

BIDDING DOCUMENT

FOR

Revival of 220kV Samaguri-Mariani line-I by constructing D/C Towers along the existing Samaguri-Mariani Line-II under CAR, AEGCL

ASSAM ELECTRICITY GRID CORPORATION LIMITED



Fund: Own Source of AEGCL

Estimated value: Rs. 41,49,23,431.00(incl. GST)
BID IDENTIFICATION NO: AEGCL/MD/CGM/CAR/SMG-MRN/line-I/Bid

Tender Fee: Rs. 2000.00

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@aegcl.co.in

1.1.0 INTRODUCTION:

The Chief General Manager (O&M), CAR 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 manufacturers/firms/companies/ contractors. Joint venture is allowed for this bid.

a) Name of work: Revival of 220kV Samaguri-Mariani line-I by constructing D/C Towers along the existing Samaguri-Mariani Line-II under CAR, 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) Supply of Tower superstructure including nuts and bolts, stubs, ACSR zebra conductors as per Bill of Quantity and bid specification.
- b) Supply of insulators, conductor accessories, hangers, vibration dampers, clamps & connectors, and hardware fittings as per BoQ and bid specification.
- c) Construction of foundation as per BoQ and bid specification.
- d) All necessary survey works shall be done by the contractor and submit profile drawing and tower schedule based on the survey reports to AEGCL for approval.
- e) The contractors shall submit regenerated drawings already approved by AEGCL in the past for similar type of towers instead of new drawings
- f) Dismantling of existing TL Towers and Erection of new towers, hoisting of insulators, conductor accessories, hardware, clamps and connectors, OPGW etc. including installation of danger plates etc. as per BoQ and bid specification.
- g) Lowering of existing line conductors and stringing of new conductor as per the BOQ. ERS shall be utilized in the period from lowering of conductor and till charging of the transmission lines as and when required. Arrangement of ERS and erection & dismantling of ERS towers shall be in the scope of the Contractor. The contractor shall be responsible for all works related to Installation, Stringing, Lowering of conductor on ERS towers along with dismantling of ERS after completion of work. The ERS will be provided by AEGCL on rental basis if requested subject to availability and all the expenditure for the same will be borne by the contractor.
- h) Storage of dismantled Tower structures and TL materials and accessories to AEGCL store including transportation to store and material handling.
- i) Freight and Transit Insurance, storage at site and site insurance of all material at site shall be in the scope of the contractor.

- j) Any permits required for supply of materials shall be arranged by the contractor. However, AEGCL shall assist the contractor in arranging permits if any to the extent possible.
- k) Arrangement of RoW clearances shall be in the joint scope of AEGCL & the contractor. However, the payment of compensation (if any) will be in the scope of AEGCL.

1.4.0 TIME SCHEDULE:

The successful bidder shall have to complete the works within **30 (Thirty) months** from the date of signing of contract agreement.

1.5.0 ESTIMATE:

Rs. 41,49,23,431.00 (Rupees Forty-One Crore Forty-Nine Lakh Twenty-Three Thousand Four Hundred Thirty-One) Only including GST.

1.6.0 ELIGIBILITY CRITERIA:**1.6.1 Experience**

Criteria	Compliance Requirements			Documents
Requirement	Single Entity	Joint Venture		Submission Requirements
		All Partners Combined	Each partner	

1.6.2 General Experience

Experience as a contractor/Partner in a JV/ sub-contractor for work(s)/contract(s) in last 5 (five) years as on the bid submission deadline.	Must meet requirement	Not applicable	Must meet requirement	Not applicable	Form EXP- 1
--	-----------------------	----------------	-----------------------	----------------	--------------------

1.6.3 Specific Experience

The bidder (as contractor/ partner in a JV/ Sub-contractor) must have executed construction of foundation along with stringing works for successful commissioning of 132 KV or above transmission line with lattice structure. <i>The Bidder should furnish such work executed along with Recent Completion Certificate to substantiate the requirement of this clause.</i> (Such work must be	Must meet requirement	Must meet requirement	Not Applicable	Not Applicable	Form EXP – 2
---	-----------------------	-----------------------	-----------------------	-----------------------	---------------------

completed not older than five years as on the date of Technical Bid opening).					
--	--	--	--	--	--

Subcontractors/Manufacturers

(If Bidder is a manufacturer or proposes to appoint subcontractor for supply of equipment required to be supplied as per this bid, he or his subcontractor must also meet the requirements of the clause under 2.5).

1.6.5 Sub-contractors/manufacturers for the following major items of supply must meet the following minimum criteria, herein listed for that item. Failure to comply with this requirement will result in rejection of the subcontractor/manufacturer.

Item No.	Description of Item	Minimum Criteria to be met
1	ACSR ZEBRA conductors	If the Bidder is manufacturer or if the Bidder is not a manufacturer of listed items his supplier must have designed, manufactured, type tested, supplied listed equipment, which are in successful operation for at least one (1) year. The bidder/manufacturer should list such works executed to substantiate the requirement of this Clause using Form EXP-2 .
2	Disc Insulator	
3	Hardware fitting	
4	OPGW	

NOTE: The bidder complying above requirements must submit with his bid the following documents to substantiate the requirements of this clause:

- (i) Manufacturer must have production facility in India.
- (ii) Manufacturer's authorization, using the form provided in Section 2 (Bidding Forms). The Bidder is responsible for ensuring that the manufacturer or producer complies with the requirements of bidding document and meets the minimum criteria listed above for that item.
- (iii) Full type test certificate/GTP.
- (iv) Manufacturer's experience list.
- (v) Recent performance certificate from past clients along with supporting documents (e.g., copy of WO's/contracts & recent completion certificate). **Performance certificates should not be older than five (05) years as on the date of opening of the technical bid.**

1.6.6 Bidders are free to list more than one Manufacturer/Subcontractor against each item of the plant and services. However, necessary documents as mentioned in clause 2.5.1 must be furnished with the bid against each such manufacturer/ subcontractor. Quoted rates and prices will be deemed to apply to whichever Subcontractor is appointed, and no adjustment of the rates and prices will be permitted.

NOTE: The bidder complying above requirements must submit with his bid the manufacturer's authorization, using the form provided in Section 2 (Bidding Forms), showing that the Bidder has been duly authorized by the manufacturer or producer of the related plant and equipment or component to supply and install that item in the Employer's establishment. The Bidder is responsible for ensuring that the manufacturer or producer complies with the requirements of bidding document and meets the minimum criteria listed above for that item.

1.7 Financial Situation

Criteria	Compliance Requirements			Documents
Requirement	Single Entity	Joint Venture		Submission Requirements
		All Partners Combined	Each partner	
			One partner	

1.7.1 Historical Financial Performance

Submission of audited balance sheets or other financial statements acceptable to the Purchaser, for the last 3 (three) financial years i.e., 2022-23, 2023-24 and 2024-25 to demonstrate the current soundness of the Bidders financial position and its prospective long-term profitability. As a minimum, a Bidder's net worth calculated as the difference between total assets and total liabilities should be positive.	Must Meet Requirement	Not Applicable	Must Meet Requirement	Not Applicable	Form ' FIN-1 ' With attachments
---	-----------------------	----------------	-----------------------	----------------	--

1.7.2 Average Annual Turnover

Minimum average annual turnover of ₹12,44,77,029.00 calculated as total certified payments received for contracts in progress or completed, within the last 3 financial years i.e., 2022-23, 2023-24 and 2024-25. <i>Financial Statements for last 3 (three) financial years i.e., 2022-23, 2023-24 and 2024-25 will be considered for calculation of turnover (should be CA/CMA certified).</i>	Must Meet Requirement	Must Meet Requirement	Must Meet 25% Minimum	Must meet 40% of the requirement (Lead partner)	Form ' FIN-2 '
---	-----------------------	-----------------------	-----------------------	---	-----------------------

1.7.3 Financial Resources/Cash Flow

Using Forms FIN-3 and FIN-4 , Section 4 (Bidding Forms), the bidder (Single Entity/JV) must demonstrate that the financial resources of bidder (Single Entity/JV), defined in FIN-3, less the bidder's (Single Entity/JV) financial obligations for its own current contract commitments defined in FIN-4, meet or exceed the total requirement of ₹2,07,46,172.00 . <i>The Bidder (Single Entity/JV) 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 the cash-flow requirement, in the prescribed format of ICAI (CA Certified).</i>	Must Meet Requirement	Must Meet Requirement	Must Meet 25% Minimum	Must meet 40% of the requirement (Lead partner)	Form ' FIN-3 ' & Form ' FIN-4 '
---	-----------------------	-----------------------	-----------------------	---	---

1.8 TYPE TEST REPORT:

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

1.9 SITE VISIT:

The bidders are advised to visit and examine the sites of works 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. **The location of work is, Nagaon District.** For details of location bidders may refer the tower schedule.

1.10 QUANTUM OF WORK:

The quantum of work is stated in the PRICE SCHEDULE at the end of section 2 – bidding forms.

1.11 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.

1.12 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.

1.13 DEADLINE FOR SUBMISSION OF BID

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.

1.14 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 information in the format provided in this bidding document where applicable.

In addition to the online bid submission, (i) Original copy of **EMD/Online EMD payment receipt**, (ii) **Duly filled and signed tender submission form** 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 these documents are not received, the bid shall be summarily rejected.**

1.15 BID VALIDITY

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

1.16 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.

1.17 EARNEST MONEY DEPOSIT (EMD):

EMD amount mentioned in BDS must be submitted either online through e-tendering portal or through BG from schedule banks in favour of Managing Director, AEGCL. 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.

1.18 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.

1.19 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.

1.20 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) **Letter of Technical Bid;**
- b) **Written confirmation of authorization to commit the Bidder (i.e., Notarized Power of Attorney)**
- c) **Bid Security, if not paid via online mode in assam e-tender portal-<https://assamtenders.gov.in>.**
- d) **Registered JV agreement, if bidder is a JV.**

Bidder should submit hard copies of the documents mentioned above in (a), (b), (c) and (d) in a physical envelope prior to deadline for technical bid submission. Techno-commercial bids shall be summarily rejected if these four documents are not submitted in hard copy deadline for technical bid submission.

1.21 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,

1.21.1 If accepted, would:

1.21.1.1 Affect in any substantial way the scope, quality, or performance of the plant and services specified in the Contract; or

1.21.1.2 Limit in any substantial way, inconsistent with the Bidding Document, the Purchaser's rights or the Bidder's obligations under the proposed Contract; or

1.21.1.3 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.

1.22 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 are 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 analyze 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.

1.23.0 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.

1.24.0 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.

1.25.0 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.

1.26.0 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 60 days beyond the warranty period.

1.27 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

Name of Work	Revival of 220kV Samaguri-Mariani line-I by constructing D/C Towers along the existing Samaguri-Mariani Line-II under CAR, AEGCL
Location of Work	Nagaon
NIT No.	AEGCL/MD/CGM/CAR/SMG-MRN/line-I/Bid/3 Dated: 09/07/2026
Bid Identification No.	AEGCL/MD/CGM/CAR/SMG-MRN/line-I/Bid
Estimate (In Indian Rupees)	Rs. 41,49,23,431.00 (Rupees Forty-One Crore Forty-Nine Lakh Twenty-Three Thousand Four Hundred Thirty-One) Only including GST.
Earnest Money Deposit (EMD)	Rs. 82,98,469.00 (Rupees Eighty-Two lakhs Ninty-Eight Thousand Four Hundred and Sixty-Nine) Only
Purchaser's Address for correspondence	The Chief General Manager(O&M), CAR AEGCL 1st Floor, Bijulee Bhawan, Paltanbazar Guwahati (Assam) 781001 Telephone: +91 361 2739520 Facsimile number: +91 361 2739513 Electronic mail address: cgmom.CAR@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), CAR, 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. 10.07.2026 Tender clarification start date: 13:00 Hrs. 10.07.2026 Tender clarification end date: 12:00 Hrs. 20.07.2026 Tender submission start date: 12:00 Hrs. 20.07.2026 Tender submission end date and time: 12:00 Hrs. 05.08.2026 Techno-commercial bid opening date: 15:00 Hrs 06.08.2026

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.	JV agreement/Deed of consortium applicable only if bidder is participating as a JV/consortium)		
3.	Notarized Power of attorney for the person signing the tender		
4.	Bank Guarantee for EMD (Form-3) (Applicable if offline BG submission is allowed)		
5.	Manufacturer's authorization		
6.	Bidders company/firm registration certificate/certificate of incorporation		
7.	GST registration		
8.	Electrical license for working on 132 KV (or above) line		
9.	Filled up Form ELI-1		
10.	Filled up Form LIT		
11.	Filled up Form FIN-1		
12.	Filled up Form FIN-2		
13.	Filled up Form FIN-3		
14.	Filled up Form FIN-4		
15.	Audited Balance sheet for last three years		
16.	Bank solvency certificate/other supporting document		
17.	Filled up Form EXP-1		
18.	Order/Contract copies establishing past experience		
19.	Completion certificate of work executed		
20.	Type test reports/Undertaking for insulator and hardware fittings		
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 if in the form of BG and iii) Power of Attorney(notarized) for bid signatory to Tender inviting authority.**

(In bidders letterhead)

Form-2
Letter of technical bid

Date:

To

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

Bid Identification No:

Sir,

I/We the undersigned, declare that, we, [insert name of the bidder] having registered office at [insert address of the registered office] having experience in construction/stringing of EHV transmission line, have read the bid document and do not have any reservation to any of the clause therein. We offer to execute the work of:

“

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 authorized person:

Name:

Designation:

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.

Furthermore, we understand that, according to your conditions, bids must be supported by a bid guarantee. At the request of the Bidder, we *name of Bank with address*..... hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of *amount in figures* (. *amount in words*) upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder:

- (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)

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 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.:

To

The Chief General Manager (O&M), CAR
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 authorized person:

Name:

Designation:

NOTE:

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

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

Form-ELI-1
Bidder's information Sheet

Sl. No.	Particulars	Bidders' response
1	Bidder's name and registered address	
2	Bidder's authorized representative, designation and contacts	
3	GST registration no.	
4	Bid validity	180(One Hundred Eighty) Days

(Signature and common seal)

Name:

Designation:

Date:

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:

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:

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:

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:

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				

(Signature and common seal)

Name:

Designation:

Date:

Form EXP – 1: General Experience

Each Bidder must fill in this form

General Experience				
Starting Month Year	Ending Month Year	Years	Contract Identification and Name Name and Address of Purchaser Brief Description of the Works Executed by the Bidder	Role of Bidder

Note: Order/contract copies/recent performance/completion certificates are to be submitted as supporting document.

Common seal and signature of the authorized person:

Name:

Designation:

Date:.....

Form EXP – 2: Specific Experience

Fill up one (1) form per contract.

Contract of Similar Size and Nature			
Contract No.of.	Contract Identification		
Award Date		Completion Date	
Role in Contract	☐ Contractor		☐ Subcontractor
Total Contract Amount	(Rupees)		
Purchaser's Name Address Telephone/Fax Number E-mail			
Description of the similarity in accordance with Criteria 2.4.2 /2.5 of Section 3			
1. Brief Specification of Goods supplied/Works Completed			
2. Date of commissioning/completion			
Attached are copies of the following original documents. ☐ 1. Type Test Certificates & GTP as per Bid Requirement ☐ 2. Recent completion certificates for works completed not older than five years as on the date of Technical Bid opening) ☐ 3. Order/Contract copies			

Common seal and signature of the authorized person:

Name:

Designation:

Date:.....

Manufacturer's Authorization

(To be submitted in Manufacturer's Letterhead)

[The Bidder shall submit MA, in pursuant to ECQ Clause 2.1.1 and in accordance with the instructions indicated].

Date: [insert date (as day, month and year) of Bid Submission]

Bid No.: [insert number of bidding process]

To: [Insert: full name of Purchaser]

WE [insert: **complete name of Manufacturer**], who are established and reputable manufacturers of [insert: **name and/or description of the Goods manufactured**] having production facilities at [insert: **full address of manufacturer's factory**] do hereby authorize [insert: **complete 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 5.11.13** 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.

We also hereby declare that; we will furnish the Performance Guarantee in accordance with **SCC Clause in bid**.

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.

In the capacity of [insert: **title of position or other appropriate designation**] ***(and this should be signed by a person having the power of attorney to legally bind the manufacturer).***

Signed: [insert: **signature(s) of authorized representative(s) of the manufacturer**]

Name & Title: [insert: **complete name(s) of authorized representative(s) of the manufacturer**]

(Common Seal).....

Duly authorized to sign this Authorization on behalf of [insert: **complete name of the manufacturer**]

Dated on _____ day of _____, _____ [insert: **date of signing**]

Notes:

1. *The letter of Undertaking should be on the letterhead of the Manufacturer and should be signed by a person competent and having **Power of Attorney to sign on behalf of the Manufacturer** (to be attached with this MA) to legally bind the Manufacturer. It shall be included by the bidder in its bid.*
2. ***Above undertaking shall be registered or notarized so as to be legally enforceable.***

Price Schedule 1(A)
Supply Schedule

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder in Rs. P	TOTAL AMOUNT Without Taxes in Rs. P
1	Tower superstructures				
1.1	Galvanized steel works including hangers, gussets, strain plates, including Galvanized iron nuts & bolts, spring washers, step bolts etc. (No. of tower x MT * per Tower)				
1.11	A+6 Type, 15 x 6.33962MT	95.094	MT		0.00
1.12	B+6 type, 28X8.53384MT	238.948	MT		0.00
1.13	C+0 type, 1X7.72811 MT	7.728	MT		0.00
1.14	C+6 Type, 3 x 10.14171MT	30.425	MT		0.00
1.15	D+3 Type, 1X 10.512	10.512	MT		0.00
1.16	D+6 Type, 14 x 11.75638 MT	164.589	MT		0.00
2	Stub set of four				
2.11	Fully galvanized stub Angle with including nuts & bolts, spring washers, step bolts, etc(No. of tower x MT * per Tower)				
2.12	A+6 Type, 15 x .21414 MT	3.212	MT		0.00
2.13	B+6 type, 28X.33088MT	9.265	MT		0.00
2.14	C+0 type , 1X.389992 MT	0.390	MT		0.00
2.15	C+6 Type, 3 x .389992 MT	1.170	MT		0.00
2.16	D+3 Type, 2X .508624MT	0.509	MT		0.00
2.17	D+6 Type, 14 x .508624 MT	7.121	MT		0.00
3	Supply of prop setting templates with the precise positioning and anchoring of foundation stubs for tower legs using specialized, adjustable, and durable Galvanized props and templates for all types of tower design & extensions.				
3.1	A,B,C & D -type & extensions	20.000	Sets		0.00
4	Tower accessories				
4.1	Procurement of Danger plate	104.00	Nos		0.00
4.2	Procurement of Phase plate (Set of Three)	104.00	Nos		0.00
4.3	Procurement of Number plate	104.00	Nos		0.00
4.4	Procurement of Bird guard (Set of Three)	104.00	Nos		0.00
4.5	Procurement of Anti-Climbing device	104.00	Set		0.00
4.6	Procurement of Circuit Plate	104.00	Nos		0.00

5	Power Conductor and Its Accessories				
5.1	Power Conductor, ACSR Zebra	195.00	KM		0.00
5.2	Stock bridge type vibration damper	1820.00	nos		0.00
5.3	Preformed Armoured Rod	205.00	nos		0.00
5.4	Mid span compression joint for conductor	70.00	nos		0.00
5.5	Repair sleeve for conductor	70.00	nos		0.00
5.6	Supply of empty Drum for rerolling the dismantled conductor	120.00	nos		0.00
6	Disc Insulator Strings complete with all hardware fittings and associated clamps				
6.1	Porcelain disc insulators, 90KN,suitable for ACSR Zebra equivalent.	3070.00	Nos		0.00
6.2	Porcelain disc insulators, 120KN,suitable for ACSR Zebra equivalent.	10280.00	Nos		0.00
6.3	Hardware fitting set for suspension string complete with all hardware fittings including suspension clamp for ACSR Zebra equivalent.	205.00	Set		0.00
6.4	Hardware fitting set for single Tension string complete with all hardware fittings including suspension clamp for ACSR Zebra equivalent.	622.00	Set		0.00
6.5	Hardware fitting set for Double Tension string complete with all hardware fittings including suspension clamp for ACSR Zebra equivalent.	144.00	Set		0.00
7	Mandatory Spares (Tools and Equipments)				
7.1	Porcelain insulators, 90KN	200.00	nos		0.00
7.2	Porcelain insulators, 120KN	200.00	nos		0.00
7.3	Power Conductor, ACSR Zebra	5.00	kM		0.00
7.4	Stock bridge type vibration damper	10.00	nos		0.00
7.5	Preformed Armoured Rod	10.00	nos		0.00
7.6	Mid span compression joint for conductor	20.00	nos		0.00
7.7	Repair sleeve for conductor	20.00	nos		0.00
7.8	Compressor jointing machine with complete die-set, 150T Capacity	1.00	nos		0.00
7.9	Megger (Insulation Tester), with complete accessories	1.00	nos		0.00
8.0	UPG clamp for ACSR Zebra	50.00	Nos.		0.00
8.1	Tension clamp for ACSR Zebra	50.00	Nos.		0.00
8.2	Digital Earth Resistance Earsth Tester with standard accessories	1.00	No.		0.00
8.3	Professional Digital LASER range finder	1.00	No.		0.00
8.4	Aluminium extendable ladder (20ft)	1.00	No.		0.00
8.5	Hardware fitting set for suspension string complete with all hardware fittings including suspension clamp for ACSR Zebra equivalent.	20.00	Set		0.00

8.6	Hardware fitting set for single Tension string complete with all hardware fittings including suspension clamp for ACSR Zebra equivalent.	20.00	Set		0.00
8.7	Hardware fitting set for Double Tension string complete with all hardware fittings including suspension clamp for ACSR Zebra equivalent.	10.00	Set		0.00
9	SUPPLY OF OPGW HARDWARE/FITTINGS				
9.1	FIBER OPTIC CABLES				
9.11	48 Fiber (DWSM) OPGW fibre optic cable	25.000	KM		0.00
9.12	24 Fiber (DWSM) OPGW fibre optic cable	12.000	KM		0.00
10	OPGW HARDWARE/FITTINGS				
10.1	OPGW HARDWARE/FITTINGS	20.00	Set		0.00
10.2	OPGW Suspension Assembly c/w pre-formed armour rods and tower bond clamps (48F)	45.00	Set		0.00
10.3	OPGW Suspension Assembly c/w pre-formed armour rods and tower bond clamps (24F)	85.00	Set		0.00
10.4	OPGW Double Tension Assembly for with /without splicing location c/w pre-formed armour rods and tower bond clamps(48F)	25.00	Set		0.00
10.5	OPGW Double Tension Assembly for with /without splicing location c/w pre-formed armour rods and tower bond clamps(24F)	6.00	Set		0.00
10.6	OPGW Splicing Tension Assembly in Suspension tower (48F)	4.00	Set		0.00
10.7	OPGW Splicing Tension Assembly in Suspension tower (24F)	450.00	Set		0.00
10.8	OPGW Vibration damper c/w pre-formed armour rods	210.00	Set		0.00
10.9	Downlead clamp	8.00	Set		0.00
11.0	OPGW Optical Splice Kit (48 Fibre) including Junction Box(2 Way)	4.00	Set		0.00
11.1	OPGW Optical Splice Kit (48 Fibre) including Junction Box(3 Way)	4.00	Set		0.00
11.2	OPGW Optical Splice Kit (24F Fibre) including Junction Box(2 Way)	4.00	Set		0.00
Total in Figures					0.00

Price Schedule 1(B)
F&I Schedule

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder in Rs. P	TOTAL AMOUNT Without Taxes in Rs. P
1	Tower superstructures				
1.1	Galvanized steel works including hangers, gussets, strain plates, including Galvanized iron nuts & bolts, spring washers, step bolts etc. (No. of tower x MT * per Tower)				
1.11	A+6 Type, 15 x 6.33962MT	95.094	MT		0.00
1.12	B+6 type, 28X8.53384MT	238.948	MT		0.00
1.13	C+0 type, 1X7.72811 MT	7.728	MT		0.00
1.14	C+6 Type, 3 x 10.14171MT	30.425	MT		0.00
1.15	D+3 Type, 1X 10.512	10.512	MT		0.00
1.16	D+6 Type, 14 x 11.75638 MT	164.589	MT		0.00
2	Stub set of four				
2.11	Fully galvanized stub Angle with including nuts & bolts, spring washers, step bolts, etc. (No. of tower x MT * per Tower)				
2.12	A+6 Type, 15 x .21414 MT	3.212	MT		0.00
2.13	B+6 type, 28X.33088MT	9.265	MT		0.00
2.14	C+0 type , 1X.389992 MT	0.390	MT		0.00
2.15	C+6 Type, 3 x .389992 MT	1.170	MT		0.00
2.16	D+3 Type, 2X .508624MT	0.509	MT		0.00
2.17	D+6 Type, 14 x .508624 MT	7.121	MT		0.00
3	Supply of prop setting templates with the precise positioning and anchoring of foundation stubs for tower legs using specialized, adjustable, and durable Galvanized props and templates for all types of tower design & extensions.				
3.1	A,B,C & D -type & extensions	20.000	Sets		0.00
4	Tower accessories				
4.1	Procurement of Danger plate	104.00	Nos		0.00
4.2	Procurement of Phase plate (Set of Three)	104.00	Nos		0.00
4.3	Procurement of Number plate	104.00	Nos		0.00
4.4	Procurement of Bird guard (Set of Three)	104.00	Nos		0.00

4.5	Procurement of Anti-Climbing device	104.00	Set		0.00
4.6	Procurement of Circuit Plate	104.00	Nos		0.00
5	Power Conductor and Its Accessories				
5.1	Power Conductor, ACSR Zebra	195.00	KM		0.00
5.2	Stock bridge type vibration damper	1820.00	Nos.		0.00
5.3	Preformed Armoured Rod	205.00	Nos		0.00
5.4	Mid span compression joint for conductor	70.00	Nos		0.00
5.5	Repair sleeve for conductor	70.00	Nos		0.00
5.6	Supply of empty Drum for rerolling the dismantled conductor	120.00	Nos		0.00
6	Disc Insulator Strings complete with all hardware fittings and associated clamps				
6.1	Porcelain disc insulators, 90KN,suitable for ACSR Zebra equivalent.	3070.00	Nos		0.00
6.2	Porcelain disc insulators, 120KN,suitable for ACSR Zebra equivalent.	10280.00	Nos		0.00
6.3	Hardware fitting set for suspension string complete with all hardware fittings including suspension clamp for ACSR Zebra equivalent.	205.00	Set		0.00
6.4	Hardware fitting set for single Tension string complete with all hardware fittings including suspension clamp for ACSR Zebra equivalent.	622.00	Set		0.00
6.5	Hardware fitting set for Double Tension string complete with all hardware fittings including suspension clamp for ACSR Zebra equivalent.	144.00	Set		0.00
7	Mandatory Spares (Tools and Equipments)				
7.1	Porcelain insulators, 90KN	200.00	Nos		0.00
7.2	Porcelain insulators, 120KN	200.00	Nos		0.00
7.3	Power Conductor, ACSR Zebra	5.00	kM		0.00
7.4	Stock bridge type vibration damper	10.00	nos		0.00
7.5	Preformed Armoured Rod	10.00	nos		0.00
7.6	Mid span compression joint for conductor	20.00	nos		0.00
7.7	Repair sleeve for conductor	20.00	nos		0.00
7.8	Compressor jointing machine with complete die-set, 150T Capacity	1.00	nos		0.00
7.9	Megger (Insulation Tester), with complete accessories	1.00	nos		0.00
8.0	UPG clamp for ACSR Zebra	50.00	Nos.		0.00
8.1	Tension clamp for ACSR Zebra	50.00	Nos.		0.00
8.2	Digital Earth Resistance Tester with standard accessories	1.00	No.		0.00
8.3	Professional Digital LASER range	1.00	No.		0.00

	finder				
8.4	Aluminum extendable ladder (20ft)	1.00	No.		0.00
8.5	Hardware fitting set for suspension string complete with all hardware fittings including suspension clamp for ACSR Zebra equivalent.	20.00	Set		0.00
8.6	Hardware fitting set for single Tension string complete with all hardware fittings including suspension clamp for ACSR Zebra equivalent.	20.00	Set		0.00
8.7	Hardware fitting set for Double Tension string complete with all hardware fittings including suspension clamp for ACSR Zebra equivalent.	10.00	Set		0.00
9	SUPPLY OF OPGW HARDWARE/FITTINGS				
9.1	FIBER OPTIC CABLES				
9.11	48 Fiber (DWSM) OPGW fibre optic cable	25.000	KM		0.00
9.12	24 Fiber (DWSM) OPGW fibre optic cable	12.000	KM		0.00
10	OPGW HARDWARE/FITTINGS				
10.1	OPGW HARDWARE/FITTINGS	20.00	Set		0.00
10.2	OPGW Suspension Assembly c/w pre-formed armour rods and tower bond clamps (48F)	45.00	Set		0.00
10.3	OPGW Suspension Assembly c/w pre-formed armour rods and tower bond clamps (24F)	85.00	Set		0.00
10.4	OPGW Double Tension Assembly for with /without splicing location c/w pre-formed armour rods and tower bond clamps(48F)	25.00	Set		0.00
10.5	OPGW Double Tension Assembly for with /without splicing location c/w pre-formed armour rods and tower bond clamps(24F)	6.00	Set		0.00
10.6	OPGW Splicing Tension Assembly in Suspension tower (48F)	4.00	Set		0.00
10.7	OPGW Splicing Tension Assembly in Suspension tower (24F)	450.00	Set		0.00
10.8	OPGW Vibration damper c/w pre-formed armour rods	210.00	Set		0.00
10.9	Downlead clamp	8.00	Set		0.00
11.0	OPGW Optical Splice Kit (48 Fibre) including Junction Box (2 Way)	4.00	Set		0.00
11.1	OPGW Optical Splice Kit (48 Fibre) including Junction Box (3 Way)	4.00	Set		0.00
11.2	OPGW Optical Splice Kit (24F Fibre) including Junction Box (2 Way)	4.00	Set		0.00

Total in Figures					0.00
------------------	--	--	--	--	------

Price Schedule 1(c)
Erection/Installation Schedule

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder in Rs. P	TOTAL AMOUNT Without Taxes in Rs. P
1	Setting of stubs (Set of four) including transportation and distribution of stubs and accessories from store to site excluding cost of excavation, concreting and back filling with complete				
1.1	All type of tower and all type of Extension including all etc.	62.00	Set		0.00
2	Superstructure erection including transportation of structures by any means and distribution of structure and accessories from store to site excluding fixing of Danger Plate, Number plate, Anti-climbing device, hoisting of insulators and painting, if any as per direction of site Engineer.				
2.1	All type of tower	547.30	MT		0.00
3	Stringing of power conductors including transportation from stores and distribution of conductors and accessories to sites and laying, stringing, tensioning, clamping, jointing, jumpering and hoisting of insulator complete including cost of all fittings and accessories. Not specifically mentioned elsewhere per route Km (6 conductor for double circuit line) of line.	23.00	Route km		0.00

4	Stringing of power conductors including transportation from stores and distribution of conductors and accessories to sites and laying, stringing, tensioning, clamping, jointing, jumpering and hoisting of insulator complete including cost of all fittings and accessories. Not specifically mentioned elsewhere per route Km (3 conductor for single circuit line) of line.	14.000	Route km		0.00
5	Grounding of towers with 3 metre long 25mm dia GI pipe, along with 50X6 GI flat including cost of all materials, such as GI pipes, GI bolts & nuts and washers, salt, coke, etc as per specification. (2 Nos. per tower)	208.000	Nos		0.00
6	Painting of towers with bituminous paints of approved quality up to 3 metres from ground level including cost of paints.	104.00	per tower		0.00
6.1	Erection of Danger plate	104.000	Nos		0.00
6.2	Erection of Phase plate (Set of Three)	104.000	Sets		0.00
6.3	Erection of Number plate	104.000	Nos		0.00
6.4	Erection of Bird guard (Set of Three)	104.000	Sets		0.00
6.5	Erection of Anti-Climbing device	104.000	Sets		0.00
6.6	Erection of Circuit Plate	104.00	Nos		0.00
7.1	Check Survey as per specification	37.00	Route km		0.00
8	Welding of all nuts & bolts up to the bottom cross arm level including all charges				
8.1	All type of tower and all type of Extension including all etc.	62.00	Nos		0.00
9	Fabrication/Repairing/Replacement of missing tower legs & members	20.00	per MT		0.00
10	Carriage and Installation of ERS towers.	114.00	Per tower		0.00
11	OPGW Erection				
11.1	Installation, Laying, test & commissioning of links etc. of 48Fibre (DWSM) OPGW Fibre Optic Cable alongwith all necessary Hardware sets excluding Joint Box.	25.00	KM		0.00
11.2	Installation, Laying, test & commissioning of links etc. of 24 Fibre (DWSM) OPGW Fibre Optic Cable alongwith all necessary Hardware sets excluding Joint Box.	7.00	KM		0.00
11.3	24 F OPGW Live Line Installation	5.00	KM		0.00
11.4	Splicing & Installation of Joint box (48 Fibre)	12.00	Set		0.00

11.5	Splicing & Installation of Joint box (24 Fibre)	4.00	Set		0.00
11.6	CD, PMD and AP Pre and Post Test for 24 Fiber OPGW	12.00	KM		0.00
11.7	CD, PMD and AP Pre and Post Test for 48 Fiber OPGW	25.00	KM		0.00
11.8	OPGW Drum Testing	12.00	Nos		0.00
Total in Figures					

Price Schedule 1(D)
Destringing & Dismantling Schedule

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder in Rs. P	TOTAL AMOUNT Without Taxes in Rs. P
1	Opening & lowering of ACSR DEER & Zebra conductor of the portion to be dismantled and re-rolling on empty drums, removing of hardware fittings, insulators and accessories, Loading & unloading, transportation to the same to AEGCL store.	50.00	RKM		0.00
2	Dismantling of Existing tower without damaging the tower members complete and transport the same to store with proper stacking.	140.00	Nos		0.00
Total in Figures					0.00

Price Schedule 1(E)
Tower Foundation & associated civil work Schedule

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder in Rs. P	TOTAL AMOUNT Without Taxes in Rs. P
1	Isolated Footing				
1.1	Construction of tower foundation of RCC (M20) and PCC (1:3:6) including excavation and backfilling in all types of soil (Dry, Wet, PS & FS), shuttering, shoring, Dewatering, Manual or Mechanised carriage of material to the site, providing all construction materials such as stone chips, sand, cement, all tools and plants, cost of labour and any incidental items deemed necessary for completion of the foundation work as per drawing and specification as directed by AEGCL (for all types of foundation). DA+6 FS (RC+2.0m) 14X23.07=322.98 DB+6 FS (RC+1.5m) 4 x 44.88 =179.52 DB+6 FS (RC+2.0m) 8 x 45.50 =364.00 DB+6 Dry 6 x 19.90 =119.40 DB+6 WET 2 x 27.08 =54.16 DC+6 FS 1 x 50.01 =50.01 DC+6 DRY 2 x 25.85 =51.70 DD+3 FS 1 x 70.42 =70.42 DD+6 FS 2 x 71.74 =143.48 DD+6 FS (RC+1.5m) 5X74.55= 372.75 DD+6 FS (RC+2.0m) 1 x 75.50 =75.50 DD+6 DRY 5 x 37.33 =186.65	1990.57	Cum		0.00

1.2	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level. Thermo-Mechanically Treated bars of grade Fe-500D or more (from Primary producer TATA, Jindal, SAIL, Shyam etc.). DA+6 FS (RC+2.0m) 14 x 1916.16 =26826.24 DB+6 FS (RC+1.5m) 4 x 3501.59 =14006.36 DB+6 FS (RC+2.0m) 8 x 3558.98 =28471.84 DB+6 Dry 6 x 1686.87 =10121.22 DB+6 WET 2 x 2226.62 =4453.24 DC+6 FS 1 x 4194.55 =4194.55 DC+6 DRY 2 x 2517.15 =5034.30 DD+3 FS 1 x 6293.09 =6293.09 DD+6 FS 2 x 6463.84 =12927.68 DD+6 FS (RC+1.5m) 5 x 6782.35 =33911.75 DD+6 FS (RC+2.0m) 1 x 6884.95 =6884.95 DD+6 DRY 5 x 3846.43 =19232.15	172357.37	Kg		0.00
2	Caisson Foundation				
2.1	Mobilisation (including preparation of work space, approach road, dewatering, arrangement of electricity, jungle clearing, earth filling and making all arrangements for construction and supply of all materials & labour for temporary island/working platform to facilitate the construction of Caisson foundation including working platform for storage of construction of materials such as stone chips, sand, cement, steel reinforcement bar, vibrator machine, mixture machine, tools and plants, cables, lights for all foundation materials keeping and mixing DA+6 (RC+2.0m) 1 x 1.00 =1.00 DB+6 (RC+2.0m) 1 x 1.00 =1.00 DC+0 (RC+2.0m) 1 x 1.00 =1.00 DD+6 (RC+2.0m) 1 x 1.00 =1.00	4.00	Job		0.00
2.2	Construction of cast in situ RCC caisson of inner dia 1200mm and outer dia 1400 mm for tower foundation as per the approved drawing and technical specification, sinking of the caisson through all strata of soil (Clay, sand, silt, gravel, roc, etc) upto depth of approved drawing including cost of removal of soil from inside the caisson for sinking, dewatering, steel shuttering/formwork for caisson, carriage of material to work site, site preparation including preparation of island, protection of work site and adjacent properties, supply of all construction materials shuttering, shoring etc. complete as per drawing & specification. (Concrete and Reinforcement shall be paid extra) DA+6 (RC+2.0m) 1 x 38.00 =38.00 DB+6 (RC+2.0m) 1 x 38.00 =38.00 DC+0 (RC+2.0m) 1 x 38.00 =38.00 DD+6 (RC+2.0m) 1 x 38.00 =38.00	152.000	Cum		0.00

2.3	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level. Thermo-Mechanically Treated bars of grade Fe-500D or more (from Primary producer TATA, Jindal, SAIL, Shyam etc.). DA+6 (RC+2.0m) 1 x 2843.63 2843.63 DB+6 (RC+2.0m) 1 x 2996.42 2996.42 DC+0 (RC+2.0m) 1 x 2942.19 2942.19 DD+6 (RC+2.0m) 1 x 3149.04 3149.04	11931.280	kgs		0.00
2.4	Providing and laying in position cement concrete of M20 grade of reinforced cement concrete for Tie Beam including Shuttering in prop 1:1.5:3, coarse sand (zone-III) derived from natural sources and graded stone aggregate of 20 mm nominal size obtained from crushed stone boulder. DA+6 (RC+2.0m) 1 x 6.86 =6.86 DB+6 (RC+2.0m) 1 x 9.94 =9.94 DC+0 (RC+2.0m) 1 x 9.18 =9.18 DD+6 (RC+2.0m) 1 x 11.99 =11.99	37.97	cum		0.00
3.1	Providing Stone / Brick Soling under the footing of Isolated Foundation including supplying, carrying the material to site by mechanical / manual means as directed by AEGCL. In case of Boulder soling: Random rubble soling with hard stone in foundation including levelling wherever required to be placed as directed by the engineer in charge.	1200.000	Cum		0.00
Total in Figures					0.00

Note:

1) Price quoted should be without GST.

2) The price schedules presented here is for reference only. Bidders must submit the price using the price schedule available in e-tendering portal. **These are not to be submitted in the techno-commercial envelope.**

3) If any item is not specifically mentioned in the price schedule but required to complete the job successfully, same shall be deemed to be included in any of the items of the price schedule.

Section - 3 Purchaser's Requirements

3.1.0 SCOPE

The brief description of scope covered under this Bidding Document is furnished below. Bidders must read the bid document particularly the bid specifications thoroughly to understand the scope of work.

- a) Supply of Tower superstructure including nuts and bolts, stubs, ACSR zebra conductors as per Bill of Quantity and bid specification.
- b) Supply of insulators, conductor accessories, hangers, vibration dampers, clamps & connectors and hardware fittings as per BoQ and bid specification.
- c) Construction of foundation as per BoQ and bid specification.
- d) Dismantling of existing TL Towers and Erection of new towers, hoisting of insulators, conductor accessories, hardware, clamps and connectors, OPGW etc. including installation of danger plates etc as per BoQ and bid specification.
- e) Lowering of existing line conductors and stringing of new ACSR conductor. ERS shall be utilized in the period from lowering of conductor and till charging of the Transmission lines. Arrangement of ERS, erection and dismantling of ERS towers shall be in the scope of the Contractor. The contractor shall be responsible for all works related to stringing and lowering of conductor on ERS towers. The ERS will be provided by AEGCL on rental basis if requested subject to availability and all the expenditure for the same will be borne by the contractor.
- f) Storage of dismantled Tower structures and TL materials and accessories to AEGCL store including transportation to store and material handling.
- g) Freight and Transit Insurance, storage at site and site insurance of all material at site shall be in the scope of the contractor.
- h) Any permits required for supply of materials shall be arranged by the contractor. However, AEGCL shall assist the contractor in arranging permits if any to the extent possible.
- i) Arrangement of RoW clearances and compensation will be in the scope of AEGCL. However, in the event of any ROW issue, the contractor shall be liable to assist AEGCL for resolving any such issues.

3.2.0 SERVICE CONDITIONS

Bidder should note the following climatic and other conditions prevailing in the location of work:

- | | | |
|----|---|-------------------------------|
| a) | Peak ambient day temperature in still air | : 45°C |
| b) | Minimum night temperatures | : 0°C |
| c) | Ground temperatures | : 40°C |
| c) | Reference ambient day temperature | : 45°C |
| d) | Relative Humidity a) Maximum | : 100 % |
| | b) Minimum | : 10 % |
| e) | Altitude | : Below 1000 M above MSL |
| f) | Maximum wind pressure | : As per IS: 802 latest code. |
| g) | Seismic Intensity | : ZONE-V as per IS 1893. |

3.3.0 Technical Standards

The tension string assemblies, insulator discs and hardware offered, material and processes adopted in the manufacture of insulator discs and hardware shall conform to the provision of the following standards or equivalent other international standards:

- | | |
|--------------|---|
| (1) IS: 731 | Specification of porcelain insulators for overhead power lines. |
| (2) IS: 2486 | Specification of insulator fittings for overhead power lines. |
| (3) IS: 2026 | Specification for recommended practice for hot dip galvanizing of steel |
| (4) IS: 2633 | Specification for method for testing uniformity of coating on zinc coated articles. |
| (5) IS: 2107 | Specification for white hearth malleable iron castings. |
| (6) IS: 2108 | Specification for black hearth malleable iron castings. |

3.4.0 TECHNICAL SPECIFICATION

3.4.1. TOWER SUPERSTRUCTURE AND ACCESORIES

3.4.1.1. GENERAL

The AEGCL shall provide drawings for G.I. towers to the successful bidder at the time of award of contract. The Contractor has to regenerate three copies of drawings for approval.

3.4.1.2. DRAWING TO BE PREPARED BY CONTRACTOR

The contractor shall conduct the check survey as per BOQ and submit profile drawings etc. based on the survey to AEGCL for necessary approval.

The contractor shall submit regenerated drawings by collecting previous approved drawings of AEGCL for same tower type as required for this work as per BOQ / survey report. He shall submit the same along with the detailed bill of materials for AEGCL's approval / reference. The fabrication work shall be started strictly in conformation to the approved drawings of AEGCL. It is the responsibility of the Contractor to reproduce the drawings and The Site Engineer reserves the right to make changes to drawings supplied to the contractor for revisions to reflect more updated requirements. Revisions to drawings and any new drawings made to include additional works by the contractors shall be considered as a part of this specification and AEGCL shall entertain no extra claim on this account.

In the case of variations in drawings and specifications the decisions of the site Engineer shall be final. If the contractor found discrepancies in the execution of his work he shall refer such discrepancies to the site Engineer before proceedings with such works.

3.4.1.3. MATERIALS

Materials for steel structure including bolts, anchor bolts, washers etc shall be of tested quality and shall conform to IS: 226 and IS: 2062 (for plates over 20mm thick) Dimensions of all bolts and nuts shall conform to IS 6639 and their mechanical properties shall conform to property class 4.6 and class 4 of IS: 1367 for bolts and nuts respectively. Dimensions and mechanical properties of all washers shall conform to IS: 6610 and IS: 3063 respectively. Other materials used in the construction of steel structure shall conform to appropriate IS specification for the materials wherever they exist. All members of the steel structures, bolts, nuts and washers shall be galvanized.

3.4.1.4. FABRICATION

The workmanship shall conform to the best practice in modern structural shops and to the provisions of IS: 802 (Part-II) and IS: 800 as applicable.

3.4.1.5. CONNECTIONS

All connections shall be designed for the full strength and properties of the members. The fabrication, in general shall be bolted type. Bolts shall also be used for field connections unless otherwise specified in the drawings or permitted by the site engineer for any special circumstances. Bolting shall be conforming to IS: 802 (Part-I & II) and IS: 800 as applicable.

Welding where required shall be generally done in accordance with the relevant IS standards. Selection of

electrodes shall conform to IS: 815. MS electrodes for welding shall conform to IS 814. Welding procedure shall conform to IS: 816 and IS 823.

3.4.1.6. TOLERANCES.

Fabrications tolerances shall conform to IS: 802 (Part-II) and IS: 800 as applicable.

3.4.1.7. MARKING

The marking procedure shall conform to IS: 802 and IS: 800 as applicable.

3.4.1.8. SHOP ASSEMBLY

All steelworks (one in each type) shall be temporarily shop assembled complete or as directed by the site engineer before commencing mass fabrication to ensure proper field erections. Reaming of untrue holes will not be allowed. A reasonable amount of drifting will be allowed in assembling. Shop assembled parts shall be dismantled for shipment.

3.4.1.9. GALVANIZING

Bolts and other fasteners shall be galvanized in accordance with IS: 5358. Galvanizing members of structures shall conform to IS: 4759 and spring washers shall be galvanized in accordance IS; 1573.

The recommendation given in IS: 2629 and IS: 6159 shall be complied with in respect of surface preparations, safety and applications of coating.

3.4.1.10. INSPECTION AND PACKING

The recommendation given in IS: 802 (Part-II) and IS 800 for inspection and packing shall be complied with.

3.4.1.11. TESTING

The material used for fabrication of towers shall be tested for quality.

3.4.1.12. FIELD ERECTION

Erection work shall be done strictly according to the provisions of IS: 802.

3.4.2. CONDUCTOR (ACSR Zebra)

3.4.2.1. GENERAL

The Power Conductor shall conform to IS: 398 Part-IV.

3.4.2.2. CONDUCTOR PARTICULARS:

The Power Conductor properties shall conform to IS: 398 Part-IV.

3.4.3. HANGER

3.4.3.1.1. Hanger material shall be of forged steel conforming to IS:2004:1993 class-4. Galvanising shall be hot dip conforming to IS:2629. Ultimate tensile strength shall be 120 KN or above.

3.4.4. INSULATOR DISCS AND STRINGS

3.4.4.1. TYPE OF INSULATORS:

All suspension and tension strings shall consist of standard centre ball and socket type porcelain insulators with all the exposed porcelain parts fully glazed, unless otherwise specified.

3.4.4.2. QUALITY AND STRENGTH OF THE INSULATORS:

The insulators and their hardware used in the lines shall comply with requirement of relevant IS or other

equivalent international standards.

3.4.4.3. MATERIALS USED:

The porcelain used in the manufacture of the insulators shall be of the best quality and shall be manufactured by the wet process. It shall be homogeneous, free from lamination; flaws etc. and well finished making it impervious to moisture. The glaze shall be brown color and shall cover all the porcelain parts of the insulator except those areas necessarily left unglazed for the purpose of assembly. The cement used in the construction of the insulators shall not cause fracture by expansion or loosening and shall not give rise to any chemical reaction with the metal fittings.

3.4.5. HARDWARE FITTINGS FOR INSULATOR

3.4.5.1. HARDWARE:

Each insulator string assembly shall generally include the following hardware:

Anchor shackle for attachment of suspension string assembly to the tower hanger and tension string assembly to the tower strain plate. Suitable top and bottom yoke assemblies with the arrangement of fixing a set of arcing horns.

- Set of arcing horns
- Suspension or tension clamp
- Bolts, nuts, washers, split pins etc.
- Other fittings necessary to make the strings complete such as ball clevis, socket clevis, chain links etc.

The bidder shall be responsible and satisfy himself that all the hardware included in strings are entirely suitable for the conductor offered.

3.4.5.2. STRAIN CLAMP:

The bolted strain clamps shall also be made of malleable iron or aluminum alloy; hot dip galvanized, lined with sheet aluminum liners and shall be suitable to accommodate the conductor with necessary binding tapes etc. The lips shall be rounded off carefully and conductor seating and the ball mouth shall be smooth to avoid corona and radio interference noises. Suitable attachment for receiving one side of arcing horns and for connecting to the insulator strings shall be provided.

The strain clamps shall be such that the conductor should not slip at a load of 90% of the breaking load of the conductor. The ultimate strength of the clamp for horizontal load shall not be less than the ultimate strength of the conductor.

3.4.5.3. OTHER INSULATOR STRING HARDWARE:

The strength of other string hardware namely anchor shackle, yoke plates, socket-clevis etc. shall be coordinated with insulator disc strength.

3.4.5.4. INTERCHANGEABILITY:

The hardware together with ball and socket fittings shall be of standard design, so that this hardware are interchangeable with each other and suitable for use with disc insulators of any make conforming to relevant Indian/International Standard

3.4.5.5. BALL AND SOCKET DESIGNATION:

The dimensions of the ball and socket shall be of 20 mm designation for 70 KN , 90 KN and 120 KN discs, in accordance with the standard dimensions stated in IS: 2486-(Part-II) /IEC: 120. The dimensions shall be checked by the appropriate gauge after galvanizing only.

3.4.5.6. SECURITY CLIPS AND SPLIT PINS:

Security clips for use with ball and socket coupling shall be R-shaped, hump type which provides positive locking of the coupling as per IS: 2486-(Part-III)/IEC: 372. The legs of the security clips shall be spread after assembly in the works to prevent complete withdrawal from the socket. The locking device

should be resilient, corrosion resistant and of suitable mechanical strength. There shall be no risk of the locking device being displaced accidentally or being rotated when in position. Under no circumstances shall the locking devices allow separation of fittings.

The hole for the security clip shall be countersunk and the clip should be of such design that the eye of clip may be engaged by a hot line clip puller to provide for disengagement under energized conditions. The force required to pull the security clip into its unlocked position shall neither be less than 50 N (5 kg) nor more than 500 N (50 kg).

Split pins shall be used with bolts & nuts.

3.4.5.7. ARCING HORN FOR EHV STRINGS:

The arcing horn shall be provided on both tower side & line side of the hardware fittings. The same shall be either ball ended rod type or tubular type.

The spark gap shall be so adjusted to ensure effective operation under actual field conditions.

3.4.5.8. DEAD END ASSEMBLY:

The dead-end assembly shall be suitable for Conductor as detailed in the document.

The dead-end assembly shall be compression type with provision for comprising the jumper terminal at one end. The angle of the jumper terminal to be mounted should be 300 with respect to the vertical line. The area of bearing surface on all the connections shall be sufficient to ensure positive electrical and mechanical contact. The resistance of the clamp when compressed on Conductor shall not be more than 75% of the resistance of equivalent length of Conductor.

The assembly shall not permit slipping of, damage to, or failure of the complete conductor or any part thereof at a load less than 95% of the ultimate tensile strength of the conductor.

3.4.6. TOWER FOUNDATION

This section covers the specifications for design of foundations for various types of towers and special structures under different soil condition described hereinafter.

Design of foundations is not in the scope of Bidders for this package. The foundations shall be constructed on the basis of drawings supplied by the Employer. However, in case any special type of foundation is required but is not covered in the bidding document, the Employer may ask the Contractor to design and construct such foundation.

3.4.6.1. STANDARDS

For design of foundations reference shall be made to **IS 4099**.

3.4.6.2. TYPE OF FOUNDATION

3.4.6.2.1. Most of the paddy fields of Assam remain under water for about 3 months in a year. During the remaining period of the year sub-soil water is normally found about 1.5 meters below the ground level. The

Contractor shall note this factor while designing the foundation of towers.

3.4.6.2.2. It is expected that the type of foundations defined in **Clause 4.3.4** below shall be suitable for use at various locations of all the Transmission Lines covered in this Bid Document. *The Contractor shall examine the suitability of foundation type assigned for each location depending on the soil investigation reports.*

3.4.6.2.3. In case a defined type of foundations cannot be used at certain location(s), the Contractor may be asked to design foundations for such locations and payments shall be made at unit rates of other type of foundations.

3.4.6.2.4. The Contractor shall design and quote for the following four types of foundations and all the foundations shall be RCC type.

- (i) **Dry type foundation:** Design of this type of foundation shall be normally for dry / rocky / hard soil for which, (a) weight of earth shall be assumed to be 1600 kg/cum. (b) The Limit Bearing Capacity of the soil shall be 22000 kg/square meter. (c) The angle of repose shall be 30°.
- (ii) **Wet type foundation (Suitable for paddy field location):** Design of this type of foundation shall be for locations where sub-soil water level is found below 1.5 meters from the ground level. This design shall also be suitable for paddy fields in Assam, as described in the first Para 4.3.1 above. The weight, the limit bearing capacity, the angle of repose and the ultimate bearing capacity of soil up to depth of 1.5 meter shall be taken as mentioned in (i) above and same for earth beyond 1.5 meter depth shall be taken as per (iv) below.
- (iii) **Semi sub-merged type foundation:** Design of this type of foundations shall be for locations where sub-soil water level is found below 0.75 meter from the ground level. The weight, the limit bearing capacity, the angle of repose and the ultimate bearing capacity of soil up to depth of 0.75 meter shall be taken as mentioned in (i) above and same for earth beyond 0.75 meter depth shall be taken as per (iv) below.
- (iv) **Sub-merged type foundation:** Design of this type of foundations shall be for locations where sub-soil water level is found at less than 0.75 meter from the ground level including completely sub-merged locations. (a) The weight of earth shall be assumed to be 850 kg/cum. (b) The limit bearing capacity of the soil shall be 11000 kg/sq. meter. (c) The angle of repose shall be 15°.
- (v) **Cassion Foundation:** Design of this type of foundation shall be adopted at locations where conventional open-cast foundations are not feasible due to the presence of deep water, river crossings, marshy ground, loose alluvial deposits, high scour potential, or where the competent bearing stratum exists at substantial depth below ground level.
 - (a) The design of caisson foundation shall be based on the soil parameters established through detailed geotechnical investigations carried out at the tower location.
 - (b) The foundation shall be designed to withstand all vertical loads, uplift loads, transverse loads and longitudinal loads transmitted from the tower under normal, broken wire and security loading conditions.
 - (c) The safe bearing capacity of the founding stratum at the caisson base shall be determined through soil investigation and shall not be less than 15000 kg/sq. meter unless otherwise specified by detailed geotechnical studies.
 - (d) The unit weight of filling material inside the caisson shall be considered as 1800 kg/cum.
 - (e) The effects of buoyancy, hydrostatic pressure, current forces, scour and erosion shall be considered in the design wherever applicable.
 - (f) The depth of caisson embedment below the anticipated scour level shall be adequate to ensure stability and shall conform to the recommendations of the geotechnical investigation report.

3.4.6.3. SEISMIC CONDITION:

Each foundation shall be provided with the tie beam for each type of tower to take care of seismic

conditions. Force due to earthquake shall be assumed to be vertical 0.1g and horizontal 0.2g.

3.4.6.4. OVER LOAD FACTOR

The magnitude of limit loads for foundation should be taken as 10% higher than those for the corresponding towers.

3.4.6.5. FOUNDATION DEPTH

The total depth of foundations below the ground level shall not be less than 1.5 meter. To maintain interchangeability of stubs for all type foundations of each type of towers almost the same depths of foundations will be used. However, the maximum depth of foundations for all types of towers shall not be more than 3.0 meters below the ground level.

3.4.6.6. LOADS ON FOUNDATIONS

The foundation shall be designed to withstand the loads of the superstructure (as specified under Section - 3) for the full footing reactions obtained from the structure as per analysis in conformity with the relevant factors of safety. The reactions on the footings shall be composed of the following types of loads for which they shall be required to be checked.

1. Maximum tension or uplift
2. Maximum compression or down thrust
3. Maximum horizontal shear or side thrust

The additional weight of concrete in the footing below ground level over the earth weight and the full weight of concrete above the ground level in the footing and the embedded steel parts will also be taken into account adding to the down thrust.

3.4.6.7. CONCRETING

The concrete foundation for transmission line towers shall consists of two portions viz. (i) pyramid & (ii) chimney. In chimney portion, the thickness of the concrete cover should be such that it provides minimum cover of not less than 10 cm from any part of the stub angle to the nearest outer surface of the concrete in respect of all dry locations, limiting the minimum section of chimney to 30.5 cm. Sq. In respect of all wet locations, the section of chimney should be 45.72 cm. Sq. uniformly for all sizes of stub angle.

The chimney top or muffing must be 23 cm above ground level in dry locations, 38 cm in irrigated field and 15.24 cm above maximum water level in tank beds.

The size of the bottom portion of the foundation viz. Pyramid should be designed according to the nature of the sub soil met with at the design depth for the stub angles.

The maximum base thickness in the pyramid portion in case of sub-merged foundation may be taken as 200 mm.

3.4.6.8. VOLUME OF FOUNDATIONS

The volume of foundation of a tower shall mean the total volume of the foundation including chimney, tie beams and the PCC soling. The volumes indicated for various types of tower foundations in Annexure-II of Sections 1 are provisional only and for bidding purpose. Measurements and payments shall be made only on the basis drawings released for construction.

Similarly for reinforcement steel, the weight for payment shall be as indicated in the drawings released for construction and no extra shall be paid for lap joints, hooks, etc. and wastages.

3.4.7. ERECTION

3.4.7.1. GENERAL:

The details specifications given below are intended for general description of quality, workmanship etc for the items given under clause 3.1.0 above but do not cover minutes details of the work. In the absence of relevance details in the specifications the work shall be executed according to the prevailing practices and to the discretion of the site engineer.

3.4.7.2. TYPE OF FOUNDATION:

Construction of foundation is in the scope of this work.

3.4.7.3. TOWER ERECTION:

Erection of towers is in the scope of this work.

3.4.7.4. STRINGING OF CONDUCTOR:

The Hotline stringing of the conductors shall be done in a most standard method used for such lines, which shall be indicated in the tender. The tenderer shall give complete details of the stringing method they propose to follow and indicate its adaptability and advantages. They shall also indicate the tools and equipment required for stringing by the method proposed by them. The contractor shall use his own stringing and erection tools and other equipment.

The contractor shall be entirely responsible for any damage to the towers or the conductors during stringing.

3.4.7.5. PULLING OPERATION:

The earth wire shall be strung and securely clamped to the towers before the conductors are drawn up in order of the top conductor first.

The pulling of the conductor into the travelers (comprising of aerial and ground rollers) shall be carried out in such a manner that the conductor is not damaged or contaminated with any foreign substance and that it may not be rubbed with rough ground surface. The traveler surface in contact with aluminum surface of conductor is not damaged. These shall be equipped with high quality ball and roller bearings for minimum friction.

During pulling out operation the tension in each conductor and earth wire shall not exceed the design working tension of the conductor at the actual prevailing temperature. After being pulled the conductor and the earth wire shall not be allowed to hang in the stringing blocks for more than 96 hours, before being pulled to the specified sag. It shall be ensured that the conductors and earth wire are not damaged due to wind, vibration or other cause.

3.4.7.6. SAGGING IN OPERATION:

The conductors shall be pulled up to desired sag and left in travelers for at least one hour after which the sag shall be rechecked and adjusted. The conductors shall be clamped within 36 hours for sagging in. The sags shall also be checked when the conductors have been drawn up and transferred to the insulator clamps.

At sharp vertical angles the sags and tensions shall be checked on both sides of the angle. Sagging operations shall not be carried out under wind, extremely low temperature or other adverse weather conditions, which prevent satisfactory sagging.

3.4.7.7. JOINTING:

All the joints of the conductor or the earth wire shall be compression type in accordance with the recommendations of the manufacturers, for which the necessary tools and equipment like compressors and dies, grease guns, presses shall have to be arranged by the contractor.

All joints and splices shall be made at least 30 meters away from the structures. No joint or splices shall be made in span crossing over main roads, railways, small rivers or in tension spans. Not more than one joint shall be allowed in one span.

After pressing the joint the aluminum sleeve shall have all corners rounded, burrs and sharp edges removed and smoothened.

3.4.7.8. INSULATOR HOISTING:

Suspension insulator strings shall be used up to deviation of 2 degrees on all 'A' type towers in the line and strain insulators on all 'B', C and D' type towers. Except on approaching towers, all suspension strings will consist of the specified number of insulator discs per string with arching horns on line side only and tension string of specified number of insulator discs per string with arcing horns on both line and tower sides.

Insulator strings shall be assembled on the ground. These shall be cleaned and examined before hoisting. Insulators with hair cracks or clips or those having glazing defects exceeding half centimeter square will not be used. No separate rates shall be quoted for insulator hoisting. The charges shall be included in the rates of string of conductors.

3.4.7.9. ACCESSORIES:

Accessories like vibration dampers; armour rods etc. for the conductor shall also be fitted on the line. Armour rods shall be provided at all suspension support of the conductors and vibration dampers shall be provided at both ends of each span at suitable distances from the supporting points for each phase conductor. All accessories shall be clean, smooth and in perfect condition before fitting.

3.4.7.10. GROUNDING:

The Contractor shall measure the tower footing resistance (TFR) of each tower in the diverted section of the line after it has been erected and before the stringing of the earth wire during dry weather. Each tower shall be earthed and the tower footing resistance shall not exceed 10 ohms. Generally pipe type earthing shall be done in accordance with the latest additions and revisions of:

IS: 3043 : Code of practice for Earthing.

IS: 5613 : Code of practice for Design, Installation and maintenance (Part-II/Section-2) of overhead power lines.

The earthing will be effected by burying 3 meters long GI pipe in a 300 mm diameter and 3750 mm deep pit at a distance of not less than 3650 mm diagonally away from the stubs and filling in the pit with finely broken coke having the granule sizes not less than 25 mm and salt in such a way that a minimum cover of 125 mm thick salt mixed coke shall be maintained from the pipe on all sides and that the top edge of the pipe shall be at least 600 mm below the ground level. A 45 X 6 mm-galvanized steel flat shall be used to connect the tower with the pipe. The galvanizing steel strip shall be buried not less than 600 mm deep from the ground level. The tenderer will quote the erection charges for each earthing inclusive of the cost of coke and salt, excavation and back filling etc.

3.4.8. FINAL CHECKING, TESTING & COMMISSIONING

(a) After completion of the works, final checking of the line shall be done by the contractor to ensure that all the foundation work; tower erection and stringing have been done strictly according to the specifications and as approved by the Employer. All the works shall be thoroughly inspected keeping in view the following main points:

1. All the tower members are correctly used strictly according to final approved drawings are free of any defect or damage whatsoever.
2. All the bolts are fully tightened and they are properly punched.
3. The stringing of the conductors and earth wire done to maintain proper sag.

The contractor shall submit a report to the above effect. After final checking the line shall be tested for insulation and any defect found shall be rectified by the contractor.

(b) After satisfactory tests on the line and on approval by the Employer the line shall be energized at

full operating voltage before handing over.

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 period shall be counted from contract commencement date. Completion of the work shall be within **30 (Thirty) months** from Contract 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.

A. Progressive payments for supply items including F&I within the country:

1. Within 60 (sixty) days from the date of submission of the invoice against supply, not more than 60% (sixty percent) payment of the total supply invoice value would be made, on receipt and acceptance of materials in full and good conditions. However, GST amount on invoice would be paid 100% or as per Govt. Rules.
2. Maximum 10 (ten) Nos. of progressive supply invoice would be entertained.
3. Remaining 40% (forty percent) retention amount would be released subject to fulfilment of the following conditions –
 - (a) 50% of balance supply amount would be paid on completion of 50% of the total erection works of the project.
 - (b) Remaining 50% of the supply amount would be paid on completion of 100% erection, testing and commissioning activities of the project, which should be certified by the Project Manager.

B. Progressive payments for erection works:

1. Within 60 (sixty) days from the date of submission of invoice against foundation, erection & civil works, not more than 80% (eighty percent) of the total verified invoice would be made. However, GST amount on invoice would be paid 100% or as per Govt. Rules.
2. Maximum 8 (eight) Nos. of progressive erection invoice/ bill would be entertained during entire erection work.
3. The 1st progressive erection invoice/ bill would be entertained on completion of 30% of total erection cost of the project.
4. Maximum 6 (six) Nos. of additional progressive erection invoice/ bill would be entertained. Minimum value of each invoice should be 10% of the total ordered value for foundation, erection and civil work.
5. Remaining 20% of the erection value would be paid on successful completion of 100% erection, testing and commissioning activities of the project, which should be certified by the Project Manager.

5.8.2. Documents required along with invoice: Following documents need to be submitted along with invoice – Payment of invoice would be entertained subject to submission of the following documents with the invoice –

- (a) Unconditional acceptance of the Letter of Award and signed Contract Agreement, by the contractor for supply.
- (b) Detailed Supply Plan /Project Execution Plan/ PERT chart approved by AEGCL.
- (c) Documentary evidence of dispatch (R/R or receipt of L/R)-(for Supply only.)
- (d) Contractor's detailed invoice & packing list identifying contents of each shipment/supply. -(for Supply only.)
- (e) Copy of certificate in respect of payments of State/ Central taxes, duties, levies, etc. have been made against supply of equipment/ materials through contractors/ sub-vendors under the contract, if applicable.
- (f) Certified copy of Insurance Policy/ Insurance Certificate.
- (g) Manufacturer's/ Contractor's Guarantee Certificate of Quality.
- (h) Material Dispatch Clearance Certificate (MDCC)/ Dispatch Instructions (DI) for dispatch of materials from the manufacturer's works. MDCC/DI shall be issued by authorised Officer of the AEGCL. -(for Supply only.)
- (i) Manufacturer's/ Supplier's copy of challan.-(for Supply only.)
- (j) Copy of testing/ inspection of equipment/ material clearance certificate issued by AEGCL. -(for Supply only.)
- (k) Copy of Goods Receipt Sheet (GRS)/ Materials Received Voucher (MRV)/ Materials Handing Over Voucher (MHOV). - (for Supply only.)
- (l) Joint Measurement Sheet. - (for erection only.)
- (m) Labour Licence, Insurance, etc. - (for erection only.)

5.8.3. Payments would be made subject to fulfilment of the following conditions -

- (i) Advance copy of invoices in duplicate with documents/ information as stated under clause (a) to (m), Whichever is applicable, are to be furnished sufficiently in advance.
- (ii) Any demurrage charges on account of late intimation and/or delivery of documents by the Bank is to be borne by the supplier.
- (iii) The supplier should intimate the dispatch of each and every consignment to the Purchaser and the Consignee.
- (iv) All Bank charges are to be borne by the supplier.
- (v) Payment through Bank for supply of equipment/ materials, dispatched by Rail would be allowed if required, however the equipment/ materials have to reach at destination/ project site in full and good condition and additional expenditure in any form for this is to be borne by the supplier. A prior approval from appropriate authority of the AEGCL is to be taken in this respect.
- (vi) Payment through Bank for supply of equipment/ materials, dispatched by road transport would be allowed if required, provided that, the transport agency is approved by the Banking Association and prior approval thereof is given by the AEGCL's appropriate authority.

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, 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. 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.
- 5.9.3. 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. 5.8.0.
- 5.10.2. No interest shall be payable on such deductions/retentions.

5.11.0 WARRANTY

- 5.11.1 The Supplier/Manufacturer warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract
- 5.11.2 The Supplier/Manufacturer further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the country of final destination
- 5.11.3 The warranty shall remain valid for a period of **sixty (60) months** from the date of supply (the Goods having been delivered to and accepted at the final destination as indicated in the Purchaser's Requirement) or **fifty-four (54) months** from the date of commissioning of the project, whichever is later.
- 5.11.4 If during the Period Warranty any defect should be found, the Purchaser shall give Notice to the Supplier/Manufacturer stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all reasonable opportunity for the Supplier/Manufacturer to inspect such defects.
- 5.11.5 If having been notified, the Supplier/Manufacturer fails to remedy the defect within a period of 15 (fifteen) days, the Purchaser may, following notice to the Supplier/Manufacturer, proceed to do such work, and the reasonable costs incurred by the Purchaser in connection therewith shall be paid to the Purchaser by the Supplier or may be deducted by the Purchaser from any monies due the Supplier 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 35% 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.
- 5.12.2 The total quantity of ERS to be used is subject to the requirement of site condition and payment shall be made on the actual uses of quantity of ERS.

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/Manufacturer. 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. In the event of any dispute or difference between the parties hereto, such dispute of difference shall be resolved amicably by mutual consultation. If such resolution is not possible, then unresolved dispute (s) or difference shall be referred to the arbitration of a sole arbitrator to be nominated jointly by both the parties. The Arbitration Proceedings shall be governed by the Arbitration and Conciliation Act, 1996. The language of arbitration shall be English. The place of arbitration shall be at Guwahati. The award of arbitrator shall be binding on the parties to the dispute. Cost of arbitration shall be borne equally between the parties.

5.20.0 INDEMNIFICATION

The supplier shall indemnify, defend and hold AEGCL harmless against any loss, damage, and expenses of whatever kind and nature arising out of and during the course of execution of the entire project, including but not limited to any negligent act or omission, or breach of statutory duty on the part of the supplier, its employee or workman or sub-contractor employed or engaged by supplier. The supplier shall be solely responsible for resolving any dispute whatsoever that may arise out of and during the course of execution of the entire project, between the supplier and its employee or workman or sub-contractor employed or engaged by supplier. The supplier shall indemnify, defend and hold AEGCL harmless against any law suit by the employee or workman or sub-contractor employed or engaged by supplier during the course of execution of the entire project.

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 ('____**Name of work**____') covering inter-alia supply of all equipment and 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 (Rs. 100, Non Judicial)

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), 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"). **[in case of JV insert name and address of the Lead Partner as well as other Partners]**

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 (**_Name of the work_**) 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 **30 (Thirty)** months from Contract Commencement Date with following schedule:

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

[**Signature**]

[**Title**]

in the presence of

[**Signature**]

[**Title**]

Signed by, for and on behalf of the Contractor

[**Signature**]

[**Title**]

in the presence of

[**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
- (Other documents if required shall be added here)

Appendix 3 - 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.***