

BIDDING DOCUMENT

FOR

**Supply of 220KV Potential Transformers for Upper Assam Region of
AEGCL**

Fund: "O&M HQ UAR"

**ASSAM ELECTRICITY GRID CORPORATION
LIMITED**



**BID IDENTIFICATION NO:
AEGCL/MD/CGM(UAR)/PT-Procurement/2024/BID**

Tender Fee: Rs.1000.00

SECTION 1

INSTRUCTION TO BIDDERS

Corporate Office,
Assam Electricity Grid Corporation Limited, Bijulee Bhawan,
Paltan Bazar, Guwahati-781001
PHONE: 0361-2739520 FAX NO.0361-2739513
Web: www.aegcl.co.in Email: managing.director@aeqcl.co.in

1.1.0 INTRODUCTION:

The Chief General Manager (O&M), UAR on behalf of Assam Electricity Grid Corporation Ltd (AEGCL), hereinafter referred to as AEGCL or Purchaser invites single stage two envelope e-bids for the following work from eligible firms/companies/ contractors.

a) Name of work: Supply of 220KV Potential Transformers for Upper Assam Region of AEGCL

1.2.0 INTENT OF THE TENDER ENQUIRY:

The intent of the Tender Enquiry is to invite proposals from the prospective and relevantly experienced and financially sound contractor(s) /firms to carry out the works as specified in this bidding document.

1.3.0 SCOPE OF WORK:

The major scopes of work are as follows:-

- a) Design, manufacture, testing, supply, delivery of equipment to AEGCL site.
- b) Arrangements of any permits required for transportation and movement of supplied materials. However, AEGCL shall assist as far as practicable in the process.

1.4.0 TIME SCHEDULE:

The successful bidder shall have to complete the works within **6 (Six) months** from the date of signing of contract agreement. Bidder must submit a completion schedule bar chart for activities to complete the work within this time schedule.

1.5.0 ESTIMATE:

Rs. 37,52,400.00 (Rupees Thirty-Seven Lakh Fifty-Two Thousand and Four Hundred Only) including GST @ 18%.

1.6.0 ELIGIBILITY CRITERIA:

1.6.1. GENERAL

Bidder may be manufacturer of the offered products or a firm/company having authorisation from a manufacturer. In case the bidder is not a manufacturer of the offered products, bidder must submit manufacturer's authorisation using for that purpose Form-MA provided in Section-2 Bidding forms.

1.6.2. EXPERIENCE

To be qualified for the bid the bidder must compulsorily meet the following minimum criteria specified in (i), (ii) and (iii) below:

- i. Bidder OR if the bidder is not a manufacturer, offered product's manufacturer must have least six years of experience in design, manufacture and supply of the equipments. Bidder shall submit filled up form EXP-1 along with copy of past orders to establish its eligibility.
- ii. Bidder OR if the bidder is not a manufacturer, offered product's manufacturer must have supplied such equipments which are in successful operation for at least five years. Bidder shall submit filled up form EXP-2 along with copy of orders and performance certificates to establish its eligibility.
- iii. Bidder must have experience of executing a supply order of electrical items in Govt agency within past six years. Bidder shall submit filled up form EXP-3 along with copy of past orders and completion certificate/delivery Challan with customer signature to establish its eligibility.

Joint venture is not allowed for this bid.

1.6.3. FINANCIALS:

- i. As a minimum, a Bidder's net worth calculated as the difference between total assets and total liabilities should be positive. As supporting document, bidder should submit audited balance sheets or other financial statements acceptable to the Purchaser, for last 3 (three) financial years to demonstrate the current soundness of the Bidders financial position and its prospective long-term profitability. Apart from audited balance sheet, bidder shall submit duly filled and signed **Form 'FIN-1'** given in Section 2. Using the 'Form LIT – 1' (Section 2, Bidding Form), bidder shall list all Pending Litigation. All pending litigation shall be treated as resolved against the Bidder and so shall in total not represent more than 50% percent of the Bidder's net worth.
 - ii. Bidder must have minimum **Average Annual Turnover (AAT) of Rs. 37,52,400.00 (Rupees Thirty-Seven Lakh Fifty-Two Thousand and Four Hundred) only**. AAT shall be calculated by averaging total certified payments received for contracts in progress or completed, for the last 3 (three) years. The bidder shall furnish, along with its bid, audited balance sheets and duly filled up Form '**FIN-2**' in support of this Clause.
 - iii. Bidder must demonstrate access to, or availability of, financial resources such as liquid assets, unencumbered real assets, lines of credit, and other financial means, other than any contractual advance payments to meet:
 - (a) the cash-flow requirement, **Rs. 6,25,400.00 (Rupees Six Lakh Twenty-Five Thousand and Four Hundred) only** for this work. **The Cash flow statement must be submitted in the format prescribed by the Institute of Chartered Accountant of India.**
 - (b) the overall cash flow requirements for this contract and its current works commitment.
- Bidder must submit duly filled and signed **Form FIN-3 & FIN-4** of section 2 in support of this clause.

1.6.4. TYPE TEST REPORT:

The offered product(s) must be type tested at CPRI or NABL accredited laboratory for critical performance at the time of bid submission. Bidder must submit full type test reports for the offered products along with the techmno-commercial bid.

Type Test Reports should not be older than ten (10) years on the date of technical bid opening.

1.7.0 SITE VISIT:

Supply of 220KV Potential Transformers for Upper Assam Region of AEGCL

The bidders are advised to visit and examine the sites of work and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the bid. The costs of visiting the Site shall be at the bidder's own expense.

1.8.0 QUANTUM OF WORK:

The quantum of work is stated in the PRICE SCHEDULE at the end of section 2 – bidding forms. Tentative delivery locations shall be as follows –

SL. No.	Items	Qty	Delivery Destination
1.	220KV PT, hermetically sealed, outdoor, oil cooled, single phase single pole insulated IVT with porcelain insulator of ratio 220KV/110V including terminal connectors.	2	220KV Mariani GSS
1.1	Marshalling box for the above	1	
2.	220KV PT, hermetically sealed, outdoor, oil cooled, single phase single pole insulated IVT with porcelain insulator of ratio 220KV/110V including terminal connectors	4	220KV Tinsukia GSS
2.1	Marshalling box for the above	1	

1.9.0 QUERY ON THE BIDDING DOCUMENT:

Prospective bidder may submit queries, if felt necessary, requesting clarification of any bid clause. Such queries must be submitted in the e-tendering portal latest by the **Tender clarification end date and time** mentioned in the Bid Data Sheet. Purchaser shall clarify to the extent felt necessary or issue corrigendum for any amendment required in the bidding document. Such corrigendum/clarification shall be made available in the e-tendering portal and official website of AEGCL, www.aegcl.co.in. Any query submitted outside the e-tender portal viz. email, or in physical letters, shall not be entertained.

1.10.0 CLARIFICATION OF BIDS

To assist in the examination, evaluation, and comparison of the Technical and Price Bids, and qualification of the Bidders, the Purchaser may, at its discretion, ask any Bidder for a clarification of its bid. Any clarification submitted by a Bidder that is not in response to a request by the Purchaser shall not be considered. The Purchaser's request for clarification and the response shall be in writing. No change in the substance of the Technical Bid or prices in the Price Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Purchaser in the evaluation of the bids. If a Bidder does not provide clarifications of its bid by the date and time set in the Purchaser's request for clarification, its bid may be rejected.

1.11.0 DEADLINE FOR SUBMISSION OF BIDS

Bids shall be received ONLINE only on or before the date and time indicated in the **Bid Data Sheet**. The Purchaser may, at its discretion, extend the deadline for the submission of bids by amending the Bidding Document, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.

1.12.0 SUBMISSION OF BID:

The bidder shall submit the techno commercial & price bid through e-tendering portal <https://assamtenders.gov.in>. All documents as required by this bidding document shall be scanned and uploaded in the portal. Price schedule should be submitted in the format provided in the online portal. Bidder must go through the document checklist provided in this bidding document and submit all required document. Bidders are also requested to submit the informations in the format provided in this bidding document where applicable.

Supply of 220KV Potential Transformers for Upper Assam Region of AEGCL

In addition to the online bid submission, (i) Duly filled and signed **Letter of technical bid** and (iii) **Authorization letter of bid signatory** must be submitted in a sealed envelope superscribed with the name of bidder, full address, IFB reference, name of work etc. at the office of the Managing Director, Assam Electricity Grid Corporation Ltd, Bijulee Bhawan, Paltan Bazar Guwahati-781001 **one hour prior to bid submission end date and time. In case any of these three documents are not received; the bid shall be summarily rejected.**

1.13.0 BID VALIDITY

The validity of bid shall be for **180(One Hundred Eighty) days** from the date of bid submission end date.

1.14.0 OPENING OF TECHNO-COMMERCIAL BIDS

The Purchaser shall conduct the opening of Technical Bids through online process at the address, date and time specified in the BDS. Bidders at their discretion may attend the techno-commercial bid opening.

Price bid of those bidders shall only be opened whose techno-commercial bids are found to be responsive to the requirement of the bidding document.

1.15.0 EARNEST MONEY DEPOSIT (EMD):

The bid must be accompanied with earnest money as mentioned in the **Bid Data Sheet** against the works to be deposited through online mode only in Assam e-tender portal. The EMD should be submitted along with Techno-Commercial bid. The earnest money will be released to the unsuccessful bidders on finalization of the tenders. The EMD to the successful bidder will be released on submission of Security Deposit after execution of the contract agreement.

1.16.0 PRICE BASIS:

Cost quoted by the bidder shall be inclusive of all scope of work as specified in this bidding document including any related services that is implicit to carry out the work successfully. Price will be firm and no price variation will be allowed within the completion period given in the work order.

1.17.0 DEVIATIONS, RESERVATIONS, AND OMISSIONS:

During the evaluation of bids, the following definitions apply:

- a) "Deviation" is a departure from the requirements specified in the Bidding Document;
- b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Document; and
- c) "Omission" is the failure to submit part or all of the information or documentation required in the Bidding Document.

1.18.0 PRELIMINARY EXAMINATION OF TECHNICAL BIDS:

The Purchaser shall examine the Techno-commercial Bid to confirm that all documents and technical documentation requested in this bidding document have been provided, and to determine the completeness of each document submitted. If any of these documents or information is missing, **the Bid may be rejected.**

The Purchaser shall confirm that the following documents and information have been provided in the Technical Bid. If any of these documents or information is missing, the offer **shall be rejected.**

- (a) Duly filled and signed **Letter of technical bid** and
- (b) **Authorization letter of bid signatory**

Bidder should submit hard copies of the documents mentioned above in (a) and (b) in a physical envelope prior to deadline for technical bid submission. Techno-commercial bids shall be summarily

rejected if these three documents are not submitted in hard copy deadline for technical bid submission.

1.19.0 RESPONSIVENESS OF TECHNO-COMMERCIAL BID:

The Purchaser's determination of a bid's responsiveness is to be based on the contents of the bid itself. A substantially responsive Techno-commercial Bid is one that meets the requirements of the Bidding Document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that,

- a) if accepted, would:
 - (i). Affect in any substantial way the scope, quality, or performance of the plant and services specified in the Contract; or
 - (ii). Limit in any substantial way, inconsistent with the Bidding Document, the Purchaser's rights or the Bidder's obligations under the proposed Contract; or
- b) If rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive bids.

The Purchaser shall examine the Techno-commercial Proposal, to confirm that the requirement of the bidding document have been met without any material deviation or reservation.

If a bid is not substantially responsive to the requirements of the Bidding Document, it shall be rejected by the Purchaser and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.

1.20.0 EVALUATION OF PRICE BIDS:

The Purchaser shall use the criteria and methodologies listed in this Clause. No other evaluation criteria or methodologies shall be used.

To evaluate a Price Bid, the Purchaser shall consider the following:

- a) The bid price excluding taxes as quoted in the Price Schedules;
- b) Price adjustment for correction of arithmetical errors.
- c) The following methodology will be practiced for identification and treatment of the Abnormally Low Bids (ALB) in this tender process of AEGCL:
 - i. Absolute Approach is to be considered when there is fewer than five substantially responsive bidders and if the bid price is 20% or more below 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 is to be considered 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.
- d) In case of an ALB, the tender evaluation committee/appropriate authority of the respective tenders shall undertake the following three stage review process which is as below:
 - i. To identify ALB as per the steps mentioned in SI no. 1.20.a.(i) and 1.20.b.(ii) Whichever is applicable.
 - ii. To seek and analyse 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.

- iv. On acceptance of the bid, whether Additional Performance Security is to imposed on the bidder supplemented by adequate justification.
- e) In case of acceptance of ALB with Additional Performance Security:
 - I. If any abnormally low bid is accepted under point 1.20.d.(iii) 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.

1.21.0 AWARD CRITERIA:

Purchaser shall in general award the contract to the lowest substantially responsive bidder. However, the purchaser reserves the right to not award contract to the lowest substantially responsive bidder without thereby incurring any liability to Bidders.

1.22.0 PURCHASER'S RIGHT TO ACCEPT ANY BID, AND TO REJECT ANY OR ALL BIDS:

The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders. In case of annulment, all bids submitted and specifically, bid securities, shall be promptly returned to the Bidders.

1.23.0 NOTIFICATION OF AWARD:

Prior to the expiration of the period of bid validity, the Purchaser shall notify the successful Bidder, in writing, that its bid has been partially or fully accepted quoting acceptance of the bid. The notification letter (hereinafter called the "Notification of Award") shall specify the sum that the Purchaser will pay the Contractor (hereinafter called "Contract Price") in consideration of the execution and completion of the services. Until a formal contract is prepared and executed, the notification of award shall constitute a binding Contract.

1.24.0 PERFORMANCE SECURITY:

Within 15 (five) days of receipt of the Notification of Award from AEGCL, the successful bidder shall furnish to AEGCL a performance security in an amount of 10 (ten) percent of the Contract Price in accordance with the Conditions of Contract. The form of performance security provided in Section 3 of the bidding documents may be used or some other form acceptable to AEGCL. The performance guarantee BG shall be valid through 30 days beyond the guarantee period.

1.25.0 SIGNING OF CONTRACT AGREEMENT:

Within 15 (Fifteen) days of receipt of the Notification of Award, the successful Bidder shall be required to sign the Contract Agreement with AEGCL using for that purpose, the contract form provided with this bidding document failing which AEGCL at its discretion may cancel the award.

Supply of 220KV Potential Transformers for Upper Assam Region of AEGCL

Annexure to SECTION 1 BID DATA SHEET

Name of Work	Supply of 220KV Potential Transformer for Upper Assam Region of AEGCL
Location of Work	220KV Mariani GSS and 220KV Tinsukia GSS
NIT No.	AEGCL/MD/CGM(UAR)/PT-Procurement/2024/07 , Dated – 29.08.2024
Bid Identification No.	AEGCL/MD/CGM(UAR)/PT-Procurement/2024/BID
Estimate (In Indian Rupees)	Rs. 37,52,400.00 (Rupees Thirty-Seven Lakh Fifty-Two Thousand and Four Hundred Only) including GST @ 18%
Earnest Money Deposit (EMD)	Rs. 75,048.00 (Rupees Seventy-Five Thousand and Forty-Eight) Only
Purchase's Address for correspondence	The Chief General Manager(O&M), UAR, AEGCL 1 st Floor, Bijulee Bhawan, Paltanbazar Guwahati (Assam) 781001 Contact Person: AGM, O&M, UAR Facsimile number: +91 361 2739513 Electronic mail address: cgmom.uar@aegcl.co.in
Pre-bid date	Shall be notified, if any, in due course.
Bid submission mode	E-tenders shall be accepted through online portal https://assamtenders.gov.in only
Address for bid opening	The Chief General Manager(O&M), UAR, AEGCL Floor/Room number: First Floor Street Address: Bijulee Bhawan, Paltanbazar City: Guwahati (Assam) PIN Code: 781001 Country: India
Key dates	Tender publishing date: 12:00 Hrs., 30.08.2024 Tender submission start date: 12:00 Hrs., 09.09.2024 Tender clarification end date: 12:00 Hrs., 09.09.2024 Tender submission end date and time: 12:00 Hrs., 19.09.2024 Techno-commercial bid opening date: 14:00 Hrs., 20.09.2024

SECTION -2 BIDDING FORMS

(This Section contains the forms which are to be completed by the Bidder and submitted as part of his Bid)

Form – 1
Document checklist

SL. No.	Document to be submitted	Submitted (Yes/No)	Name of uploaded pdf
1.	Letter of technical bid (Form-2)		
2.	Notarised Power of attorney for the person signing the tender		
3.	EMD		
4.	Bidders company/firm registration certificate/certificate of incorporation		
5.	Manufacturer's authorization (Form MA) (Applicable for bidder who is not manufacturer of offered product)		
6.	GST registration		
7.	Filled up Form ELI-1		
8.	Filled up Form LIT		
9.	Filled up Form FIN-1		
10.	Filled up Form FIN-2		
11.	Filled up Form FIN-3		
12.	Filled up Form FIN-4		
13.	Audited Balance sheet for last three years		
14.	Bank solvency certificate/other supporting document		
15.	Filled up Form EXP-1		
16.	Filled up Form EXP-2		
17.	Filled up Form EXP-3		
18.	Order/Contract copies establishing supplying offered product in past		
19.	Performance certificate of offered product		
20.	Document establishing manufacturing unit details		
21.	GTP and drawings		
22.	Type test reports		
23.	Completion schedule bar chart		
24.	Additional documents if any		

Note: Bidders are requested to submit all required documents in e-tender portal and **physical copies of i) Letter of technical bid and ii) Power of Attorney(notarized) for bid signatory to Tender inviting authority.**

Supply of 220KV Potential Transformers for Upper Assam Region of AEGCL

(In bidders letterhead)

Form-2
Letter of technical bid

Date:

To

The Chief General Manager (O&M), UAR
AEGCL, 1st Floor, Bijulee Bhawan,
Paltan Bazar, Guwahati-01

Bid Identification No: **AEGL/MD/CGM(UAR)/PT-Procurement/2024/BID**

Sir,

I/We the undersigned, declare that, we, [insert name of the bidder] having registered office at [insert address of the registered office] are established manufacturer/supplier of _____ items.

I/we have read the bid document and do not have any reservation to any of the clause therein. We offer to execute the work of:

Supply of 220KV Potential Transformers for Upper Assam Region of AEGCL

in conformity with the bid specification. Our Bid shall be valid for a period of **180(One Hundred Eighty)** days from the date fixed for the bid submission deadline and it shall remain binding upon us at any time before the expiration of that period.

Common Seal and Signature of the authorised person:

Name:

Designation:

Note:

i) Insert name and address in appropriate places.

ii) Strike out which is not applicable.

Form - 3

Format for Bank Guarantee (Earnest money deposit)
(EMD to be paid in online mode only)

Form 4

Manufacturer's Authorization

(To be submitted in Manufacturer's Letterhead)

Bid No.: AEGCL/MD/CGM(UAR)/Terminal-Eqp/2023/BID

To

The Chief General Manager (O&M), UAR
AEGCL, 1st Floor, Bijulee Bhawan,
Paltan Bazar, Guwahati-01

WE *[insert: name of Manufacturer]* who are established and reputable manufacturers of *[insert: name and/or description of the Goods]* having production facilities at *[insert: address of factory]* do hereby authorize *[insert: name & address of Bidder]* (hereinafter, the "Bidder") to submit a bid the purpose of which is to provide the following goods, manufactured by us, and to subsequently negotiate and sign the Contract:

1. -----
2. -----

We hereby extend our full guarantee and warranty in accordance with **Clause 5.11.0** of the Special Conditions of Contract, for the above specified Goods supporting the Supply of specified Goods and fulfilling the Related Services by the Bidder against this Bidding Documents, and duly authorize said Bidder to act on our behalf in fulfilling these guarantee and warranty obligations.

Further, we also hereby declare that we and *[insert: name of the Bidder]* have entered into a formal relationship in which, during the duration of the Contract (**including related services and warranty / defects liability**) we, the Manufacturer or Producer, will make our technical and engineering staff fully available to the technical and engineering staff of the successful Bidder to assist that Bidder, on a reasonable and best effort basis, in the performance of all its obligations to the Purchaser under the Contract.

For and on behalf of the Manufacturer

Common Seal and Signature of the authorised person:

Name:

Designation:

NOTE:

This MA should be signed by a person having either of the following-

- 1) Valid Power of attorney
- 2) Authorised by Managing Director
- 3) Member of Board of Directors

Supply of 220KV Potential Transformers for Upper Assam Region of AEGCL

Form-ELI-1 Bidder's information Sheet

Sl. No.	Particulars	Bidders' response
1	Bidders name and registered address	
2	Bidders authorised representative, designation and contacts	
3	GST Registration No.	

(Signature and common seal)

Name:

Designation:

Date:

Supply of 220KV Potential Transformers for Upper Assam Region of AEGCL

Form – LIT
Pending Litigation

Year	Matter in Dispute	Value of Pending Claim in Rupees	Value of Pending Claim as a Percentage of Net Worth

(Signature and common seal)

Name:

Designation:

Date:

Supply of 220KV Potential Transformers for Upper Assam Region of AEGCL

Form FIN – 1
Financial Situation

Information from Balance Sheet

Financial Data for Previous 3 Years [Rupees]	Year 1 [Mention Financial Year]	Year 2 [Mention Financial Year]	Year 3 [Mention Financial Year]
Total Assets			
Total Liabilities			
Net Worth			
Current Assets			
Current Liabilities			

Information from Income Statement

Total Revenues			
Profits Before Taxes			
Profits After Taxes			

Note: To be supported by audited financial documents

(Signature and common seal)

Name:

Designation:

Date:

Supply of 220KV Potential Transformers for Upper Assam Region of AEGCL

Form FIN – 2
Average Annual Turnover

Annual Turnover Data for the Last 3 Years	
Year	Amount (Rupees)
Average Annual Turnover	

The information supplied should be the Annual Turnover of the Bidder in terms of the amounts billed to clients for each year for contracts in progress or completed.

(Signature and common seal)

Name:

Designation:

Date:

Supply of 220KV Potential Transformers for Upper Assam Region of AEGCL

Form FIN – 3 Financial Resources

Specify proposed sources of financing, such as liquid assets, unencumbered real assets, lines of credit, and other financial means, net of current commitments, available to meet the total cash flow demands of the subject contract or contracts with necessary supporting documents.

Financial Resources		
No.	Source of financing	Amount (Rupees)
1		
2		
3		

(Signature and common seal)

Name:

Designation:

Date:

Supply of 220KV Potential Transformers for Upper Assam Region of AEGCL

Form FIN- 4 Current Contract Commitments

Bidders should provide information on their current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

No.	Contract No., Customer and name of work	Contract value (Rs.)	Estimated Completion Date	Value of Outstanding Work (Rs.)
1				
2				
3				
4				
5				

Supply of 220KV Potential Transformers for Upper Assam Region of AEGCL

Form – EXP-1

Bidder must fill this form to establish eligibility as per clause 1.6.2(i)

Sl. No.	Customer name	Contract No. and Date	Work order value	Contractor/supplier	Details of Product supplied and manufacturer of the product

Note: Order/contract copies are to be submitted as supporting document.

(Signature and common seal)

Name:

Designation:

Date:

Supply of 220KV Potential Transformers for Upper Assam Region of AEGCL

Form – EXP-2

Bidder must fill this form to establish eligibility as per clause 1.6.2(ii)

Sl. No.	Equipment/Product name	Contract No. and date	End Customer	Contractor/supplier	Completion date	Date of issue of performance certificate

Note: Following documents are to be submitted as supporting document:

- i) Relevant order/contract copies.
- ii) Performance certificate (Should be in end customer's letterhead).

(Signature and common seal)

Name:

Designation:

Date:

Supply of 220KV Potential Transformers for Upper Assam Region of AEGCL

Form – EXP-3

Bidder must fill this form to establish eligibility as per clause 1.6.2(iii)

Sl. No.	Customer name	Contract No. and date	Work order value	Contractor/supplier	Brief description of work	Completion date

Note: Following documents are to be submitted as supporting document:

- i) Relevant order/contract copies.
- ii) Completion certificate or Delivery Challan with customer signature.

(Signature and common seal)

Name:

Designation:

Date:

Supply of 220KV Potential Transformers for Upper Assam Region of AEGCL

Price schedule

All prices are in Indian Rupees and exclusive of taxes

Sl. No	Item	Unit	Qty	Unit Price	Unit F&I	Unit Total	Total
A	B	C	D	E	F	G=E+F	H
1.	220KV PT, hermetically sealed, outdoor, oil cooled, single phase single pole insulated IVT with porcelain insulator of ratio 220KV/110V including terminal connectors	Nos.	6				
2.	Marshalling box for the above	Nos	2				

Note: The price schedule presented here is for reference only. Bidders must submit the price using the price schedule available in e-tendring portal.

Section - 3

Purchaser's Requirements

TECHNICAL SPECIFICATION OF OUTDOOR POTENTIAL TRANSFORMERS

3.1. SCOPE:

3.1.1. This specification provides for the design, manufacture, assembly inspection and testing at the manufacturer's works, packing and delivery at site including unloading at delivery site of outdoor mounted type, single phase, oil filled, self-cooled, single unit type Inductive voltage transformers for 220kV systems to be used for voltage indication, supply of potential to energy meters, relays for feeder protection in Grid Sub- stations of AEGCL, ASSAM.

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

3.1.3. Bidders are required to quote for 0.2 accuracy class [metering winding] for 220kV IVTs 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.

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

- (i) Technical Specification (TS).
- (ii) Technical requirements.

3.3. STANDARDS:

3.3.1 The IVTs 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.

3.3.2. Except to the extent modified in the specifications, the IVTS 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.

Supply of 220KV Potential Transformers for Upper Assam Region of AEGCL

11	IS-2147	Degree of protection provided by enclosures for low voltage switchgear and control.
12	IS-2165	Insulation co-ordination for equipments of 100KV 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.

3.3.3 All the above along with the amendments there of 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.

3.3.4. 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.

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

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

3.4. CLIMATIC AND SERVICE CONDITIONS:

3.4.1 Earthquake Incidence:

The IVT are to be designed to withstand earthquake of intensity, equivalent to **minimum** 0.5g in the horizontal and 0.6g in the vertical direction.

3.5. INSTALLATION:

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

3.6. GENERAL TECHNICAL REQUIREMENTS:

3.6.1. GENERAL TECHNICAL REQUIREMENTS FOR IVT:

3.6.1.1. 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.

3.6.1.2. Secondary Terminal Box:

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

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

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

3.6.1.2.4. 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.

3.6.1.2.5. 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.

3.6.1.2.6. 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.

3.6.1.2.7. 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.

3.6.1.2.8. 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.

3.6.1.2.9. Primary earthing link should be provided for measurement of capacitance & dielectric dissipation factor.

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

3.6.1.3 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.

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

3.6.1.5. 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.

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

3.6.1.7 COMMON MARSHALLING BOXES

3.6.1.7.1. The outdoor type common marshalling boxes shall conform to the latest edition of IS 5039 and other general requirements specified hereunder.

3.6.1.7.2. The common marshalling boxes shall be suitable for mounting on the steel mounting structures of the instrument transformers.

3.6.1.7.3. (One) common marshalling box shall be supplied with each set of instrument transformers. The marshalling box shall be made of sheet steel and weather proof. The thickness of sheet steel used shall be not less than 3.0 mm. It is intended to bring all the secondary terminals to the common marshalling.

3.6.1.7.4. The enclosures of the common marshalling boxes shall provide a degree of protection of not less than IP 55 (As per IS 2147).

3.6.1.7.5 The common marshalling boxes shall be provided with double hinged front doors with pad locking arrangement. All doors and removable covers and plates shall be sealed all around with neoprene gaskets or similar arrangement.

3.6.1.7.6 Each marshalling box shall be fitted with terminal blocks made out of moulded non-inflammable plastic materials and having adequate number of terminals with binding screws washers etc. Secondary terminals of

the instrument transformers shall be connected to the respective common marshalling boxes. All out going terminals of each instrument transformer shall terminate on the terminal blocks of the common marshalling boxes. The terminal blocks shall be arranged to provide maximum accessibility to all conductor terminals.

3.6.1.7.7. Each terminal shall be suitably marked with identification numbers. Not more than two wires shall be connected to any one terminal. At least 20 % spare terminals shall be provided over and above the required number.

3.6.1.7.8. All terminal strips shall be of isolating type terminals and they will be of minimum 10 A continuous current rating.

3.6.1.7.9. All cable entries shall be from bottom. Suitable removable gland plate shall be provided on the box for this purpose. Necessary number of cable glands shall be supplied fitted on to this gland plate. Cable glands shall be screw on type and made of brass.

3.6.1.7.10. Each common marshalling box shall be provided with two numbers of earthing terminals of galvanised bolt and nut type.

3.6.1.7.11. All steel works of common marshalling boxes shall be hot dipped galvanized.

3.6.1.8. 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.

3.6.1.9. 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.

3.6.1.10. 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.

3.6.1.11. Tank:

13.6.1.11.1. 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.

13.6.1.11.2. 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

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

3.6.1.12. Porcelain Housing:

13.6.1.12.1. 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)

13.6.1.12.2. 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

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

13.6.1.12.4. 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.

13.6.1.12.5. 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.

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

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

3.6.1.13. 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**.

3.6.1.14. 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.

3.6.1.15. 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

3.6.1.16. Provisions

3.6.1.16.1. 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.

3.6.1.16.2. 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.

3.6.1.16.3. 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.

3.6.1.16.4. 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.

3.6.1.16.5. 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.

3.6.1.16.6. 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.

3.6.1.16.7. Gasket Joint:

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

3.6.1.16.8. 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.

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

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

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

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

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

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

3.6.1.16.9. 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.

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

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

3.7. TESTS:

3.7.1 Type Tests:

The offered 220kV Inductive 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 220 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.

3.7.2 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
- (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.

3.8. INSPECTION:

13.8.1. The Purchaser shall have access at all times to the works and all other places of manufacture, where the IVTs 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.

13.8.2. 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.

13.8.3. 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.

13.8.4. 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.

13.8.5. 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 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.

3.9. QUALITY ASSURANCE PLAN:

13.9.1. 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.

Supply of 220KV Potential Transformers for Upper Assam Region of AEGCL

- (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

13.9.2. 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.

3.9.3. 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.

3.10. 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
- (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
- (l) Ratio and phase angle error curves for IVTS
- (m) Magnetization characteristic curves such as B-H curves and Sp. Loss vs. Flux density curves for core material, used for IVT
- (n) Sectional view of EMU unit of 220KV&132KV CVT.

3.11. 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.

13.12 APPENDIX – I.

TECHNICAL REQUIREMENTS FOR 220kV INDUCTIVE VOLTAGE TRANSFORMERS

Sl. No.	Particulars	220kV IVT
I	II	III
1	Type	Single phase, 50Hz, oil filled, self-cooled, hermetically sealed, outdoor porcelain type.
2	Nominal system voltage.	220kV
3	Highest system voltage.	245kV.
4	Frequency.	50Hz± 5%
5	System earthing.	Effectively solidly earthed
6	Number of phases.	3 [single phase]
7	(i) Number of secondary windings. (ii) Purpose of windings.	3 [three] Protection & metering.
8	Rated primary voltage.	220/1.732kV
9	Rated secondary voltage.	Winding-II & III- 110/1.732V (Protection) Winding-I- 110/1.732V (Metering)
10	Ratio	220kV/1.732: 110V/1.732 110V/1.732 110V/1.732
11	Rated burden.	Winding-I(M)- 100VA Winding-II(P)- 100VA Winding-III(P)- 100VA
12	Accuracy class	0.2/3P/3P
13	Rated voltage factor at rated frequency.	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.
15	Temperature rise at 1.5 times the rated primary voltage for 30 seconds, rated frequency & rated burden.	As per IEC-186.

Supply of 220KV Potential Transformers for Upper Assam Region of AEGCL

16	One-minute power frequency dry/wet withstands test voltage for primary winding.	460kV[rms]
18	1.2/50 micro second impulse withstand test voltage for primary winding	1050kV[peak]
19 (i) (ii)	One-minute power frequency withstands test voltage for Secondary winding Between LV(HF) terminal & earth terminal	3kV[rms] 10kV[rms] for exposed terminals & 4kV[rms] for terminals, enclosed in a weatherproof box.
20	Class of insulation.	B
21	Material of the conductor of primary and secondary windings.	Copper.
22	Fault level	50 kA [rms] for 3 second.
23	Minimum creepage distance.	7595mm
24	Grade of oil.	EHV Grade As per IS-335.
25	Radio interference voltage at 1.1 times maximum rated voltage at 1.0 MHZ.	500 micro volts.
26	Partial discharge level.	Less than 10 piccoulombs.
27	Seismic acceleration Horizontal – Vertical –	0.5g. 0.6g.

Section - 4

General Conditions of Supply and Erection of AEGCL

This Section 'General Conditions of Supply and Erection of AEGCL' supplementary to Section -5 'Special Conditions of Contract' of this document and [can be downloaded from www.aegcl.co.in](http://www.aegcl.co.in). Whenever there is a conflict, the provisions in SCC or the other Sections of this bid document shall prevail over those in the 'General Conditions of Supply and Erection of AEGCL'.

Section - 5

Special Conditions of Contract

5.1.0 DEFINITION OF TERMS

“Contract” means the Contract Agreement entered into between the Purchaser and the Contractor, together with the Contract Documents referred to therein; they shall constitute the Contract, and the term “the Contract” shall in all such documents be construed accordingly.

“Contract Documents” means the documents listed in Article 1.1 (Contract Document) of the Contract Agreement (including any amendments thereto).

“Contract Price” means the price payable to the Contractor as specified in the Agreement, subject to such additions and adjustments thereto or deductions therefrom, as may be made pursuant to the Contract.

“Day” means calendar day

“Year” means 365 days.

“Month” means calendar month.

“Party” means the “Purchaser” or the “Contractor”, as the context requires.

“Purchaser” means the Assam Electricity Grid Corporation Limited (in short AEGCL) and its assignees.

The “Contractor” shall mean the tenderer / bidder whose tender/ bid has been accepted by the “Purchaser” and shall include the bidder’s legal representatives, successors and assignees.

“Goods” means all of the commodities, raw material, machinery and equipment, and/or other materials that the Contractor is required to supply to the Purchaser under the Contract.

“Delivery” means the transfer of the Goods from the Contractor to the Purchaser in accordance with the terms and conditions set forth in the Contract.

“Completion” means the fulfilment of the Related Services by the Contractor in accordance with the terms and conditions set forth in the Contract.

“Related Services” means the services incidental to the supply of the goods, such as insurance, installation, training and initial maintenance and other similar obligations of the Contractor under the Contract.

The “Specification” shall mean the “Purchaser’s Requirements”.

“Contractor” means the natural person, a company/firm, or a combination of these, whose bid to perform the Contract has been accepted by the Purchaser and is named as such in the Agreement, and includes the legal successors or permitted assigns of the Contractor.

5.2.0 CONTRACT DOCUMENTS

5.2.1. Subject to Article 1.2 (Order of Precedence) of the Contract Agreement, all documents forming part of the Contract (and all parts thereof) are intended to be correlative, complementary and mutually explanatory. The Contract shall be read as a whole.

5.3.0 LEGAL JURISDITCTION

5.3.1. For any litigation arising out of the contract which cannot be resolve through mutual agreement or through Arbitration the honorable Guwahati High Court will have sole jurisdiction of all settlement.

5.4.0 LANGUAGE

5.4.1. The ruling language of the Contract shall be English.

5.5.0 SCOPE OF WORK

5.5.1. The Goods and Related Services to be supplied shall be as specified in section 3- Purchaser's requirement and quantity as stated in Schedule No. 1 of Section -2, Bidding Forms.

5.5.2. **Unless otherwise stipulated in expressly limited in the Purchaser's Requirements, the Scope of Supply shall include all such items not specifically mentioned in the Contract but that can be reasonably inferred from the Contract as being required for attaining Delivery and Completion of the Goods and Related Services as if such items were expressly mentioned in the Contract.**

5.6.0 DELIVERY SCHEDULE

5.6.1. Contract completion shall be **6(Six) months** from the date of signing of contract agreement.

5.6.2. The Delivery of the Goods and Completion of the Related Services shall be in accordance with the Delivery and Completion Schedule specified in the Article 3 of the Contract Agreement (Contract Forms) or within such extended time to which the Contractor shall be entitled under SCC **Clause 5.16.0** hereof.

5.7.0 CONTRACT PRICE

5.7.1. The Contract Price shall be as specified in **Article 2 (Contract Price)** of the Contract Agreement.

5.7.2. Unless an escalation clause is provided for in the **Article 2 (Contract Price)**, the Contract Price shall be a firm shall not subject to any alteration, except in the event of a Change in the scope or changes in applicable tax rates or as otherwise provided in the Contract.

5.8.0 TERMS OF PAYMENT

5.8.1. The contract price shall be paid as specified in subsequent sub-clauses, if not provided in Contract Forms, Section-6.

5.8.2. Payment against supply of equipment and F&I shall be made as follows: -

1. Within 60 (sixty) days from the date of submission of the invoice against successful delivery, 80% (eighty percent) payment of the invoice value (without GST) would be made along with 100% GST on receipt and acceptance of materials in full and good condition.
2. In total 5 (five) Nos. of invoice/ bill would be entertained.
3. For payment upto 80% of the total contract value, maximum 4 (four) Nos. of progressive invoices/ bills would be entertained.
4. Final invoice/ bill of 20% would be entertained on completion work to the satisfaction of purchaser.

5.8.3. Documents required along with invoice: Following documents need to be submitted along with invoice –

- (i) Application for payment
- (ii) Contractor's invoice showing LOA reference, Goods description, quantity dispatched, unit reclamation price, total amount (6 Copies)
- (iii) Packing List
- (iv) Railway receipt/ LR
- (v) Manufacturer's guarantee certificate of Quality
- (vi) Material inspection Clearance Certificate for dispatch issued by Purchaser
- (vii) Insurance certificate.
- (viii) Physical verification certificate of material received at site by Purchaser/Purchaser's site representative.

5.8.4. ADVANCE PAYMENT

No advance payment is applicable for this contract.

5.9.0 PERFORMANCE SECURITY DEPOSIT

- 5.9.1. The successful bidder shall have to deposit to the extent of 10% (ten percent) of the Contract price as performance security (Bank Guarantee), within fifteen (15) days of receipt of notification of award (NoA), duly pledged in favor of the Managing Director, AEGCL and such security deposits shall be valid up to 60(sixty) days beyond the warranty period as per clause 5.11.3.
- 5.9.2. In the event of the successful bidder's quoted rate is determined to be ALB (Abnormally Low Bid), AEGCL at its discretion may increase the PBG amount from 10% (as stipulated in clause 5.9.1) upto a maximum of 20% of the contract Price.
- 5.9.3. In the event, the successful bidder contractor fails to submit the PBG within 15 days from the issue of NoA and AEGCL shall impose a penalty @ 0.1% per day of such delay. Such penalty shall be recovered from the amounts payable against the contract. However, this shall not entitle the successful bidder to delay submission of PBG and AEGCL shall retain the right to cancel the NoA for delay in submission of PBG.
- 5.9.4. If the Contractor fails or neglects to observe, perform any of his obligations under the contract, it will be lawful for the "Purchaser" to forfeit either in full or in part at his absolute discretion, the security deposit furnished by the Contractor.
- 5.9.5. No interest shall be payable on such deposits.

5.10.0 RETENTION MONEY

- 5.10.1. Deduction shall be as per payment terms clause no. 5.8.2.
- 5.10.2. No interest shall be payable on such deductions/retentions.

5.11.0 WARRANTY

- 5.11.1. The Contractor/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.
- 5.11.2. The Contractor/Manufacturer further warrants that the Goods shall be free from defects arising from any act or omission of the Contractor or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the country of final destination.
- 5.11.3. The warranty shall remain valid for **24 (Twenty-four) months** from the date of successful and complete delivery of materials at the final destination indicated in the clause 1.8.0.
- 5.11.4. If during the Period Warranty any defect should be found, the Purchaser shall give Notice to the Contractor/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 Contractor/Manufacturer to inspect such defects.
- 5.11.5. If having been notified, the Contractor/Manufacturer fails to remedy the defect within a period of 15 (fifteen) days, the Purchaser may, following notice to the Contractor/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 Contractor or may be deducted by the Purchaser from any monies due the Contractor or claimed under the Performance Security.

5.12.0 QUANTITY VARIATION

- 5.12.1. "Purchaser" shall have the right to increase/decrease the ordered quantity by 25% within 50 days of the period of completion and the same shall be carried out at the same rates /prices and terms and conditions stipulated in the contract except in regard to completion schedule, which shall be mutually agreed upon in case of enhancement of the ordered quantity.

5.13.0 INSPECTION AND TESTING

Supply of 220KV Potential Transformers for Upper Assam Region of AEGCL

- 5.13.1. The Contractor shall at its own expense and at no cost to the Purchaser carry out all such tests and/or inspections of the Goods and Related Services as are specified in Sections 3, Purchaser's Requirements.
- 5.13.2. The inspections and tests shall generally be conducted on the premises of the Contractor/Manufacture. Subject to Sub-Clause 5.13.3, The Contractor shall furnish, all reasonable facilities and assistance, including access to drawings/process chart and production data to the inspectors at no charge to the Purchaser.
- 5.13.3. The Purchaser or its designated representative shall be entitled to attend the tests and/or inspections referred to in SCC Sub-Clause 5.13.2, provided that the Purchaser bear all of its own costs and expenses incurred in connection with such attendance including, but not limited to, all traveling and board and lodging expenses.
- 5.13.4. Whenever the Contractor is ready to carry out any such test and/or inspection, the Contractor shall give a reasonable advance notice (not less than 21 days) of such test and/or inspection and of the place and time thereof to the Purchaser. The Contractor shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Purchaser or its designated representative to attend the test and/or inspection.
- 5.13.5. The Contractor/manufacture shall provide the Purchaser with a certified report of the results of any such test and/or inspection.
- 5.13.6. The Purchaser may reject any Goods or any part thereof that fail to pass any test and/or inspection or do not conform to the specifications. The Contractor shall either rectify or replace such rejected Goods or parts thereof or make alterations necessary to meet the specifications at no cost to the Purchaser, and shall repeat the test and/or inspection, at no cost to the Purchaser, upon giving a notice pursuant to SCC Sub-Clause 5.13.4
- 5.13.7. If it is agreed between the Purchaser and the Contractor that the Purchaser shall not attend the test and/or inspection, then the Contractor may proceed with the test and/or inspection, and should provide the Purchaser with a certified report of the results thereof.
- 5.13.8. The Contractor agrees that neither the execution of a test and/or inspection of the Goods or any part thereof, nor the attendance by the Purchaser or its representative, nor the issue of any report pursuant to SCC Sub-Clause 5.13.5 & 5.13.7, shall release the Contractor from any warranties or other obligations under the Contract.

5.14.0 INSURANCE

- 5.14.1. The "Contractor" 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.
- 5.14.2. The "Contractor" 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.
- 5.14.3. In case of any loss/ damage/ pilferage/ non-delivery/ short delivery by carriers etc.; the Contractor 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 Contractor shall be initiated within a period of 30(thirty) days from the date of receipt of each consignment by him /them.
- 5.14.4. If it is considered necessary that the damaged equipment either in part or in full to be sent back to the manufacturer's works for repair, the manufacturers/ Contractors 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 Contractor.
- 5.14.5. Unless, otherwise mutually agreed upon, in case of failure by the Contractor 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 "Contractor" with the Purchaser or take any other appropriate action.

5.15.0 FORCE MAJEURE

- 5.15.1. "Force Majeure" shall mean any event beyond the reasonable control of the Purchaser or of the Contractor, as the case may be, and which is unavoidable notwithstanding the reasonable care of the party affected, and shall include, without limitation, the following:
- (a) war, hostilities or warlike operations whether a state of war be declared or not, invasion, act of foreign enemy and civil war
 - (b) rebellion, revolution, insurrection, mutiny, usurpation of civil or military government, conspiracy, riot, civil commotion and terrorist acts
 - (c) confiscation, nationalization, mobilization, commandeering or requisition by or under the order of any government or de jure or de facto authority or ruler or any other act or failure to act of any local state or national government authority
 - (d) strike, sabotage, lockout, embargo, import restriction, port congestion, lack of usual means of public transportation and communication, industrial dispute, shipwreck, shortage or restriction of power supply, epidemics, quarantine and plague
 - (e) earthquake, landslide, volcanic activity, fire, flood or inundation, tidal wave, typhoon or cyclone, hurricane, storm, lightning, or other inclement weather condition, nuclear and pressure waves or other natural or physical disaster
 - (f) shortage of labor, materials or utilities where caused by circumstances that are themselves Force Majeure.
- 5.15.2. If either party is prevented, hindered or delayed from or in performing any of its obligations under the Contract by an event of Force Majeure, then it shall notify the other in writing of the occurrence of such event and the circumstances thereof within fourteen (14) days after the occurrence of such event.
- 5.15.3. The party who has given such notice shall be excused from the performance or punctual performance of its obligations under the Contract for so long as the relevant event of Force Majeure continues and to the extent that such party's performance is prevented, hindered or delayed. The Time for Completion shall be extended in accordance with **SCC Clause 5.16.0**.

5.16.0 EXTENSION OF TIME FOR COMPLETION

- 5.16.1. The Time(s) for Completion specified in the Article 3 of the Contract Agreement (Contract Forms) shall be extended if the Contractor is delayed or impeded in the performance of any of its obligations under the Contract by reason of any of the following:
- (a) any Change in the scope of works by the Purchaser; which justifies extension of completion time as provided in **SCC Clause 5.12.0**; and
 - (b) any occurrence of Force Majeure as provided in **SCC Clause 5.15.0**.
- 5.16.2. Except where otherwise specifically provided in the Contract, the Contractor shall submit to the Purchaser's Representative a notice of a claim for an extension of the Time for Completion, together with particulars of the event or circumstance justifying such extension as soon as reasonably practicable after the commencement of such event or circumstance. As soon as reasonably practicable after receipt of such notice and supporting particulars of the claim, the Purchaser and the Contractor shall agree upon the period of such extension. In the event that the Contractor does not accept the Purchaser's estimate of a fair and reasonable time extension, the Contractor shall be entitled to refer the matter to a Dispute Board, pursuant to **SCC Sub-Clause 5.19.0**.

5.17.0 LIQUIDATED DAMAGE

- 5.17.1. The Contractor guarantees that it shall attain Completion of the Works within the Time for Completion specified in the Contract Agreement pursuant to **SCC Sub-Clause 5.6.2**, or within such extended time to which the Contractor shall be entitled under **SCC Clause 5.16.0** hereof.
- 5.17.2. If the Contractor fails to attain Completion of the Works within the Time for Completion or any extension thereof under **SCC Clause 5.16.0**, the Contractor shall pay to the Purchaser liquidated damages at the rate

of **1% (one percent)** of the total Contract Price per week or part thereof delay. The aggregate amount of such liquidated damages shall in no event exceed **10% (ten percent)** of the total contract price.

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.

- 5.17.3. Once the aggregated "Liquidated damage" reaches 10% of the total contract price, the Purchaser may consider following actions:
- (a) Procure the undelivered material/ equipment and/or complete the balance works from elsewhere giving notice to the Contractor and to recover any extra expenditure incurred thereby for having to procure these materials and works at higher price, at the risk and responsibility of the Contractor; or
 - (b) Cancel the contract wholly or in part and to complete the works at the full risk and cost of the Contractor and forfeit the security deposit.
 - (c) Declare it as a "Contractual Failure" and act in accordance with **SCC Clause 5.18.0**.

5.18.0 CONTRACTUAL FAILURE

- 5.18.1. In the event of contractual failure of any respect on the part of the Contractor, the Purchaser shall be entitled to operate security deposit or any deposit or any payment due to Contractor irrespective of whether his default relates to the particular orders or not towards the Purchaser's claim for damages arising out of the failure. In addition, the Purchaser may black-list or bans the "Contractor" or pending enquiry, suspend him or take any other steps considered suitable.

5.19.0 ARBITRATION

- 5.19.1. If at any time, any question, disputes or differences whatsoever shall rise between the Purchaser and the Contractor, upon or in relation to or in connection with the contract, either party may forthwith give notice to the other in writing of the existence of such question of dispute or difference and the same shall be referred to the adjudication of three Arbitrators, one to be nominated by the Purchaser the other by the Contractor and the third by the President of the Institution of Engineers, India/ Retired or Sitting Judge not below the status of a retired Judge of High Court of India. If either of the parties fail to appoint its arbitrators within 60(sixty) days after receipt of notice of the appointment of arbitrators then the President of the Institution of Engineers /retired or sitting Judge of India, as the case may be, shall have the power at request of either of the parties, to appoint an Arbitrator. A certified copy of the "President" making such an appointment shall be furnished to both parties
- 5.19.2. The arbitration shall be conducted as per provisions of the Indian Arbitration Act, shall be held at Guwahati or any other place as may be decided by the Purchaser. The decision of the majority of Arbitrators shall be final & binding upon the parties and the expenses of the arbitration shall be paid as may be determined by the Arbitrator. However, any dispute arising out of this contract will first be discussed and settled bilaterally between Purchaser and the Contractor.

Section 6 - Contract Forms

This Section contains the format for Notification of Award, the Contract Agreement and Appendices to the Contract Agreement which, once completed, will form the Contract along with the Section 4 and Section 5. The Bidder should note that this Section shall be completed fully at the time of Contract signing.

[AEGCL's letter head]

Notification of Award

[date]

To: [Name and address of the Contractor]

This is to notify you that your Bid dated [date] for execution of the [name of the work] against [Bid identification number] for the Contract Price in the aggregate of Rupees [amounts in numbers and words] (as per Price Schedule-1), as corrected and modified in accordance with the Instructions to Bidders is hereby accepted, and it is decided to award on you the '**Supply of 220KV Potential Transformers for Upper Assam Region of AEGCL**' covering inter-alia supply of all services specified in bidding document.

You are requested to furnish the Performance Security within fifteen (15) days in accordance with the Conditions of Contract, using for that purpose one of the Performance Security Forms included in Section 6 (Contract Forms) of the Bidding Document.

[Authorized Signature]
[Name and Title of Signatory]
Assam Electricity Grid Corporation Limited

Attachment: 1) Price schedule (with arithmetic correction if any)
2) Draft Contract agreement

STAMP

1. Contract Agreement
(Supply and related services Contract)

THIS AGREEMENT made the _____ day of _____, _____,

BETWEEN

Assam Electricity Grid Corporation Limited (herein after referred to as AEGCL or Purchaser), a corporation incorporated under the laws of Company Act, 1956 and having its registered office at First Floor, Bijuli Bhawan, Paltanbazar, Guwahati-781001, Assam and [**name of Contractor**], a firm/company incorporated under the laws of Company Act, 1956 and having its principal place of business at [**address of Contractor**] (hereinafter called "**the Contractor**").

WHEREAS AEGCL desires to engage the Contractor to the 'Ex-works Supply Contract' (also referred to as the 'First Contract') covering inter-alia supply of all equipment and materials for the complete execution of '**Supply of 220KV Potential Transformers for Upper Assam Region of AEGCL**' as detailed in the Contract Document ("the Facilities"), and the Contractor has agreed to such engagement upon and subject to the terms and conditions hereinafter appearing.

NOW IT IS HEREBY AGREED as follows:

Article 1
Contract Documents

- 1.1 **Contract Documents** (Reference SCC Clause 5.2.0)
The following documents shall constitute the Contract between the Purchaser and the Contractor, and each shall be read and construed as an integral part of the Contract:
- (a) This Contract Agreement and the Appendices hereto
 - (b) Letter of Price Bid and Price Schedules submitted by the Contractor
 - (c) Letter of Technical Bid and Technical Proposal submitted by the Contractor
 - (d) Special Conditions of Contract
 - (e) General Conditions of Supply and Erection.
 - (f) Specification (Purchaser's Requirements)
 - (g) Drawings (Purchaser's Requirements)
 - (h) Other completed Bidding Forms submitted with the Letters of Technical and Price Bids
 - (i) Guaranteed and other Technical Particulars (as submitted with the Bid).
 - (j) Any other documents shall be added here
- 1.2 **Order of Precedence** (Reference SCC Clause 5.2.0)
In the event of any ambiguity or conflict between the Contract Documents listed above, the order of precedence shall be the order in which the Contract Documents are listed in Article 1.1 (Contract Documents) above.
- 1.3 **Definitions** (Reference SCC Clause 5.1.0)
Capitalized words and phrases used herein shall have the same meanings as are ascribed to them in the SCC.

Article 2
Contract Price and
Terms of Payment

- 2.1 **Contract Price** (Reference SCC Clause 5.7.0)
The Purchaser hereby agrees to pay to the Contractor the Contract Price in consideration of the performance by the Contractor of its obligations hereunder. The Contract Price shall [. . . **amounts in rupees in words** . . .], [. . . **amounts in figures** . . .] as specified in Price Schedule No. 3 (Grand Summary).
The Contract Price is fixed.

2.2 **Terms of Payment** (Reference SCC Clause 5.8.0)
The terms and procedures of payment according to which the Purchaser will pay the Contractor are given in the Appendix (Terms and Procedures of Payment) hereto.

**Article 3
Commencement Date
and Completion Time**

3.1 **Commencement Date** (Reference SCC Clause 5.6.1)
The Commencement Date upon which the period until the Time for Completion of the Works shall be counted from is the date when this Contract Document is signed.

3.2 **Completion Time** (Reference SCC Clause 5.6.2)
The whole works under the scope of this Contract shall be completed within **6 (Six)** months from the date of signing of contract agreement.

Article 4. Appendices

4.1 The Appendices listed in the attached List of Appendices shall be deemed to form an integral part of this Contract Agreement.

4.2 Reference in the Contract to any Appendix shall mean the Appendices attached hereto, and the Contract shall be read and construed accordingly.

IN WITNESS WHEREOF the Purchaser and the Contractor have caused this Agreement to be duly executed by their duly authorized representatives the day and year first above written.

Signed by, for and on behalf of the
Purchaser

Signed by, for and on behalf of the
Contractor

[**Signature**]

[**Signature**]

[**Title**]

[**Title**]

in the presence of

in the presence of

[**Signature**]

[**Signature**]

[**Title**]

[**Title**]

APPENDICES

- Appendix 1 - Special Conditions of Contract
- Appendix 2 - Completion schedule (bar chart)
- Appendix 3 - Performance Security.
- Appendix 4 - Price Schedule.
- Appendix 5 - Guaranteed Technical Particulars

Supply of 220KV Potential Transformers for Upper Assam Region of AEGCL

Appendix 4 - Form of Performance Security Bank Guarantee

(To be stamped in accordance with Stamp Act)
(The non-Judicial Stamp Paper should be in the name of issuing Bank)

Bank's Name:
Address of Issuing Branch or Office:
Email id and phone no for correspondence:

Beneficiary: Managing Director, AEGCL
Name and Address of Purchaser

Bid Security No.:

WHEREAS _____ [name and address of Contractor] (hereinafter called "the Contractor") has undertaken, in pursuance of LoA No. _____ dated _____ to execute _____ [name of Contract and brief description of Works] (hereinafter called "the Contract");

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognized/scheduled bank for the sum specified therein as security for compliance with its obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee;

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of _____ [amount of Guarantee] _____ [in words], such sum being payable in the currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ [amount of Guarantee] as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed there under or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

BG expiry date:

BG clam date:

Bank's seal and authorized signature(s)

NOTE

1. *All italicized text is for use in preparing this form and shall be deleted from the final document. An amount is to be inserted by the Guarantor, representing the percentage of the Contract Price specified in the Contract.*
2. *This guarantee shall be valid upto 30 days beyond the Warranty Period as per the Contract.*
3. *For BG amount equal to or more than 50,000.00, BG should be signed by two bank officers to be valid.*
4. **Address of the banker with email and phone number for correspondence with banker should be clearly mentioned. Any correspondence related to the BG with the banker shall be made to the address mentioned in the BG.**