BIDDING DOCUMENT

FOR

Supply, erection, testing & commissioning of 145 kV Isolators at 220kV Salakati Grid Substation, AEGCL

ASSAM ELECTRICITY GRID CORPORATION LIMITED



BID IDENTIFICATION NO: AEGCL/MD/CGM(O&M)/SS/Salakati/2020/BID

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@aegcl.co.in

1.1.0 INTRODUCTION:

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

Name of work: Supply, erection, testing & commissioning of 145 kV Isolators at 220kV Salakati Grid Substation, 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 at manufacturer's works, supply and delivery of 145 kV Isolators, supervision of erection, commissioning (Retrofitting in existing mounting structure) of outdoor station type 145 kV Isolators (as per BoQ) with/without earth switches, with electrical interlock, insulators and complete in all respect with bimetallic connectors arcing horns operating mechanism, auxiliary switches, indicating devices, fixing detail etc.
- 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 contract commencement. Bidder must submit a completion schedule bar chart for activities to complete the work within this time schedule.

1.5.0 ESTIMATE:

₹ 35,60,296.00 (Rupees Thirty-Five Lakh Sixty Thousand Two Hundred Ninety-Six only) including GST @ 18% + Freight and insurance charges

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 <u>not</u> 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 <u>OR</u> if the bidder is not a manufacturer, offered product's manufacturer must have least <u>5(five)</u> 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 <u>OR</u> if the bidder is not a manufacturer, offered product's manufacturer must have supplied such equipments which are in successful operation for at least two 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 in Govt agency within past five 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 ₹ 53,40,000.00 (Rupees Fifty-Three Lakh Forty Thousand 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 of ₹ 8,90,000.00 (Rupees eight lakh and ninety thousand Only) and
 - (b) Current contract 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 techno-commercial bid.

1.7.0 SITE VISIT:

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 220KV Salakati GSS, Salakati, Dist- Kokrajhar, Assam

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, <u>www.aegcl.co.in</u>. 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 <u>https://assamtenders.gov.in</u>. 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 information in the format provided in this bidding document where applicable.

In addition to the online bid submission, (i) Original copy of **EMD BG (or receipt of online payment)**, (ii) 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 within bid submission end date and time. In case these any of these 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 in the form of Bank Guarantee (BG) of Nationalized or scheduled Bank <u>OR</u> FD/Term Deposit pledged in favour of "The Managing Dircetor, AEGCL" <u>OR</u> through online mode. 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 and 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 biding 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) Original copy of EMD (or Receipt of online payment),

(b) Duly filled and signed Letter of technical bid and

(c) Authorization letter of bid signatory

Bidder should submit hard copies of the documents mentioned above in (a), (b) and (c) 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. 1.20.0 (c) (i) and 1.20.0 (c) (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 5.B.(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 1.20.0 (d) (ii).

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.

Annexure to SECTION 1 BID DATA SHEET

	Supply, erection, testing & commissioning of 145 kV Isolators at 220kV Salakati Grid			
Name of Work	Substation, AEGCL			
Location of Work	220KV Salakati GSS, AEGCL, Salakati, Dist- Kokrajhar, Assam			
NIT No.	AEGCL/MD/CGM(O&M)/SS/Salakati/2020/49			
Bid Identification No.	AEGCL/MD/CGM(O&M)/SS/Salakati/2020/BID			
Estimate (In Indian Rupees)	₹ 35,60,296.00 (Rupees Thirty-Five Lakh Sixty Thousand Two Hundred Ninety-Six only) including GST @ 18% + Freight and insurance charges			
Earnest Money Deposit (EMD	₹ 71,200.00 (Rupees Seventy-one Thousand Two Hundred) Only			
Purchase'sAddress for correspondance	The Chief General Manager(O&M), LAR, AEGCL 1 st Floor, Bijulee Bhawan, Paltanbazar Guwahati (Assam) 781001 Telephone: 9101055696 (DGM, O&M, LAR) Facsimile number: +91 361 2739513 Electronic mail address: cgmom.lar@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), LAR, AEGCL Floor/Room number: First Floor Street Address: Bijulee Bhawan, Paltanbazar City: Guwahati (Assam) PIN Code: 781001 Country: India			
Key dates	Tender publishing date: 10:00 Hrs., 21.07.2022 Tender submission start date: 10:00 Hrs., 21.07.2022 Tender clarification seeking end date: 17:00 Hrs., 30.07.2022 Tender submission end date and time: 12:00 Hrs., 11.08.2022 Techno-commercial bid opening date: 14:00 Hrs., 12.08.2022			

SECTION -2 BIDDING FORMS

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

<u>Form – 1</u> 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.	Bank Gurantee for EMD (Form-3)		
4.	Bidders company/firm registration		
	certificate/certificate of incorporation		
5.	Manufacturer's authorization (Form		
	MA) (Applicable for bidder who is not		
	manufacturer of offered prodyuct)		
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/ certificate/		
	other supporting documents		
15.	Filled up Form EXP-1		
16.	Order/Contract copies establishing		
	supplying offered product in past		
17.	Performance certificate of offered		
	product		
18.	Document establishing manufacturing		
	unit details		
19.	GTP and drawings		
20.	Type test reports		
21.	Completion schedule bar chart		
22.	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, ii) EMD and iii) Power of Attorney(notarized) for bid signatory to Tender inviting authority.

(In bidders' letterhead)

Form-2 Letter of technical bid

Date:

То

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

Bid Identification No: AEGCL/MD/CGM(O&M)/SS/Salakati/2020/BID

Sir,

I/We the undersigned, declare that, we, [insert name of the bidder] having registered office at [insert address of the registerd 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, erection, testing & commissioning of 145 kV Isolators at 220kV Salakati Grid Substation, 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)

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: The Managing Director, AEGCL Name and Address of Purchaser

Bid Security No.:

We have been informed that name of the Bidder..... (Hereinafter called "the Bidder") intends to submit to you its bid against *Bid ref*..... for Supply installation, testing & commissioning of solar street light system.

- (a) has withdrawn its Bid during the period of bid validity specified by the Bidder in the Form of Bid; or
- (b) does not accept the correction of errors in accordance with the Instructions to Bidders (hereinafter "the ITB"); or
- (c) having been notified of the acceptance of its Bid by the Purchaser during the period of bid validity, (i) fails or refuses to execute the Contract Agreement, or (ii) fails or refuses to furnish the Performance Security, in accordance with the ITB.

This guarantee will expire: (a) if the Bidder is the successful Bidder, upon our receipt of copies of the Contract Agreement signed by the Bidder and the performance security issued to you upon the instruction of the Bidder; and (b) if the Bidder is not the successful Bidder, upon the earlier of (i) our receipt of a copy your notification to the Bidder of the name of the successful Bidder; or (ii) twenty-eight days after the expiration of the Bidder's bid.

Consequently, any demand for payment under this guarantee must be received by us at the office on or before that date.

BG expiry date: BG clam date:

Bank's seal and authorized signature(s)

<u>NOTE</u>

- **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 EMD amount as per bid.
- 2. This guarantee shall be valid upto 30 days beyond the bid validity.
- 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.

Form 4

Manufacturer's Authorization

(To be submitted in Manufacturer's Letterhead)

Bid No.: AEGCL/MD/CGM(O&M)/SS/Salakati/2020/BID To

The Chief General Manager (O&M), LAR 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

Form-ELI-1 Bidder's information Sheet

SI. No.	Particulars	Bidders' response
	Bidder's name and registered	
1	address	
2	Bidders authorised	
	representative, designation and	
	contacts	
3	GST registration no.	
4	MSME/SSI registration	Yes/No
	Udyog Adhaar/NSIC registration	
	available?	
5	EMD exemption claimed	Yes/No

Form – LIT Pending Litigation

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

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

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.

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.	Amount (Rupees)					
1						
2						
3						

(Signature and comm	on seal)
Name:	
Designation:	
Date:	

Form FIN- 4 Current Contract Commitments (Do not submit blank form. Write NIL if there are no current contracts at hand)

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 (₹)	Estimated Completion Date	Value of Outstanding Work (₹)	Average monthly billing for last six months (₹)
Α	В	С	D	E	F
1					
2					
3					
4					
5					
	Total financial obligations for its current contract commitments				

NOTE: The Bidder must demonstrate that its financial resources defined in FIN – 3, less its financial obligations for its current contract commitments defined in FIN – 4, meet or exceed the total requirement for the Subject Contract of Supply, erection, testing & commissioning of 145 kV Isolators at 220kV Salakati Grid Substation, AEGCL.

Form – EXP-1

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

SI. 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.

Form – EXP-2

Bidder must fill this form to establish eligi	bility as per clasue 1.6.2(ii)
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SI. No.	Equipmen t/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).

Form – EXP-3

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

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

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

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

SI. Unit Unit HSN/SSC Item Unit Qty Unit F&I Unit Total Total Price Erection No В G С D Ε F H=E+F+G L Α 132KV Isolator with 1 3 Nos. Single Earth Switch 132KV Isolator with 2 2 Nos. Double Earth Switch 132KV Tandem 3 Isolator without Nos. 3 Earth Switch

Price schedule – 1 All prices are in Indian Rupees and exclusive of taxes

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

Unpriced schedule with HSN/SSC code is to be submitted with the techno-commercial envelope.

Section - 3

Purchaser's Requirements

TECHNICAL SPECIFICATIONS

3.0 TECHNICAL PARTICULARS OF 132 kV ISOLATOR:

Sl No.	Туре:	132 kV
1	Main switch	Horizontal Centre Break
2	Service	Outdoor
3	Applicable standard	IS: 9921 / IEC-62271-102
4	No. of Phases	3 phase
5	Design Ambient temperature	50°C
6	Type of operation	Mechanically Ganged
7	Rated voltage (kV)	In KV
	a) Nominal	132
	b) Maximum	145
8	Rated current (Amps)	2500
9	Short time current for 1sec.(kA)	40
10	Rated frequency	50 HZ <u>+</u> 5%
11	System earthing	Effectively earthed
12	Temperature rise	As per relevant IS/IEC standards
13	Lightening Impulse withstand voltage (kVp)	
	(a) Across Isolating distance	750
	(b) To earth	650
14	1-minute power frequency withstand voltage	
	a) Across Isolating distance	315
	b) To earth	275
15	Switching Impulse withstand voltage (kVp)	
	a) Across Isolating distance	_
	b) To earth	-

16	Max. RIV for frequency between 0.5MHz and 2MHz (micro-volt)	500 at 92kV
17	Corona Extinction Voltage (kV)	-
18	Operating mechanism	
	a) Isolator	Motor
	b) Earth switch	Manual
19	Auxiliary voltage	
	a) Control & Interlock	220V DC 80% to 110%
	b) Motor voltage	3 Phase 415V AC 50Hz
	c) Heater, lamp & socket	Single phase 240 V 50HZ
20	Safe duration of overload	
	150% of rated current	5 minute
	120% of rated current	30 minute
21	Minimum creepage distance of insulator (mm)	
22	Mounting structure	Tubular/ Lattice
23	Operating time	Less than 12 secs
24	Insulator Data	
	a) Bending Strength (kgf)	800
	Туре:	132 kV
	b) Height (mm)	1500
	c) Bottom PCD (mm)	184
	d) No. of holes & hole dia.	4x18
	e) Top PCD	127
	f) No. of holes & hole dia.	4xM16
	g) Minimum creepage distance (mm) 31mm/kV	4495
25	Working clearance (live part to ground) (in mm)	4900

26	Phase Spacing (mm.)	3000	
27	Minimum clearances (mm.)		
	a) Phase to Phase	1300	
	b) Phase to earth	1300	
	c) Sectional clearance	4000	

SCOPE

This specification provides for design, manufacturer, testing at manufacturer's Works and delivery, supervision of erection, commissioning (if required) of outdoor station type 132 kV Isolator with/ without earth switches, with electrical interlock, insulators and complete in all respect with bimetallic connectors arcing horns operating mechanism, auxiliary switches, indicating devices, fixing detail etc. as described hereinafter.

3.1 STANDARDS:

Disconnecting switches covered by this specification shall conform to latest edition IEC-129/IEC 62271-102 I.S.1813 and IS: 9921, IS-325 and unless specifically stated otherwise in this specification.

3.2 TYPE:

The 132 KV Isolators shall be outdoor type with centre break type/Pantograph type as required [Single (SI)/ Double (DI)] Isolators suitable for electrical as well as manual operation and local/ remote operation. They shall have crank and reduction gear mechanism.

All Isolators offered shall be suitable for horizontal upright mounting on steel structures. Each pole unit of the multiple Isolators shall be of identical construction and mechanically linked for gang operation.

Each pole of the Isolator shall be provided with two sets of contacts to be operated in series and the moving contact blades shall rotate in horizontal plane.

The design shall be such that the operating mechanism with the linkages shall be suitable for mounting on any of the outer pole ends without much difficulty and with minimum shifting of parts.

Moving contacts of all isolators shall rotate through 90 deg. from their "fully closed position" to "fully open position so that the break is distinct and clearly visible from ground level.

The Isolators offered by the Bidder shall be designed for Normal rating current for Isolator of 2500A

It should suitable for continuous service at the system voltages specified herein. The Isolators shall be suitable to carry the rated current continuously and full short circuit current of 40 KA for 132KV respectively for 1 second at site condition without any appreciable rise in temperature. These shall also be suitable for operation at 110% rated (normal) voltage. The Isolators shall be suitable for Isolating low capacitive / inductive currents of 0.7amp at 0.15 power factor. The isolators shall be so constructed that they don't open under the influence of short circuit conditions. The Isolators and earthing switches are required to be used on electrically exposed installation and this should be taken into account while fixing the clearance between phases and between phase and earth.

3.3 MAIN CONTACTS:

All Isolators shall have heavy duty, self-aligning and high-pressure line type contacts made of high conductivity, corrosion resistant, hard-drawn electrolytic copper strips of proper thickness and contact area. Fixed contact should consist of loops of above copper strips suitable for 2000 Amps rating for 132KV. The hard dawn electrolytic copper strips should be silver plated 25micron thickness and fixed contacts should be backed by powerful phosphor bronze/stainless steel springs of suitable numbers. The main contacts should be preferably of tulip type design. However, the thickness and contact area of the contact should conform to the drawing approved during type test. Moving contact with moving arm should be of hard- drawn electrolytic copper of proper thickness and contact area.

These fixed and moving contacts shall be able to carry the rated current continuously and the maximum fault current of 40 KA for 132 KV respectively for 1 seconds without any appreciable rise in temperature. The Isolator blades shall retain their form and straightness under all conditions of operation including all mechanical stress arising out of operation as well as under rated short circuit condition.

Fixed guides shall be provided so that even when the blades are out of alignment by one inch (maximum), closing of the switches, proper seating of the blades in between contacts and adequate pressure to give enough contact surface is ensured. Wherever possible, the blades shall be counter balanced by weights and springs. The contact shall be self-cleaning by the wiping action created by the movements of the blades. The surface of the contacts shall be tendered smooth and silver plated (25 micron).

The Isolator shall be self-cleaning type so that when isolators remain closed for long periods in a heavily polluted atmosphere, binding does not occur. No undue wear or scuffing shall be evident during the mechanical endurance tests, contacts and springs shall be designed so that adjustment of contact pressure shall not be necessary throughout the life of the isolator. Each contact or part of contacts shall be independently sprung so that full pressure is maintained on all contact at all times.

3.4 ARCING HORN AND GRADING HORN:

Suitable arcing horn made of tinned electrolytic copper which are required for guiding contacts shall be provided on the fixed and moving contacts of all Isolators. The contacts shall be of 'make before and break after" type.

3.5 ELECTRICAL INTERLOCK / MECHANICAL INTERLOCK:

The disconnecting switches whenever required shall be with an approved type electrical interlock for interlocking with the associated circuit breakers and earth switch. Electrical interlock assembly should be more right in construction and properly mounted to ensure reliable operation. The design should be such that the electrical circuit for the interlocking mechanism will only remain energised during operation of the switches.

3.6. AUXILIARY SWITCHES:

All isolators and earthing switches shall be provided with 220VDC auxiliary switches for their remote position indication on the control board and for electrical locking with other equipment. The auxiliary switch shall be provided with a minimum of six auxiliary contacts- 10 normally open and 10 normally closed and 10 normally open and 10 normally closed for earth switch. Separate auxiliary switches shall be provided for isolating and earth switches. 6 additional NO and NC contact to be provided as spare in each case.

The auxiliary switches and auxiliary circuits shall have a continuous current carrying capacity of at least 10 Amps. Auxiliary switches shall not be used as limit switches. Details of make, rating and type of limit switch shall be furnished in the offer.

3.7 EARTH SWITCH:

Line earth switch shall consist of three earthing blades for Isolator which normally rest against the frame when the connected Isolator is in closed position. The earthing blades for three phases shall be mechanically linked to a coupling shaft which shall be capable of being fitted on either side of the Isolator. The earthing blades shall match and be similar to the main switch blades and shall be provided at the hinge; with suitable flexible conductors with terminal lugs for connecting to the station ground bus. The earthing blades shall be operated by a separate mechanism but shall be mechanically interlocked with the main switch so that the earthing blades can be closed only when the main switches are in open position and vice-versa. The earthing blades shall be gang operated and all the three blades will operate simultaneously.

3.8 OPERATING MACHANISM:

The operating mechanism shall be simple and shall ensure quick and effective 1000 operation. The design shall be such as to enable one man to operate it with nominal effort. The operating mechanism box shall be made out of aluminum extruded (Aluminum alloy) sections of minimum 3.0 mm thickness. The operating mechanism shall be strong rigid and not subject to rebound.

The Isolator blades shall be in positive continuous control throughout the entire cycles of operation. The operating rods and pipes shall be rigid enough to maintain positive control under most adverse conditions and to withstand all torsional and bending stresses arising from operation. Operation of the switches at any speed should not result in improper functioning, in displacement of parts / machines after final adjustment has been made. All holes in cranks, linkages etc. having moving pins shall be drilled and fitted accurately so as to prevent slackness and lost motion.

Provision shall be made for padlocking the operating mechanism of disconnecting and earth switches in both open and closed positions.

Bearings shall be ball and roller type shall be protected from weather and dust by means of cover and grease retainers. Bearings pressures shall be kept low to ensure long life and care of operation. Each power operated isolator shall be motor driven as well as manually operated and shall be complete with local / remote selector switch and open / close push buttons. The function of all control facilitates operating isolators.

Provision shall be made in the control cabinet to disconnect power supply to prevent local / remote power operation. Limit switches for open and close positions of re-isolations and earth switches.

All the terminal blocks to be used in the operating mechanism should of stud type of Polyamide/Mealmine material of make like Elmex (OAT-6 for non-disconnecting type & OAT -6T for disconnecting type) / connectwell (Equivalent).

3.9 DESIGN, MATERIALS AND WORKMANSHIP:

The live parts shall be designed to eliminate sharp points, edges and similar corona producing surfaces. Where this is impracticable, adequate shields to be provided. All ferrous metal parts shall be hot dip galvanized, as per IS 2629.All metal parts shall be of such materials or treated in such a way so as to avoid rust, corrosion and deterioration due to continued exposure to atmosphere and rain. All current carrying parts shall be made from high conductivity electrolytic copper / aluminium.

Bolts, screws and pins shall be provided with standard locking device viz. Locknuts, spring washers, keys etc. and when used with current carrying parts, they shall be made of copper silicon or other high conductivity and wear resistant alloys.

The switches should not need lubrication of any parts except at very long interval of five year minimum.

3.10 PROTECTIVE COATINGS

All ferrous parts including bolts, nuts and washers of the switch assembly shall be galvanized to withstand at least six one-minute dips in copper sulphate solution of requisite strength (Prece tests) except the threaded portions which should withstand four dips.

3.11 INSULATORS

Support insulators for all type of isolators shall be of solid core type. The insulator shall be made of homogeneous and vitreous porcelain of high mechanical and dielectric strength. It shall have sufficient mechanical strength to sustain electrical and mechanical loading on account of wind load, short circuit forces etc. Glazing of the porcelains shall be of uniform dark brown color with a smooth surface arranged to shed away raise water. The porcelain shall be free from laminations and other flaws or imperfections that might affect the mechanical or dielectric quality. It shall be thoroughly vitrified, tough and impervious to moisture. The porcelain and metal ports shall be assembled in such a manner and with such material that any thermal differential expansion between the metal and porcelain parts throughout the range of temperature specified in this specification shall not loosen the parts or create under internal stresses which may affect the mechanical or electrical strength or rigidity. The assembly shall not have excessive concentration of electrical stresses in any section or across leakage surfaces. The cement used shall not give rise to chemical reaction with metal fittings. The insulator shall be suitable for water washing by rain or artificial means in service condition. Profile of the insulator shall also conform to IEC-815. Insulator shall have a minimum cantilever strength of 800kgs for 132KV. Caps to be provided on top of the insulator shall be of high-grade cast iron or malleable steel casting. It shall be machine faced and hot dip galvanized. The cap shall have four numbers of tapped holes spaced on a pitch circle diameter of 127mm. The holes shall be suitable for bolts with threads having anti corrosive protection. The effective depth of threads shall not be less than the nominal diameter of the bolt. The cap shall be so designed that it shall be free from visible corona and shall have radio interference level within 500 micro volts. Casing shall be free from blow holes cracks and such other defects.

3.12 CONTROL CABINET:

The control cabinet of the operating mechanism shall be made out of minimum 3mm thick aluminium alloy sheet. Hinged door shall be provided with pad locking arrangement. Sloping rain hood shall be provided to cover all sides. 15 mm thick neoprene or better type of gaskets shall be provided to ensure degree of protections of at least IP 55 as per IS 2147/IS-3947. The cabinet shall be suitable for mounting on support structure with adjustment for vertical, horizontal and longitudinal alignment. Details of these arrangements shall be furnished along with the offer.

3.13 MOTOR:

Motors rated 1 Kw and above shall be suitable for operation on 3 phase, 415 V, 50 HZ supply. Motors of lower rating shall be single phase type suitable for 240V, 50HZ system. It shall be totally enclosed type if mounted outside the control cabinet. The motor shall withstand without damage stalled torque for at least 3 times the time lag of the tripping device. The motor shall, in all other respects, conform to the requirement of I.S. 325.

3.14 GEAR:

The dis-connector / isolator may be required to operate occasionally, with considerably long idle intervals. Special care shall be taken for selection of material for gear and lubrication of gears to

meet this requirement. The gear shall be made out of aluminium bronze or any other better material lubricated for life with graphite or better-quality non-drawing and non-hardening type grease. Wherever necessary automatic relieving mechanism shall be provided suitable relay, Device shall be provided to prevent over loading of the motor. Single phase preventer (for 3 phase meter) shall be provided to operate on open circuiting of any phase and shall trip off the motor. Complete details of the devices shall be furnished in the offer.

3.15 SPACE HEATERS:

Space heaters suitable for 1 phase 240V AC supply shall be provided for each motor operated operating mechanism to prevent condensation and shall be operated by MCB.

3.16 TERMINAL BLOCK AND WIRINGS:

Each operating mechanism shall be provided with 1100V grade stud type terminal block. All auxiliary switches, interlocks and other terminals shall be wired up to terminal block. The terminal block shall have at least 20% extra terminals. All wiring shall be carried out with 1.1KV grade insulated 2.5 sq.mm. copper wires.

3.17 INTERIOR ILLUMINATION:

A holder suitable for a 240 V lamp shall be provided in each of the motor operated mechanism of three poles & shall be door operated type

3.18 CONTROL AND AUXILIARY SUPPLY:

A 3-phase switch with MCB for phases and link for neutral, shall be provided for power supply and a 2 pole MCB shall be provided for control supply.

3.19 POSITION INDICATOR:

A position indicator to show the isolator is in ON or OFF position to be provided.

3.20 NAME PLATE:

Isolator, earthing switches and their operating devices shall be provided with name plate. The name plate shall be weatherproof and corrosion proof. It shall be mounted in such a position that it shall be visible in the position of normal service and installation. It shall carry the following information duly engraved or punched on it.

A. Isolator Base

Name: AEGCL

Name of manufacturer – Order No. – Type Designation – Manufacturer's serial No. – Rated voltage – Rated normal current – Rated short time current (rms) and duration – Rated short time peak current (KAP) Weight

B. Earthing Switch

Name: AEGCL Name of manufacturer – Order No. – Type Designation – Manufacturer's serial No. – Rated voltage – Rated normal current – Rated short time current (rms) and duration Rated short time peak current (KAP) Weight

C. Operating Device

Name – AEGCL
Name of manufacturer –
Order No.
Type Designation –
Reduction gear ratio –
AC motor

Rated auxiliary voltage
Starting current
Designation of AC motor as per IS 4722/325
Starting torque at 80% of supply voltage
Over travel in degrees after cutting off supply

Total operating time in seconds

Close operation – Electrical

ii) Open operation – electrical

iii) Open operation – electrical

3.21 PAINTING GALVANIZING AND CLIMATE PROOFING:

At interiors and exteriors of enclosures, cabinets and other metal parts (other than made up of aluminium) shall be thoroughly cleaned to remove all rust, scales, corrosion, grease and other adhering foreign matter and the surfaces treated by phosphating (e.g., seven tank phosphating sequence). After such preparation of surfaces, two coats of zinc oxide primer shall be given by suitable stoving and air drying before final painting. Color of the final paints shall be of shade no. 697 of IS:5. The finally painted cubicle shall present aesthetically pleasing appearance free from any dent or uneven surface.

Paint inside the metallic housing shall be of anti-condensation type and the paint on outside surfaces shall be suitable for outdoor installation.

All components shall be given adequate treatment of climate proofing as per IS:3202 so as to withstand corrosive and severe service conditions.

All metal parts not suitable for painting such as structural steel, pipes, rods, levers, linkages, nuts and bolts used in other than current path etc. shall be hot dip galvanized as per IS -2629. Galvanization test will be carried out during routine test.

Complete details of painting, galvanizing and climate proofing of the equipment shall be furnished in the offer.

3.22 TESTS:

Type Tests:

Isolators offered, shall be fully type tested as per the relevant standards. The Bidder shall furnish Three sets of the following valid type test reports for their different type of offered Isolators along with the offer. The Purchaser reserves the right to demand repetition of some or all the type tests in the presence of purchaser's representative. For this purpose, the Bidder may quote unit rates for carrying out each type test and this will be taken during bid price evaluation, if required.

- a) short time withstand & peak withstand current test for Isolator & Earth Switch.
- b) power frequency (Dry & Wet), Lightening Impulse dry withstand Test
- c) Mechanical endurance Test
- d) IP-55 test

During type tests the isolator shall be mounted on its own support structure or equivalent support structure and installed with its own operating mechanism to make the type tests representative. Drawing of equivalent support structure and mounting arrangements shall be furnished for Purchaser's approval before conducting the type tests.

The type tests shall be conducted on the isolator along with approved insulators and terminal connectors. Mechanical endurance test shall be conducted on the main switch as well as earth switch of one isolator of each type.

Acceptance and Routine Test:

All acceptance and routine test as stipulated in the relevant standards shall be carried out by the supplier in presence of Purchaser's representative.

Mechanical operation test (routine test) shall be conducted on isolator (main switch and earth switch) at the supplier's works as well as purchaser's substation site.

Immediately after finalization of the programme of type / acceptance, routine testing the supplier shall give sufficient advance intimation (clear 20 days advance intimation), along with shop routine test certificates, valid calibration reports from Govt. approved test house for the equipments, instruments to be used during testing for scrutiny by the purchaser to enable him to depute his representative for witnessing the tests. If there will be any discrepancies in the shop routine test certificates and calibration reports furnished by the firm then after settlement of the discrepancies only, purchaser's representative will be deputed for witnessing the tests. Special tests proposed to be conducted (if decided to conduct) as type test on isolators, are given at Annexure- II. These special type test charges shall be quoted along with all other type tests as per relevant IEC standard and these charges shall be included in the total bid price.

Test certificates of various items including but not limited to the following shall be furnished at the time of routine tests.

- a) Chemical analysis of copper along with a copy of excise certificate indicating genuine source of procurement of electrolytic grade copper.
- b) Bearings
- c) Fasteners
- d) Universal / swivel joint coupling
- e) Insulators
- f) Motor
- g) Gears
- h) Auxiliary switch
- i) Limit switch
- j) Timer
- k) Overload / single phase preventer relay
- 1) Interlocking devices

m)Terminal block

n) Any other item

3.23 INSPECTION:

- i) The Purchaser shall have access at all times to the works and all other places of manufacture, where the disconnectors, earth switches and associated equipment are being manufactured and the supplier shall provide all facilities for unrestricted inspection of the works raw materials manufacture of all the accessories and for conducting necessary tests as detailed herein.
- ii) The supplier shall keep the purchaser informed in advance of the time of starting of the progress of manufacture of equipment in its various stages so that arrangements could be made for inspection.
- iii)No material shall be dispatched from its point of manufacture unless the material has been satisfactorily inspected and tested.
- iv)The acceptance of any quantity of the 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 equipment is later found to be defective.

3.24 QUALITY ASSURANCE PLAN:

The Bidder shall invariably furnish following information along with his offer, failing which his offer shall be liable for rejection.

- (i) Names of sub suppliers for 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 Supplier's representative, copies of test certificate
- (ii) Information and copies of test certificates as in (i) and (ii) above in respect of bought out accessories.
- (iii) List of manufacturing facilities available
- (iv) Level of automation achieved and lists of areas where manual processing still exists.
- (v) List of areas in manufacturing process, where stage inspections are normally carried out for quality control and details of such tests and inspections.
- (vi) List of testing equipments with calibration certificates from Govt. approved test house available with supplier for final testing equipment and test plant limitation if any, vis-à-vis the type, special acceptance and routine test specified in the relevant standards. These limitations shall be very clearly brought out in the specified test requirements.

The supplier shall within 30 days of placement of order, submit following information to the purchaser.

- i) List of raw material as well as bought out accessories and the names of sub-suppliers selected from the lists furnished along with offer.
- ii) Type test certificates of the raw material and both bought out accessories.
- iii) Quality Assurance Plan (QAP) withhold points for purchaser's inspection.

The supplier shall submit the routine test certificates of bought out accessories and raw material viz. Copper, aluminum conductors, lubricating material, gear material etc. at the time of routine testing of the fully assembled isolator.

3.25 DOCUMENTATION:

All drawings shall conform to relevant international standards organization (ISO). All drawings shall be in ink and suitable for micro filming. All dimensions and data shall be in S.I. Units.

List of Drawings and Documents

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

- a) General outline and assembly drawings of the dis-connector operating mechanism, structure, insulator and terminal connector.
- b) Sectional views and descriptive details of items such as moving blades, contacts, arms contact pressure, contact support bearing housing of bearings, balancing of heights, phase coupling pipes, base plate, operating shaft, guides, swivel joint operating mechanism and its components etc.
- c) Loading diagram
- d) Drawings with structure for the purpose of type tests.
- e) Name plate.
- f) Schematic drawing.
- g) Type test reports.
- h) Test reports, literature, pamphlets of the bought-out items and raw material.

The supplier shall within 2 weeks of placement of order submit four sets of final versions of all the above said drawings for Purchaser's approval. The purchaser shall communicate his comments / approval on the drawings to the supplier. The supplier shall, if necessary, modify the drawings and resubmit four copies of the modified drawings for Purchaser's approval within two weeks from the date of comments. After receipt of approval the supplier shall within three weeks submit 15 prints and two good quality re-producible of the approved drawings for purchaser's use.

Six sets of the type test report, duly approved by the Purchaser shall be submitted by the supplier for distribution, before commencement of supply Adequate copies of acceptance and routine test certificates, duly approved by the Purchaser shall accompany the dispatched consignment.

The manufacturing of the equipment shall be strictly in accordance with the approved drawings and no deviation shall be permitted without the written approval of the purchaser. All manufacturing and fabrication work in connection with the equipment prior to the approval of the drawing shall be at the supplier risk.

3.26 INSTRUCTION MANUALS:

Fifteen copies of the erection, operation and maintenance manuals in English to be supplied for each type of disconnector one month prior to dispatch of the equipment. The manual shall be bound volumes and shall contain all drawings and information required for erection, operation and maintenance of the disconnector including but not limited to the following particulars.

- (a) Marked erection prints identifying the component parts of the disconnector as shipped with assembly drawings.
- (b) Detailed dimensions and description of all auxiliaries.
- (c) Detailed views of the insulator stacks, metallics, operating mechanism, structure, interlocks, spare parts etc.

3.27 PACKING AND FORWARDING:

The equipment shall be packed in crates suitable for vertical / horizontal transport, as the case may be and suitable to withstand handling during transport and outdoor storage during transit. The supplier shall be responsible for any damage to the equipment during transit, due to improper and inadequate packing. The easily damageable material shall be carefully packed and marked with the appropriate caution symbols.

Wherever necessary, proper arrangement for lifting, such as lifting hooks etc. shall be provided. Any material found short inside the packing cases shall be supplied by supplier without any extra cost.

Each consignment shall be accompanied by a detailed packing list containing the following information:

- (a) Name of the consignee.
- (b) Details of consignment.
- (c) Destination.
- (d) Total weight of consignment.
- (e) Handling and unpacking instructions.
- (f) Bill of material indicating contents of each package.

The supplier shall ensure that the bill of material is approved by the purchaser before dispatch.

3.28 SUPERVISION OF ERECTION TESTING AND COMMISSIONING (ET&C):

Purchaser proposes to utilize the services of the supplier for supervision of testing and commissioning of the equipment being supplied by him, if it is required. For this purpose, the supplier should make available the services of trained personnel (Engineers) who shall correct in the field, any errors or omissions in order to make the equipment and material properly perform in accordance with the intent of this specification. The Engineer shall also instruct the plant operators in the operation and maintenance of the commissioning the same, if such damage results for the faulty or improper ET&C. Purchaser shall provide adequate number of skilled / semi-skilled workers as well as ordinary tools and equipment and cranes required for equipment erection, at his own expenses. Apart from the above, the Purchaser shall not be responsible for providing any other facilities to the supplier. Special tools if required for erection and commissioning shall be arranged by the supplier at his cost and on commissioning these shall be supplied to the purchaser free of cost for future use.

APPENDIX – I

(Isolators)

LIST OF SPECIAL TESTS TO BE CARRIED OUT IF DECIDED BY THE PURCHASER

Sl. No.	Name of the Test	Standard to which it conforms.
1.	Test for visible Corona and Radio interference	NEMA Pub No. 107-1964
1.	voltage (RIV) on disconnectors and terminal	ISRI Pub No. 1-1972
2.	Tests on insulators	IS-2544 IEC. 168
3.	Tests on terminal connectors	IS:5561
4.	Tests on galvanized components	IS:2633
5.	Stalled torque test on motor operating mechanism	At 110% of supply voltage

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. 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 4(Four) months from Contrat commencement.
- 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 **18 (Eighteen)** *months* from the date of successful and complete delivery of materials at the final destination indicated in the Purchaser's Requirement.
- 5.11.4. If during the Period Warranty any defect should be found, the Purchaser shall give Notice to the Contractor/Manufacture 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

- 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 damage 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 were 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 Agreementpursuant 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" reaches10% 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 decide to award on you the 'Supply, erection, testing & commissioning of 145 kV Isolators at 220kV Salakati Grid Substation, 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



1. Contract Agreement

(Supply and related services Contract)

THIS AGREEMENT made the _____ day of _____, ____

BETWEEN

Article 1

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, erection, testing & commissioning of 145 kV Isolators at 220kV Salakati Grid Substation, 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.

1.1 **Contract Documents** (Reference SCC Clause 5.2.0)

NOW IT IS HEREBY AGREED as follows:

Contract Documents		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 [<i>amounts in rupees in words</i>], [<i>amounts in</i> <i>figures</i>] 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 3.2	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. Completion Time (Reference SCC Clause 5.6.2) The whole works under the scope of this Contract shall be completed within 4 (Four) months from Contract Commencement Date.
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]	[Signatura]
[Title]	[Signature] [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

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.:

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)

<u>NOTE</u>

- 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.