak]	1425kV[peak] (400kV)/ 1050kV[peak] (220kV)
19 (i) (ii)	One-minute power frequency withstands test voltage for Secondary winding Between LV(HF) terminal & earth terminal	3kV[rms] -	3kV[rms] -	3kV[rms] 10kV[rms] for exposed terminals & 4kV[rms] for terminals, enclosed in a weatherproof box.	3kV[rms] 10kV[rms] for exposed terminals & 4kV[rms] for terminals, enclosed in a weatherproof box.
20	Class of insulation.	B	B	B	B
21	Material of the conductor of primary and secondary windings.	Copper.	Copper.	Copper for EMU	Copper for EMU
22	Fault level	31.5kA [rms] for 3 second.	40 kA [rms] for 3 second.	40 kA [rms] for 3 second.	50KA for 3 (220kV) / 63KA(400kV)[rms] for 3 second.

23	Minimum creepage distance.	1116mm	4495mm	4495 mm	13020(400kV)/7595(220kV) mm
24	Quality of oil.	EHV Grade As per IS-335.	EHV Grade As per IS-335.	EHV Grade As per IS- 335.	EHV Grade As per IS-335.
25	Radio interference voltage at 1.1 times maximum rated voltage at 1.0 MHZ.	-	500 micro volts.	500 micro volts.	500 micro volts.
26	Partial discharge level.	-	Less than 10 piccoulombs.	Less than 10 Piccoulombs.	Less than 10 piccoulombs.
27	Seismic acceleration Horizontal – Vertical –	0.5g. 0.6g.	0.5g. 0.6g.	0.5g. 0.6g.	0.5g. 0.6g.
28	Accuracy class of standard V.T. to be used	0.05 or better.	0.05 or better.	0.05 or better.	0.05 or better.
	during testing towards determination of ratio errors and phase angle errors for metering windings.				
29.	Capacitance (Pf)	-	-	4400 + 10%, -5%	4400 (for 220kV), 8800 (for 400kV) + 10%, -5%

Note:

- (i) For Station service bay equipments rated system voltage shall be 33kV and highest system voltage shall be 72.5kV.

22.0 **Contract Agreement:**

An agreement shall have to be drawn on non-judicial stamp of appropriate value with the Department by the selected Contractor in **AEGCL's General Conditions of Supply and Erection 2009** of contract within **15 (fifteen) days** from the date of issue of the **LOI/Work Order**.

23.0 **Liquidated Damage:**

The date of completion of work shall be deemed to be the essence of the contract and shall not be completed no later than the date specified in the contract. In case of failure to complete the work within the stipulated period AEGCL shall be entitled to:

23.1 Recover an amount at the rate of 1% (One percent) of the Contract Price per week or part thereof of delay, subject to maximum of 10% (Ten percent) of the contract price as liquidated damage to AEGCL.

However, the payment of liquidated damages shall not in any way relieve the Contractor from any of its obligations to complete the works or from any other obligations and liabilities of the Contractor under the Contract.

23.2 To complete the balance work giving notice to the Contractor/Firm and to recover any extra expenditure incurred thereby for having to complete the work at a higher price at the risk and responsibility of the Contractor/Firm.

24.0 **Warranty:**

24.1 The Supplier/Manufacturer warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.

24.2 The Supplier/Manufacturer further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the country of final destination. The supplier will provide warranty for the works executed by them.

24.3 If during the Period Warranty any defect is found, the Purchaser shall give Notice to the Supplier/Manufacturer stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all reasonable opportunity for the Supplier/Manufacturer to inspect such defects.

24.4 If having been notified, the Supplier/Manufacturer fails to remedy the defect within a period of 15 (fifteen) days, the Purchaser may, following notice to the Supplier/Manufacturer, proceed to do such work, and the reasonable costs incurred by the Purchaser in connection therewith shall be paid to the Purchaser by the Supplier or may be deducted by the Purchaser from any amount due the Supplier or claimed under the Performance Security.

24.5 The term period of warranty shall mean the period of **18 (Eighteen) months from the date of completion of Supply**. The successful bidder should warrant the free replacement of any damaged/malfunctioning equipment and its accessories during the warranty period.

25.0 **Payment terms:**

25.1 **No advance payment** shall be made in this contract.

25.2 No claim for interest shall be entertained by AEGCL.

25.3 The price is firm and no price variation shall be applicable.

25.4 First & Final bill for the supply & erection will be entertained only after **100%** completion of the work.

25.5 Payment will be made by **DGM, Silchar (T&T) Circle, AEGCL, Srikona, Silchar**. The Bidder / Firm will have to be submitted the following Net Banking details.

- (a) Banker's Name & Branch
- (b) Account No
- (c) Banker's address
- (d) Banker's IFSC Code

26.0 **Performance security deposit:**

26.1 The successful bidder shall have to deposit through a **Bank Guarantee** from a Nationalized or scheduled Bank of RBI in AEGCL's standard proforma on non-judicial stamp of appropriate value for an amount equivalent to **10% (ten percent)** of the total value of the order as performance security, immediately within **10 (ten) days** from the issue of the letter of intent/detailed orders (as the case may be), duly pledged in favour of "**Managing Director, AEGCL, Paltan Bazar, Guwahati-01**", payable at **Guwahati**, and such security deposit shall

be valid up to **30 (Thirty) days** beyond the **warranty period of 18 (Eighteen) months**. The **Bank Guarantee (BG)** should be submitted to the **O/o the Deputy General Manager, Silchar T&T Circle, AEGCL, Silchar-788015** by the successful Bidder.

- 26.2** Please note that, if the selected Bidder / Firm fail to furnish the requisite performance security in the form of **Bank Guarantee**, an amount equivalent to **10%** of the Contract Price shall be retained as Security Deposits which shall be retained up to **18 (Eighteen) months** from the date of Supply. .
- 26.3** If the bidder / firm fails or neglects to observe and perform any of his obligations under the contract, Purchaser (AEGCL) shall have the right to forfeit either in full or in part at his absolute discretion, the security deposit furnished by the Contractor/Firm.
- 26.4** No interest shall be payable on such deposits.

27.0 Force Majeure Condition:

Force Majeure condition shall be considered as any circumstances beyond reasonable control of the party claiming relief, including but not limited to strikes, lockout, civil commotion, riot insurrection, hostilities, mobilization, war, fire, flood, earthquake, malicious damage or accidents could entitle contractor to extension time. Any such delay should intimated **within 10 (ten) days** from the beginning of such delay to consider/approved, any claim without prior information may not be considered under force Majeure.

28.0 Settlement of Dispute and Arbitration:

Any dispute arising out of the contract will be first settled bilaterally between AEGCL and Contractor. In case, dispute cannot be settled bilaterally, it will be referred to arbitration to be by an arbitrator appointed by AEGCL. The contractor shall not stop the work during settlement of any dispute. All disputes shall be subjected to the jurisdiction of District Court of **Karimganj District**.

29.0 Insurance :

- The “Supplier” shall, have, unless, otherwise specified by the Purchaser, insure the materials through their underwrites at their cost and shall keep it insured against any loss/ damaged/ pilferage in transit, destruction or damage by fire/ flood, without exposure to vagaries of weather or through riot, civil commotion, war or rebellion, for the full value of the materials until the materials are received at the purchaser’s destination store.
- The “Supplier” shall be responsible for safe arrival at destination, unloading and receipt of the materials by the consignee. The Purchaser will discharge consignee’s responsibilities only and shall not be responsible for any damage/ loss/ pilferage/ non-delivery by the carriers.
- In case of any loss/ damage/ pilferage/ non-delivery/ short delivery by carriers etc.; the Supplier shall replace free of cost missing / damaged / lost materials within **30(thirty) days** from the receipt of report thereof from the consignee(s) without waiting for settlement of their claims with their carriers / under-writers. Normally, such reports from the consignee(s) to the supplier shall be initiated within a period of 30(thirty) days from the date of receipt of each consignment by him /them.
- If it is considered necessary that the damage equipment either in part or in full to be sent back to the manufacturer’s works for repair, the manufacturers/ suppliers will furnish the Bank Guarantee for the full value of equipment needing repairs and such Bank Guarantee shall remain valid till such time, the equipment are repaired and returned to the consignee in good condition. The to and fro freight, handling and insurance charges in such cases will be borne by the Supplier.
- Unless, otherwise mutually agreed upon, in case of failure by the Supplier to replenish /make good of the loss /damage /short supplied quantities, within the stipulated period, the Purchaser reserves the right to forfeit the security deposit and/ or adjust any outstanding payment to the “Supplier” with the Purchaser or take any other appropriate action.

30.0 Right to Reject:

AEGCL reserves the right to reject any or all the bids without assigning any reason thereof and the AEGCL further reserves the right to split up the work order in favour of more than one Contractor. The AEGCL also reserves the right to reject the lowest or any other price without assigning any reason.

The clauses which are not appearing in this document (bid) will be as per The General Condition of Supply and Erection 2009 of AEGCL. The General Condition of Supply and Erection 2009 of AEGCL is available in the AEGCL's website www.aegcl.co.in under Acts, Rules and Policies Tab.

31.0 Supply Location

Name of Work:- “Supply 3 (three) Nos. of 132 kV Potential Transformer (PT) for 132kV Main Bus to be kept as spare at 132 kV Karimganj GSS, AEGCL”

Location:- 132 kV Karimganj GSS, AEGCL

Appendix-1

Letter of Technical Bid

[Bidder's Letter head]

Date: _____

Tender No.: _____

Invitation for Bid No: _____

To: _____

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Document, including Addenda No.: _____.
- (b) We offer to supply in conformity with the Bidding Document and in accordance with the completion/delivery schedule specified in the bid document, the following Goods and Related Services: _____.
- (c) Our Bid shall be valid for a period of _____ days from the date fixed for the bid submission deadline in accordance with the Bidding Document, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (d) If our Bid is accepted, we commit to obtain a Performance Security in the amount of _____ percent of the Contract Price for the due performance of the Contract;
- (e) We are not participating, as Bidders, in more than one Bid in this bidding process;
- (f) We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed.
- (g) Our firm, its affiliates or subsidiaries, including any Subcontractors or Suppliers for any part of the contract, has not been declared ineligible by AEGCL, APDCL or APGCL under the Employer's country laws or official regulations
- (h) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the Bid for and on behalf of _____

Price Proposal Submission Sheet

Date: _____

Tender No.: _____

Invitation for Bid No: _____

To: _____

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Document, including Addenda No.:

- (b) We offer to supply in conformity with the Bidding Document and in accordance with the completion/delivery schedule specified Schedule of Supply & Erection, the following Goods and Related Services: _____
- (c) The total price of our Bid, excluding any discounts offered in item (d) below is:

- (d) The discounts offered and the methodology for their application are:

- (e) The following commissions, gratuities, or fees have been paid or are to be paid with respect to the bidding process or execution of the Contract:

Name of Recipient	Address	Reason	Amount

(If none has been paid or is to be paid, indicate “none.”)

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the Bid for and on behalf of _____

Date _____

Bidding Forms

Name of work: _____

Bid Identification No: _____

General

- (i) Name of the Firm/Contractor:
- (ii) Full Address:
- (iii) Constitution of the Firm:
- (iv) Whether Partnership or any type:

A) Experience

- (i) No of years the Firm/Contractor has been in operation under its present name.
- (ii) Details of work executed/being executed by the tenderer in the last three years.
- (iii) Testimonials from Clients Company on various works executed for the last three years.

(Details of works executed/under execution in the last three years including another department)

Sl. No.	Name of work & W/O No.	Worked Done Under	Value of Work	Specified date of completion	Present status/completed on

B) Financial Position

- (i) Financial Turnover during the last three years (copies of Audited Annual report, Accounts or a statement duly certified by a chartered accountant and Income Tax return.

Year	Turn over

Any other details that the tenderer may like to furnish to substantiate their financial and technical ability to undertake this work and complete the same within stipulated period of completion.

Name of the Bidder: -

Signature of the Bidder/Firm
Full Name
Postal Address
Phone/Mobile No.

PRICE BID

(To be submitted in the Part-II, 'Price bid' in sealed envelope in quadruplicate)

Name of the Bidder:

NIT No. AEGCL/STTC/Tech-12/2026-27/10

Dated: 13.08.2026

Name of the work: Supply 3 (three) Nos. of 132 kV Potential Transformer (PT) for 132kV Main Bus to be kept as spare at 132 kV Karimganj GSS, AEGCL

Sl No	Item Description	Unit	Qty	Unit Price	Per Unit F&I Charges (In RS.)	Total per unit price including F&I charges (In Rs.)	Total Amount including F&I (In Rs.)
1	145 Kv Outdoor type Hermetically sealed IVT Ratio: 132kV/ $\sqrt{3}$ /110V/ $\sqrt{3}$, 110V/ $\sqrt{3}$	Nos	3				
Total (in Rs.)							
Adding GST @18% (in Rs.)							
Grand Total (in Rs.)							

Rupees in words _____

Name of the Bidder: -

Signature of the Bidder/Firm:-

Full Name:-

Postal Address:-

Phone/Mobile No.

ANNEXURE – I

Following information is to be furnished in the ‘Technical and Commercial bid’ as first page.

(Please tick mark where necessary.)

1)	Earnest money (EMD)	:Submitted/Not submitted
	a) Amount of EMD	:Rs.
	b) Submitted in the form of Bank Guarantee /Demand Draft	: Yes/No.
2)	Validity of the offer	: days from the date of opening of ‘Technical & Commercial Bid’ & ‘Price bid’.
3)	Nature of price offered	
	i) ‘FIRM’ Price	: Yes/No
4)	Terms of payment (Whether agreeable to accept payment as specified in clause-33.0)	: Yes/No
5)	Date of completion of supply (Please specify the date of completion of supply as per specification)	: Yes/No
6)	‘Security and performance guarantee’ (Whether agreeable to accept as specified in Clause no-34.0)	: Yes/No
7)	List of orders executed for similar works furnished	: Yes/No
8)	Performance certificate from the Govt./Govt. undertaking furnished	: Yes/No
9)	Deviation from the specifications	
	a) Technical	: Yes/No
	b) Commercial	: Yes/No
10)	Information in respect of technical capability is furnished	: Yes/No
11)	Information in respect of Financial capability certificate from the Banker is furnished	: Yes/No
13)	PAN card as per Cl. No.19.0 (ii)	: Yes/No
14)	GST registration no. as per Cl. No. 19.0 (iv)	: Yes/No
15)	Registered Power of Attorney as per Cl.no. 19.0 (v) enclosed.	: Yes/No

Name of the Bidder: -

Signature of the Bidder/Firm

Full Name

Postal Address

Phone/Mobile No.