

ASSAM ELECTRICITY GRID CORPORATION LIMITED
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CIN:U40101 AS2003SGC007238
Phone:0361-2739520/Fax:0361-2739513 web:www.aegcl.co.in



Bidding Document

For

132kV Bus Augmentation work at Depota GSS

**DEPUTY GENERAL MANAGER
TEZPUR T&T CIRCLE
AEGCL, TEZPUR-784001**

**Tender Cost: ₹ 1000.00
EMD: ₹11,000.00**

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

Sl. No.	Name of work	Estimated Cost In INR	Time of completion In Days
1	132KV Bus Augmentation work at Depota GSS	5,34,755.00	90 days

1.0 Cost of Bidding Document:

Bidder has to pay Non-Refundable tender document cost of **Rs.1000.00 (Rupees One Thousand)** only in the form of **A/C payee Demand draft (Non-refundable)** pledged in favour of **AEGCL, BijuleeBhawan, Paltanbazar, Guwahati-1, Payable at Guwahati.**

2.0 Bidding Address:

Tender papers can be purchased on application in plain paper from the **Deputy General Manager, Tezpur T&T Circle, AEGCL, Tezpur on all working days upto 16.00 Hrs. of 11th October, 2021.**

3.0 Validity of Bids and Bids Prices:

3.1 Bids shall remain valid for the period of 180 days after the bid submission deadline date prescribed by AEGCL. In exceptional circumstances, prior to the expiration of the bid validity period, AEGCL may request Bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. If a bid security shall also be extended for a corresponding period.

3.2 Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request shall not be required or permitted to modify its bid.

3.3 Bidders shall quote for the entire scope of supply and services on a "single responsibility" basis such that the total bid price covers all the Supplier's obligations mentioned in or to be reasonably inferred from the bidding document in respect of the design, manufacture, including procurement, delivery, and completion of the entire scope.

3.4 Bidders shall give a breakdown of the prices in the manner and detail called for in the Price Schedules.

4.0 Bid Security:

4.1 All bids must be accompanied by a bid security amounting to **Rs. 11,000.00** only in the form of Bank Guarantee/Demand Draft from any Nationalised Bank payable at Guwahati in favour of **AEGCL, BijuleeBhawan, Paltanbazar, Guwahati-01.**

- 4.2 If a bid security is specified, any bid not complying then his bid shall be rejected by the Employer as non-responsive.
- 4.3 The bid security of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the Contract and furnished the required performance security.
- 4.4 The bid security of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's furnishing of the performance security.
- 4.5 The bid security may be forfeited:
- a) if a Bidder withdraws its bid during the period of bid validity specified by the Bidder.
 - b) if the successful Bidder fails to:
 - (i) sign the Contract within the specified period.
 - (ii) furnish a performance security within 15 (fifteen) days' time.
- 4.6 The Bid Security of a JV shall be in the name of the JV that submits the bid. If the JV has not been legally constituted at the time of bidding, the Bid Security shall be in the names of all future partners as named in the letter of intent.
- 4.7 If a bid securing declaration is not executed in accordance with the above, AEGCL will declare the Bidder ineligible to be awarded a contract by the AEGCL for the period of time stated in the Form of Bid Securing Declaration.

5.0 Format and Signing of Bid:

- 5.1 The Bidder shall prepare one original of the Technical Bid and one original of the Price Bid comprising the Bid and clearly mark it —ORIGINAL - TECHNICAL BID and —ORIGINAL - PRICE BID.
- In addition, the Bidder shall submit three copies of the bid, in the number specified and clearly mark each of them —COPY. In the event of any discrepancy between the original and the copies, the original shall prevail.
- 5.2 The original and all copies of the Bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation as specified in the Bid Document and shall be attached to the bid. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the bid where entries or amendments have been made shall be signed or initialled by the person signing the bid.
- 5.3 A bid submitted by a JV shall be signed so as to be legally binding on all partners.
- 5.4 Any interlineations, erasures, or overwriting shall be valid only if they are signed or initialled by the person signing the bid.

6.0 Submission and Opening of Bids:

6.1 Submission, Sealing and Marking of Bids:

- 6.1.1 Bidders may submit their bids by mail or by hand. When so specified in the Bid Document, bidders shall have the option of submitting their bids electronically. Procedures for submission, sealing and marking are as follows: Bidders submitting bids by mail or by hand shall enclose the original and each copy of the Bid, including alternative bids, if permitted in accordance with above, in separate sealed envelopes, duly marking the envelopes as —ORIGINAL and —COPY. These envelopes containing the original and the copies shall then be enclosed in one single envelope.

- 6.1.2 The inner and outer envelopes shall:
- (a) bear the name and address of the Bidder;
 - (b) be addressed to the Bidding Authority.
 - (c) bear the specific identification of this bidding process indicated in the Bid Document
- 6.1.3 The outer envelopes and the inner envelopes containing the Technical Bid shall bear a warning not to open before the time and date for the opening of Technical Bid.
- 6.1.4 The inner envelopes containing the Price Bid shall bear a warning not to open until advised by the AEGCL.
- 6.1.5 If all envelopes are not sealed and marked as required, the Employer will assume no responsibility for the misplacement or premature opening of the bid.
- 6.2 Deadline for Submission of Bids vis-à-vis Bid Opening:**
- 6.2.1 Bids must be received by the AEGCL at the address and no later than **17.00 Hours (IST) of 11thOctober, 2021.**
- 6.2.2 Subsequently, the bids will be opened publicly at **12.00 Hours (IST) of 18th October, 2021.**
- 6.3 AEGCL 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 AEGCL and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.
- 7.0 Eligible Bidders:**
- 7.1 A Bidder may be a private entity or a government-owned entity or any combination of such entities with the intent to enter into an agreement supported by a letter of intent or under an existing agreement in the form of a joint venture, consortium, or association (JV). In the case of a JV:
- a) all partners shall be jointly and severally liable, and
 - b) the JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the partners of the JV during the bidding process and, in the event the JV is awarded the Contract, during contract execution.
- 7.2 A Bidder, and all partners constituting the Bidder, shall have Indian nationality. A Bidder shall be deemed to have the nationality of a country if the Bidder is a national or is constituted, incorporated, or registered and operates in conformity with the provisions of the laws of Republic Of India. This criterion shall also apply to the determination of the nationality of proposed subcontractors or suppliers for any part of the Contract including related services.
- 7.3 AEGCL considers a **conflict of interest** to be a situation in which a party has interests that could improperly influence that party's performance of official duties or responsibilities, contractual obligations, or compliance with applicable laws and regulations, and that such conflict of interest may contribute to or constitute a prohibited practice under Anticorruption Policy of Government of India and Government Of Assam. In pursuance Anticorruption Policy's requirement that Employer as well as bidders, suppliers, and contractors observe the highest standard of ethics. AEGCL will take appropriate actions if it determines that a conflict of interest has flawed the integrity of any procurement process. Consequently all Bidders found to have a conflict of interest shall be disqualified. A Bidder may be considered to be in a conflict of interest with one or more parties in this bidding process if, including but not limited to:

- (a). they have controlling partners in common; or
- (b). they receive or have received any direct or indirect subsidy from any of them; or
- (c). they have the same legal representative for purposes of this bid; or
- (d). they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder, or influence the decisions of the Employer regarding this bidding process; or
- (e). a Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which it is involved. However, this does not limit the inclusion of the same subcontractor, not otherwise participating as a Bidder, in more than one bid; or
- (f). a Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the plant and services that are the subject of the bid.

7.4 A firm that is under a declaration of ineligibility by the AEGCL or any Government Entity or PSU at the date of the deadline for bid submission or thereafter i.e. on or before contract signing date shall be disqualified.

7.5 Bidders shall provide such evidence of their continued eligibility satisfactory to the AEGCL, as the Employer shall reasonably request.

7.6 In case a prequalification process has been conducted prior to the bidding process, this bidding is open only to prequalified Bidders.

8.0 **Financial Capability:**

8.1 Bidder will require to submit along with the bid the audited balance sheets and other legal financial statements acceptable to AEGCL, for the last 3 (three) years to demonstrate the current soundness of the Bidders financial position and its prospective long term profitability. As a minimum, an Applicant's net worth calculated as the difference between total assets and total liabilities should be positive.

8.2 **Average Annual Turnover** : Minimum average annual turnover **INR 1,60,500.00** calculated as total certified payments received for contracts in progress or completed, within the last 3 (Three) Years.

8.3 **Financial Resources**: Bidder need to 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:

- (1) the following cash-flow requirement, **INR 1,60,500.00** and
- (2) the overall cash flow requirements for this contract and its current works commitment.

9.0 **Experience:**

9.1 Experience on relevant work under contracts in the role of manufacturers, contractor, subcontractor, or management contractor for at least the last 7 (Seven) years prior to the bid submission deadline.

9.2 Participation as manufacturer, contractor Experience having successfully completed similar works during last 7 years ending last day of the month previous to the one in which applications are invited should be either of the following:

- (a) Three (3) similar completed works costing not less than **2,14,000.00**.
- (b) Two (2) similar completed works costing not less than **2,67,500.00**
- (c) One (1) similar completed works costing not less than **4,28,000.00**

9.3 The Bidder who is not a manufacturer of equipment as required for in this Bid for execution of the works shall submit **an undertaking using form “ Manufacturer’s Authorisation- notarized”**

9.4 T Similar work implies the works related to **Supply of materials such as Single tension string with hardware fittings for twin Zebra, Single suspensionstring with hardware fitting for twin Zebras, Spacer for twin Zebra, T clamp suitable for twin zebra to single Panther, UPG Clamp for Zebra, Disc Insulator 120 KN along with erection and commissioning etc.** The Bidder must have experience of executing work of similar nature previously. The bidder must submit experience and completion certificate for scrutiny by AEGCL. Each of such project/ works should consist of completion certificate as per Clause 9.1.

10.0 Evaluation Criteria:

10.1 Evaluation will be done on the basis of *Bid Clause* No.7.0, Eligibility, Cl. No. 8.0, Financial Capability, Cl. No. 9.0., Experience and in accordance with the **Annexure I** to be duly filled in, signed and submitted by the bidder.

10.2 Price Bid of only **Responsive Techno-Commercial Bidders** will be opened.

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

10.4 **Any post bid correction request will NOT BE ENTERTAINED.**

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

11.0 Late Bid:

11.1 Any bid submitted **after the due date and time** will be rejected without any prejudice.

11.2 AEGCL will not be responsible for any Postal and/or Courier Delay in delivering the bid. The same received after the scheduled closing date and time will be rejected without any prejudice.

11.3 Bidding through EMAIL WILL NOT BE ACCEPTED.

12.0 Clarification:

12.1 A prospective Bidder requiring any clarification of the Bidding Document shall contact the AEGCL in writing at the AEGCL’s address indicated in the BDS or raise his enquiries prior to 7 (seven) days of closing of the bid. The Employer will respond to any request for clarification, provided that such request is received no later than seven (7) days prior to the deadline for submission of bids. The AEGCL’s response shall be in writing with copies to all Bidders who have acquired the Bidding Document including a description of the inquiry but without identifying its source. Should AEGCL deem it necessary to amend the Bidding Document as a result of a request for clarification, it shall do so.

12.2 The Bidder is advised to visit and examine the site where the work is to be Carried out and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the bid and entering into a contract for the provision of plant and services. The costs of visiting the site shall be at the Bidder’s own expense.

12.3 The Bidder and any of its personnel or agents will be granted permission by the Employer to enter upon its premises and lands for the purpose of such visit, but only upon the express condition that the Bidder, its

personnel, and agents will release and indemnify the Employer and its personnel and agents from and against all liability in respect thereof, and will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the inspection.

- 12.4 The Bidder's designated representative is invited to attend a pre-bid meeting, if provided for in the BDS. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.
- 12.5 The Bidder is requested, as far as possible, to submit any questions in writing, to reach the AEGCL not later than one week before the pre-bid meeting if there is provision of Pre Bid Meeting.
- 12.6 Minutes of the pre-bid meeting, including the text of the questions raised, without identifying the source, and the responses given, together with any responses prepared after the meeting, will be transmitted promptly to all Bidders who have acquired the Bidding. Any modification to the Bidding Document that may become necessary as a result of the pre-bid meeting shall be made by AEGCL exclusively through the issue of an Addendum but not through the minutes of the pre-bid meeting.
- 12.7 Nonattendance at the pre-bid meeting will not be a cause for disqualification of a Bidder.

13.0 Amendment of Bidding Document:

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

14.0 Preparation of Bids by the Bidders:

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

14.3 Bid Prices and Discounts:

- 14.3.1 Unless otherwise specified in the Bid Document and/or AEGCL's Requirements, bidders shall quote for the entire plant and services on a —single responsibility basis such that the total bid price covers all the Contractor's obligations mentioned in or to be reasonably inferred from the bidding document in respect of the including procurement and subcontracting (if any), delivery, construction, installation and completion of the Work. This includes all requirements under the Contractor's responsibilities for completing the work and where so required by the bidding document, the acquisition of all permits, approvals and licenses, etc.; the operation, maintenance and training services and such other items and services as may be specified in the Bidding Document, all in accordance with the requirements of the General Conditions. Items against which no price is entered by the Bidder will not be paid for by the Employer when executed and shall be deemed to be covered by

- the prices for other items.
- 14.3.2 Bidders are required to quote the price for the commercial, contractual and technical obligations outlined in the bidding document. If a Bidder wishes to make a deviation, such deviation shall be listed. The Bidder shall also provide the additional price if any, for withdrawal of the deviation.
- 14.3.3 Bidders shall give a breakdown of the prices in the manner and detail called for in the Price Schedules. Where no different Price Schedules are included in the Bidding Document, bidders shall present their prices in the following manner:
(a) Separate numbered Schedules shall be used for each of the following elements.
(i) The total amount from each Schedule shall be summarized in a Grand Summary giving the total bid price(s) to be considered.
- 14.3.4 The price of the work shall be quoted as the Base Price or EXW Price
- 14.3.5 Sales Tax, GST, Service Tax and all other taxes (as applicable) payable on the work should be indicated separately. In case of failure to indicate so AEGCL will consider such taxes are included in the Offered Price.
- 14.3.6 Whenever forest produces like sand, stone, timbers etc are used in the work the contractor have to furnish documentary proof that requisite royalty on such produces has been paid to the concerned Department.
- 14.3.7 When the work being “work contract” which is one and individual and which involves no separate contract for the sale of materials, the contractor shall have not be entitled to get any VAT and or any other taxes, levies reimbursed from the AEGCL for the supply of the materials.
- 14.3.8 Taxes like work contract, income tax, GST etc. which need to be deducted at source as per the prevailing law of the land, will be deducted at source.
- 14.3.9 The Prices shall be FIXED and FIRM:** The Bided Price should on Fixed Price basis, prices quoted by the Bidder shall be fixed during the Bidder’s performance of the contract and not subject to variation on any account. A bid submitted with an adjustable price quotation will be treated as non-responsive and rejected.
- 15.0 Additional Requirements:**
- 15.1 Bidders(s) knowledge from actual personal investigation of the resources of the region or District (S) in which he/they offers the work.
- 15.2 Detailed list of tools, plants, equipment’s and machinery available with the tenderer along with their value (A copy of approved assessor’s certificate to be enclosed or affidavit), if applicable.
- 15.3 Name, qualifications of the technical supervisors and staff under the employment of the tenderer and organization on hand and proposed to be engaged for the subject work (Authenticated by a Chartered Accountant or sworn through affidavit), if applicable.
- 15.4 In case the tenderer is a partnership Firm, the work experience, solvency and turn over shall be in the name of partnership Firm only.
- 15.5 Copy of Contract labour license.
- 15.6 The Bidder shall furnish copy of their PAN Card. The card must be in the name of firm, in case the tenderer is a partnership Firm.

- 15.7 GST registration No. and valid labour license.
- 15.8 Registered Power of attorney, if any.
- 15.9 Audited balance sheet and IT return for last three (3) years.
- 15.10 The contractor must possess a valid Electrical License of 132 kV and above issued by the competent authority.

16.0 Negotiation with successful bidder:

The AEGCL reserve the right to hold negotiations with lowest who should be lowest, valid, eligible and technically acceptable tenderer considered for award of contract directly if the rates were not unreasonably high.

17.0 TECHNICAL REQUIREMENTS

17.1 Intent of specification

This section of the specification deals with the technical information & criteria for fabrication, erection and Supply of Beam Type1 and various substation materials as per Price schedule for Bus Augmentation work at Depota GSS.The Contractor's proposal shall be based on the use of materials complying fully with the requirements specifiedherein.

18.0 Scope

18.1 The major works included in the scope of this bids are listed below:

- a) Fabrication and supply of GI structure for beam as per the drawing provided by AEGCL.
- b) Supply of materials as per **Price Schedule**.
- c) Dismantling of existing bus and restringing of the bus with new ACSR Zebra , Clamps & Connector and associated works.

18.2 It is not the intent to specify completely herein all details of design and construction of the equipment/materials and accessories. However, the equipment/material and accessories shall conform in all respects to the relevant IS/IEC standards and be capable of performing in continuous operation up to the bidder's guarantees in a manner acceptable to the Employer. The Employer shall be entitled to reject any work or material, which in his judgement is not in full accordance therewith.

18.3 Whether called for specifically or not, all materials, accessories and services required for the completion of the work are deemed to be considered as a part of the Bidder's scope, unless and until mentioned very clearly as excluded.

18.4 The various items of works are described very briefly in the schedule of Bid Form, Price Schedules. The various items as defined in this schedules shall be read in conjunction with the corresponding section in the technical specifications including amendments and additions ifany.

18.5 The Bidder's rates shall be based on the description of activities in the schedule as well as specifications detailed in TechnicalSpecifications.

18.6 The Bill of Quantities is furnished in **Price schedule**. Bidders are requested to note the followingpoints:

- a) The items mentioned in the Price schedule shall only be used while preparing the Price Schedules. If any items which is not specifically mentioned in the Price schedule but required to complete the works as per scope & specification shall be deemed to be included in any of the items of the Price Schedule
- b) The quantities in price schedule are for bidding purpose and for bid comparison purpose only. Quantities may vary to the extent of (+) 15 % to (-) 15% in terms of total Contract Price.

18.7 The entire supply shall be completed within the stipulated time. However, for the erection part the entire job is based on the subject to availability of the shutdown. The process of part payment is entirely as per the bid clause no 39.

19.0 Contractor to inform himself fully

The Contractor should ensure that he has examined the General Conditions, qualifying criteria, Specifications and Schedules and has satisfied himself as to all the conditions and circumstances affecting the contract price and fixed his price according to his own views on these matters and acknowledge that no additional allowances except as otherwise provided therein will be levied.

The Employer shall not be responsible for any misunderstanding or incorrect information obtained by the Contractor other than information given to the Contractor in writing by the Purchaser

20.0 Conformity with Indian Electricity rules & other local regulations:

20.1 The Contractor shall note that all substation works shall comply with the latest provisions of Indian Electricity Rules and with any other regulations. Local authorities concerned in the administration of the rules and regulation relating to such works shall be consulted, if necessary, in regard to the rules and regulations that may be applicable.

20.2 The materials covered by this specification shall, unless otherwise stated be designed, constructed and tested in accordance with the latest revisions of relevant Indian Standards and shall conform to the regulations of local statutory authorities.

20.3 The Contractor shall also comply with the Minimum Wages Act 1948 and the payment of Wages Act (both. Of the Government of India and State of Assam) and the rules made there under in respect of any employee or workman employed or engaged by him or his Sub-Contractor.

20.4 All registration and statutory inspection fees, if any, in respect of his work pursuant to this Contract shall be to the account of the Contractor. However, any registration, statutory inspection fees lawfully payable under the provisions of the statutory laws and its amendments from time to time during erection in respect of the Substation Works, ultimately to be owned by the Employer, shall be to the account of the Employer. Should any such inspection or registration need to be re-arranged due to the fault of the Contractor or his Sub-Contractor, the additional fees to such inspection and/or registration shall be borne by the Contractor.

20.5 In case of any conflict between the standards and this specification, this specification shall govern.

21.0 Type Test Reports

21.1 Materials, which have never been tested for critical performance, shall not be accepted. In such cases, a promise

or agreement by a bidder to have the equipment tested after award of a contract is not acceptable.

21.2 All Bids must be accompanied by the Type Test Certificates of materials offered (refer Clause 21.5 below). Such type test certificates shall be acceptable only if:-

- a) Tests are conducted in an independent and well known testing laboratory, or
- c) Tests are conducted in manufacturer's own laboratory. In this case (i) the laboratory must have ISO 9000 (or its equivalent) series certification; and (ii) tests have been witnessed by technically qualified representatives of earlier clients or purchaser.

21.3 *Test reports to be acceptable must be related directly to the materials offered. Test reports for higher class of equipment are acceptable with commitment to perform the type tests free of any charge on the particular equipment(s) after the award of contract.*

21.4 Type Test Reports older than five (5) years on the date of Technical bid opening shall not be accepted.

21.5 Full Type Test Reports of at least the following equipment must be submitted by the successful bidder:-

1. Disc Insulators
2. Clamp & Connectors
3. Hardware fitting

22.0 ~~Drawing and Documents~~

22.1 ~~All drawings for fabrication of structures shall be provided by AEGCL during execution.~~

23.0 Inspection & Inspection certificate:

23.1 AEGCL representatives shall have full facilities for unrestricted inspection of the raw materials and works.

23.2 The acceptance of any quantity of material shall in no way relieve the contractor of his responsibility for meeting all the requirements of the specification and shall not prevent subsequent rejection, if such material are later found to be defective.

23.3 Any item specification if not available in this document, contractor shall supply and execute the items meeting the relevant IS specification with the approval of the purchaser.

24.0 Employer Supervision

24.1 The scope of the duties of the Employer, pursuant to the contract, will include but not be limited to the following.

- a) Witness or authorize his representative to witness works at site.
- b) Inspect, accept or reject any material and work under the Contract.
- c) Issue certificate of acceptance and/or progressive payment and final payment certificate.
- d) Review and suggest modification and improvement in completion schedules from time to time.
- e) Issue completion certificate.

25.0 TECHNICAL SPECIFICATION FOR DESIGN AND FABRICATION OF SUBSTATION STEEL STRUCTURES AND MOUNTING STRUCTURES

The structures shall be of structural steel conforming to any of the grade, as appropriate, of IS 2062 (latest edition) Steel conforming IS 8500 may also be used.

Medium and high strength structural steels with known properties conforming to any other national or international standards may also be used.

Bolts

Bolts used shall conform to IS12427 or bolts of property class 4.6 conforming to IS 6639 may also be used.

High strength bolts, if used (only with steel conforming to IS 8500) shall conform to property class 8.8 of IS 3757.

Foundation Bolts shall conform to IS 5624.

Step bolts shall conform to IS 10238

Nuts

Nuts shall conform to IS 1363 (Part 3). The mechanical properties shall conform to property class 4 or 5 as the case may be as specified in IS 1367 (Part 6) except that the proof stress for nuts of property class 5 shall be as given in IS 12427.

Nuts to be used with high strength bolts shall conform to IS 6623.

Washers

Washers shall conform to IS 2016. Heavy washers shall conform to IS 6610. Spring washers shall conform to type B of IS 3663

Washers to be used with high strength bolts and nuts shall conform to IS 6649.

Galvanisation

Structural members, plain and heavy washers shall be galvanized in accordance with the provisions of IS 4759. Spring washers shall be hot dip galvanized as per service grade 4 of IS 4759 or IS 1537.

Other Materials

Other materials used in the construction of the supporting structures shall conform to appropriate Indian Standards wherever available.

25.1 Fabrication

The fabrication of substation steel structures shall be in conformity with the following:

- a. Fabrication shall be done as per drawings supplied by AEGCL.
- b. Except where hereinafter modified, details of fabrication shall conform to IS: 802 (Part-II) or the relevant international standards.
- c. The column and beam structures shall be accurately fabricated to connect together easily at site without any undue strain on the bolts.
- d. No angle member shall have the two leg flanges brought together by closing the angle.

- e. The diameter of the hole shall be equal to the diameter of bolt plus 1.5mm.
- f. The structure shall be designed so that all parts shall be accessible for inspection and cleaning. Drain holes shall be provided at all points where pockets of depression are likely to hold water.
- g. All identical parts shall be made strictly inter-changeable. All steel sections before any work are done on them shall be carefully levelled, straightened and made true to detailed drawings by methods which will not injure the materials so that when assembled, the adjacent matching surfaces are in close contact throughout. No rough edges shall be permitted in the entire structure.
- h. Minimum Thickness of Tower Members shall be as follows:-

ITEM	Minimum thickness in mm
Leg members & main chords of beams in compression	5
Other members	4

25.2 Drilling and Punching

- 25.2.1 Before any cutting work is started, all steel sections shall be carefully strengthened and trued by pressure and not by hammering. They shall again be trued after being punched and drilled.
- 25.2.2 Holes for bolts shall be drilled or punched with a jig but drilled holes shall be preferred. The punching may be adopted for thickness up to 16mm. Tolerances regarding punch holes are as follows:
 - a) Holes must be perfectly circular and no tolerances in this respect are permissible.
 - b) The maximum allowable difference in diameter of the holes on the two sides of plates or angle is 0.8mm. i.e. the allowable taper in a punched hole should not exceed 0.8 mm on diameter.
 - c) Holes must be square with the plates or angles and have their walls parallel.
- 25.2.3 All burrs left by drills or punch shall be removed completely. When the tower members are in position the holes shall be truly opposite to each other. Drilling or reaming to enlarge holes shall not be permitted.

25.3 Erection Mark

Each individual member shall have erection mark conforming to the component number given to it in the fabrication drawings. The mark shall be marked with marking dies of 16mm size before galvanizing and shall be legible after galvanizing,

25.4 Galvanizing and Painting

- 25.4.1 Galvanizing of the various members of the structures shall be done only after all works of sawing, shearing, drilling, filing, bending and matching are completed. Galvanizing shall be done by the hot dip process as recommended in IS: 2629 or other such authoritative international standards and shall produce a smooth, clean and uniform coating of not less than 610 gm per square meter. The preparation for galvanizing and the galvanizing process itself must not affect adversely the mechanical properties of the treated materials.
- 25.4.2 All assembly bolts shall be thoroughly hot dip galvanized after threading. Threads shall be of a depth sufficient to

allow for the galvanized coating, which must not be excessive at the root of the threads, so that the nut shall turn easily on the completed bolts without excessive looseness. The nut threads shall not be galvanized, but oiled only.

25.4.3 The outside surface shall be galvanized. Sample of galvanized materials shall be supplied to the galvanising test set out in IS 729 or other such authoritative international standards.

25.5 Earthing

To keep provision in the structures for earthing, holes shall be drilled on two diagonally opposite legs of the towers/columns/mounting structures. The holes shall be suitable for bolting 65 mm X 12 mm GI strips and shall be such that the lower hole is about 350 mm above the ground level, clear of the concrete muffing, for connecting the earthing strip.

25.6 Test and Test Certificate

Each consignment ready for inspection shall be offered to AEGCL for inspection before dispatch giving a minimum time of not less than 10 days. Samples of fabricated structure materials shall be subjected to following tests: -

- a) Steel: The structural steel shall conform to IS 226 and IS 8500, BS 4360-1068 or ISO / R 630 other such authoritative international standards. Manufacturer's test certificate shall be submitted for all used steel.
- b) Galvanising: The galvanising shall be as per IS 2633 or BS 729 other such authoritative international standards. Zinc coating over the galvanized surfaces shall not be less than 610 gm per square meter.
- c) Bolts and nuts: Manufacturer's test certificate as per standard practice shall be submitted.

No structure or any member thereof, which failed under the test shall be supplied.

26.0 Earthing System

26.1 General

The galvanizing and Testing of materials shall confirm to the latest edition of the following standards except otherwise specified in this specification.

1. Recommended practice for hot dip galvanized of Iron Earthing Strips IS:2629(1966)
2. Methods of testing weight, thickness & uniformity of coating on hot dip galvanized articles IS:2633(1972)
3. Specification for hot dip galvanized coating on fastness IS:5358(1969)
4. Specification for Electroplating IS:3203
5. Specification for hot dip Zinc coating on structural & other allied products IS:4759(1968)

27.0 Protection against direct lightning

27.1 Protection against direct lightning shall be provided by stringing GI shield wires and/or by lightning masts (SPIKES) as per layout drawings.

27.2 G.I. wires for shielding shall conform to IS 2141. Parameters of galvanised steel wires shall be as follows:

- a) No of Strand :7
- b) Diameter of singlestrand : 3.66mm
- c) MinimumBreakingLoad : 6970KG
- d) OverallDiameter : 10.98 mm
- e) Area : 72.25mm²

28.0 SPECIFICATIONS FOR HARDWARE FITTINGS, SPACER AND CLAMPS

28.1 General

- a) The Contractor shall supply disc insulators for suspension and tension strings as required complete with all necessary hardware and accessories, including fittings for fixing insulators to steel structures as required and clamps.
- b) The porcelain shall be sound, free from defects, thoroughly vitrified and smoothly glazed.
- c) Unless otherwise specified, the glaze shall be brown colour. The glaze shall cover all the porcelain parts of the insulators except those areas which serve as support during firing or are left unglazed for purpose of assembly.
- d) The design of the insulator shall be such that stress due to expansion and contraction in any part of the insulator shall not lead to deterioration. The porcelain shall not engage directly with hard metal.
- e) Cement use in the construction of insulator shall not cause fracture by expansion or loosening by contraction and proper care shall be taken to locate the individual parts correctly during cementing. The cement shall not give rise to chemical reaction with metal fitting and its thickness shall be as uniform as possible.
- f) Pins and caps shall be made of drop forged steel, duly hot dip galvanized as per IS 2629. These shall not be made by jointing, welding, shrink fitting or any other process.
- g) Security clips/split pins shall be made of good quality of stainless steel.
- h) Suspension and tension insulators shall be wet process porcelain with ball and socket connection. Insulators shall be interchangeable and shall be suitable for forming either suspension or tension strings.
- i) Post type insulators shall be of long rod type or solid core type and preferably of single piece type for all voltage classes. These shall be complete with necessary fittings to hold Aluminium tubes or ACSR conductor as required.
- j) The items of hardware and fittings shall make complete assemblies which are necessary for their satisfactory performance. Such parts shall be deemed to be within the scope of this specification.

28.2 Parameters of Disc Insulators

- a) Type : Ball and Socket

b) Colour	: Brown
c) Surface	: Glazed
d) Locking Device	: W or R type security clip
e) Size of Disc	: 255 mm x 145 mm or 280 mm x 145mm
f) Size of Pin Ball	: 16 mm or 20mm
g) Creepage Distance (min)	: 430 mm
h) Electromechanical Strength	: 120 KN for Tension String. : 120 KN for Suspension String.
i) Power frequency withstand test voltage	: 75 KV Dry : 45 KV Wet
j) Minimum dry impulse withstand	: 125 KV peak Test voltage (+/- wave)
k) Puncture Voltage	: 1.3 X actual dry flash overvoltage

28.3 Parameters for Disc Insulator Strings

- (i) No. of Disc per string
 - a) 132 kV Single Suspension String : 9 (Minimum)
 - b) 132 kV Single Tension String : 10 (Minimum)
- (i) Minimum Failing Load
 - (a) 132 kV Single Suspension String : 120 KN
 - (b) 132 kV Single Tension String : 120 KN
- (ii) Insulation Level
 - (a) Power frequency withstand test voltage : 132 kV String: 275 kV
 - (b) Impulse withstand Test voltage : 132 kV String: 650 kV peak

28.4 Spacers, Suspension and Tension Clamps

- 28.4.1 Clamps and connectors shall be made from cold forged Aluminum Alloy plate i.e. Extruded Aluminum (having purity of Aluminum not less than 97.5%.) Clamps and Connectors shall be processed through Cold forging of Aluminum Alloy. The Nuts and Bolts associated with equipment of Connector pieces shall be of MS Hot dip Galvanized, Quality of nuts and bolts shall conform to relevant IS of latest edition. Minimum thickness at any point of current carrying part of any clamp and connector shall not be less than 12mm.
- 28.4.2 The spacer shall have enough strength so as to restore normal spacing between the subconductors after displacement by wind, short circuits etc. without damage or permanent deformation. They shall have long life without fatigue or wear and shall have gentle but firm grip on conductors. They shall be able to withstand all the electromagnetic and electrostatic forces under different operating conditions including dead short-circuit.
- 28.4.3 They shall preferably be of one-piece construction. All bolts shall be captive and nuts shall only be needed slackening not removal in order to fit the spacers to the sub-conductors. The spacer should not slip under any condition and joint with sub-conductors incorporating a flexible medium is acceptable provided such medium cannot slip under any condition.

- 28.4.4 The spacer shall not damage or chafe the conductor in any way. All nuts used for spacers shall be locked in a manner against vibration loosening.
- 28.4.5 The spacer shall be flexible enough to avoid distortion or damage of the sub-conductor. The electrical resistance between conductor and spacer shall be reasonable for satisfactory operation. The material of the spacer shall be of aluminium alloy of an approved type.

(a) SUSPENSION CLAMPS

The suspension clamps shall be made of aluminium alloy suitable to accommodate the conductor specified. The suspension clamps shall be designed to avoid any possibility of deforming or damaging the conductor. The lips shall be rounded off and the seating and the bell mouths shall be smooth to avoid corona and radio interference noises. The suspension clamps shall be suitable to receive the fittings of the insulator string.

The slipping strength of suspension clamps shall not be more than 25% of the breaking load of the conductor. The ultimate strength of suspension clamps shall be as follows.

132 kV Single Suspension String : 120KN

(b) TENSION CLAMP

The bolted type strain clamps shall also be made of aluminium alloy and shall be suitable to accommodate the conductor specified. The lips shall be rounded off carefully and conductor seating and the ball mouth shall be smooth to avoid corona and radio interference noises.

The minimum slipping strength of strain clamps shall be 90% of the breaking load of the conductor. The ultimate strength of strain clamps shall be as follows:

For 132 kV Single Tension String : 120KN

29.0 Service Conditions:

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

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

30.0 Guaranteed Technical Particulars:

This specification covers the minimum requirements for the design, engineering, manufacturing, inspection, testing and supply of Double tension string Hardware with Clamp for twin Panther without turn buckle bolted type, Double

suspension string hardware with Clamp for twin Panther, Tee connector suitable for twin Panther to single Panther, Spacer for Panther, Isolator terminal Clamp for twin Panther and UPG Clamps for Panther. In addition to concurrence to this specification following consideration to be taken:

Compliance with applicable IS codes & standards as well as any statutory regulation in existence for a specific item.

The Guaranteed Technical Particulars of the materials shall be furnished by the Bidders with the Technical Bid. The Bidder shall also furnish any other information's as in their opinion is needed to give full description and details to judge the item(s) offered by them.

The data furnished in Guaranteed Technical Particulars should be the minimum or maximum value (as per the requirement of the specification) required. A Bidder may guarantee a value more stringent than the specification requirement. However, for testing purpose or from performance point of view, the material shall be considered performed successfully if it achieves the minimum/maximum value required as per the technical specification. No preference what so ever shall be given to the bidder offering better/more stringent values than those required as per specification except were stated otherwise.

Packing:

All the materials shall be suitably protected, coated, covered or boxed and crated to prevent damage or deterioration during transit, handling and storage at Site till the time of erection. The Supplier shall be responsible for any loss or damage during transportation, handling and storage due to improper packing.

The Supplier shall include and provide for securely protecting and packing the materials so as to avoid loss or damage during transport by air, sea, rail and road.

All packing shall allow for easy removal and checking at site. Wherever necessary, proper arrangement for attaching slings for lifting shall be provided. All packages shall be clearly marked for with signs showing 'up' and 'down' on the sides of boxes, and handling and unpacking instructions as considered necessary. Special precaution shall be taken to prevent rusting of steel and iron parts during transit by sea.

The cases containing easily damageable material shall be very carefully packed and marked with appropriate caution symbols, i.e. fragile, handle with care, use no hook etc. wherever applicable.

Each package shall be legibly marked by the-Supplier at his expenses showing the details such as description and quantity of contents, the name of the consignee and address, the gross and net weights of the package, the name of the Supplier etc.

Materials handling and storage:

(a) All the supplies under the Contract as well as Employer supplied items (if any) arriving at site shall be promptly received, unloaded and transported and stored in the stores by the Contractor.

(b) Contractor shall be responsible for examining all the shipment and notify the Employer immediately of any damage, shortage, discrepancy etc. for the purpose of Employer's information only. The Contractor shall submit to the Employer every week a report detailing all the receipts during the week. However, the Contractor shall be solely responsible for any shortages or damages in transit, handling and/or in storage and erection at site. Any demurrage, and other such charges claimed by the transporters, railways etc., shall be to the account of the Contractor.

(c) The Contractor shall maintain an accurate and exhaustive record-detailing out the list of all items received by him for the purpose of erection and keep such record open for the inspection of the Employer.

(d) All items shall be handled very carefully to prevent any damage or loss. The materials stored shall be properly protected to prevent damage. The materials from the store shall be moved to the actual location at the appropriate time to avoid damage of such materials at Site.

(e) All the materials stored in the open or dusty location must be covered with suitable weatherproof and flameproof

covering material wherever applicable.

(f) The Contractor shall be responsible for making suitable indoor storage facilities, to store all items/materials, which require indoor storage.

(g) The Contractor shall have total responsibility for all equipment and materials in his custody, stored, loose, semi-assembled and/or erected by him at site. The contractor shall make suitable security arrangements including employment of security personnel to ensure the protection of all materials, equipment and works from theft, fire, pilferage and any other damages and loss.

(h) The Employer will verify the storage facilities arranged by the contractor and despatch clearance will be provided only after Employer is satisfied.

31.0 Scope of Work:

- a) Supply of materials as per **Price Schedule**.
- b) Dismantling & Restringing of the existing 132KV Bus at Depota GSS
- c) Carriage of conductor from 220KV Samaguri GSS to 132 KV Depota GSS

32.0 Contract Agreement:

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

32.2 Wherever there is any variation in between the conditions of the AEGCL's General Conditions of Supply and Erection 2009 and the above terms & conditions, this bid conditions will supersede the conditions of the AEGCL's General Conditions of Supply and Erection 2009.

33.0 Liquidated Damage:

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

33.1 Recover an amount at the rate of 1% (One percent) of the Contract Price per week or part thereof of delay, subject to maximum of 10% (Ten percent) of the contract price as liquidated damage to AEGCL. However, the payment of liquidated damages shall not in any way relieve the Contractor from any of its obligations to complete the works or from any other obligations and liabilities of the Contractor under the Contract.

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

33.3 Contractual failure:- Refer clause No.27.1 of AEGCL's General Conditions of supply and erection 2009.

34.0 PERT Chart and/or BAR Chart:

The successful bidder within 10 (ten) days before the contract is awarded will make out a detailed PERT Chart covering all activities along with detailed program chart on accepted scheme indicating various stages of execution, method of execution and completion of work in different stages keeping the period of completion in view and submit the same to the Engineer for the consideration and approval.

35.0 Insurance:

The bidder shall arrange for any pay/cost of personnel accident insurance, medical treatment etc. in respect of their employees assigned to the works for all time and shall govern by Law of land.

36.0 Warranty:

36.1 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.

36.2 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.

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

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

36.5 The term period of warranty shall mean the period of 18 months from the date of Taking Over of the Work by AEGCL. A Taking over Certificate (TOC) will be issued by the appropriate authority.

37.0 Safety:

Each and every safety measures for MAN and MACHINE will be the sole responsibility of the Contractor without any prejudice. Compensation claim if any will also be the responsibility of the contractor without any prejudice. As the contract is Turnkey in nature hence AEGCL will not bear any responsibility towards such claim.

38.0 Pollution:

Each and every measure should be taken to adhere to the standard norms to avert any occasion of Air Pollution, Water Pollution, Soil Pollution and Sound Pollution. In case of any deviation leading to any legal action the Contractor will be solely responsible without any prejudice.

39.0 Payment terms:

39.1 No advance/Mobilization advance shall be made in this contract.

39.2 (A) Progressive payment for supply items within the Country

39.2.1 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 condition. However GST amount on invoice would be paid 100% or as per Govt. Rules.

- 39.2.2 Maximum 4(Four) Nos. of progressive supply invoices would be entertained.
- 39.2.3 Remaining 40% (Forty percent) **Retention Amount** would be released subject to fulfillment of the following conditions-
- 39.2.3.1 a) 50% of balance supply amount would be paid on completion of 50% of the total erection works of the project
- 39.2.3.2 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.

39.3 (B) Progressive payments for erection works

- 39.3.1 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.
- 39.3.2 2. Maximum 8(eight) Nos. of progressive erection Invoice/ Bill would be entertained during entire erection work.
- 39.3.3 3. The 1st Progressive erection Invoice/Bill would be entertained on completion of 30% of total erection cost of the Project.
- 39.3.4 4. Maximum 6 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 works.
- 39.3.5 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.
- 39.4 Payment will be made by DGM, Tezpur (T&T) Circle, AEGCL, Dhanuwa Nagar, Tezpur. The Bidder / Firm will have to be submitted the following Net Banking details.
- (a) Banker's Name & Branch
 - (b) Account No
 - (c) Banker's address
 - (d) Banker's IFSC Code
 - (e) Banker's RTGS Code

40.0 Performance security deposit:

- 40.1 The successful bidder shall have to deposit through a **Bank Guarantee** from a Nationalized or scheduled Bank of RBI in AEGCL's standard proforma on non-judicial stamp of appropriate value for an amount equivalent to 10% (ten percent) of the total value of the order as performance security, immediately within 10 (ten) days from the issue of the letter of intent/detailed orders (as the case may be), duly pledged in favour of **AEGCL, BijuleeBhawan, Paltanbazar, Guwahati-1**, and such security deposit shall be valid up to 30 days beyond the warranty period of 12 (twelve) months. The Bank Guarantee (BG) should be submitted to the **O/O the Deputy General Manager, Tezpur T&T Circle, AEGCL, Tezpur-784001** by the issuing Bank under registered post AD.
- 40.2 Please note that, if the selected Bidder / Firm fails to furnish the requisite performance security as stated above and sign the contract within the stipulated period, 10 percent Security money will be deducted from the total Bill value.

40.3 If the bidder / firm fails or neglects to observe and perform any of his obligations under the contract, Purchaser (AEGCL) shall have the right to forfeit either in full or in part at his absolute discretion, the security deposit furnished by the Contractor/Firm.

40.4 No interest shall be payable on such deposits.

41.0 Retention Money:

41.1 In addition to above performance security deposit, retention money will be retained by the Engineer/Purchaser as per Bid Clause 40. The amount will be held by the Purchaser (AEGCL) till the work under the contract is completed and the completion certificate is issued.

41.2 If the Firm/Bidder fails or neglects to observe and perform any of his obligations under the contract, the Purchaser (AEGCL) shall have the right to forfeit either in full or in part at his absolute discretion, the security deposit furnished by the supplier/contractor.

41.3 No interest shall be payable on such deposit.

42.0 Force Majeure Condition:

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

43.0 Settlement of Dispute and Arbitration:

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

44.0 Right to Reject:

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

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

Letter of Technical Bid

[Bidder's Letterhead]

Date: _____

Tender No.: _____

Invitation for Bid No.: _____

To: _____

We, the undersigned, declare that:

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

Name _____

In the capacity of _____

Signed _____

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

Date _____

Price Proposal Submission Sheet

Date: _____

Tender No.: _____

Invitation for Bid No.: _____

To: _____

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Document, including Addenda No.: _____
- (b) We offer to supply in conformity with the Bidding Document and in accordance with the completion/delivery schedule specified Schedule of Supply & Erection, the following Goods and Related Services:

- (c) The total price of our Bid, excluding any discounts offered in item (d) below is:

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

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

Name of Recipient	Address	Reason	Amount

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

Name _____

In the capacity of _____

Signed _____

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

Date _____

Bidding Forms:

Name of work:

Bid Identification No:

General

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

A) Experience

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

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

B) Financial Position

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

Year	Turn over

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

Name of the Bidder:-

Signature of the Bidder/Firm

Full Name

Postal Address

Phone/Mobile No.

PRICE BID

PRICE SCHEDULE

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

Sl no	Description	Unit	Qty	Unit Price exclusive of Taxes (Rs.)	Total Price exclusive of Taxes (Rs.)
1	2	3	4	5	6
Supply of Materials					
1	Single Tension String with all Hardware Fittings for Twin Zebra for 120KN Disc Insulator 20mm dia ball (without turn buckle bolted type)	Set	18		
2	Single Suspension String with all Hardware Fittings for Twin Zebra for 120KN Disc Insulator 20mm dia ball	Set	6		
3	T Clamp suitable for Twin Zebra to Single Panther	Nos	21		
4	Spacer for Twin Zebra	Nos	51		
5	Isolator Terminal Clamp for Twin Zebra	Nos	9		
6	U.P.G Clamp for Zebra	Nos	12		
7	Disc Insulator (120KN, 20mm dia ball)	Nos	250		
Erection Part					
1	Dismantling of existing 132kV bus and restringing of the same using zebra conductor (Total Length=0.6KM)	JOB	1		
Cost of transporting Conductor					
1	Loading of conductor on truck (length of Zebra conductor required= 0.6km) (Weight of Zebra conductor=0.6Km x 1.621MT/km=0.973MT)	MT	0.973		
2	Transporting of conductor from Samaguri GSS to Depota GSS by truck				
	1 st 50km(plain)	/km/MT	50km, 0.973 MT		
	2 nd 9.5 km(plain)	/km/Mt	9.5 km, 0.973MT		
3	Unloading of conductor on truck (length of Zebra conductor required= 0.6km) (Weight of Zebra conductor=0.6Km x 1.621MT/km=0.973MT)	/MT	0.973MT		

	Total		
	Add 18% GST		
	Total		

Name of the Bidder:-

Signature of the Bidder/Firm

Full Name

Postal Address

Phone/Mobile No.

Form of Bid Security (Bank Guarantee)

(To be stamped in accordance with Stamp Act)

(The non-Judicial Stamp Paper should be in the name of issuing Bank)

Date: _____

Bid Reference No.: _____

WHEREAS, _____ [Name of Bidder] (hereinafter called "the Bidder") has submitted his bid dated _____ [Date] for the supply of _____ [Name of Contract] (hereinafter called "the Bid").

KNOW ALL MEN by these presents that We _____ [Name of Bank] of _____ [Name of Place] having our registered office at _____ (hereinafter called "the Bank") are bound unto _____ [Name of Purchaser] (hereinafter called "the Purchaser ") in the sum of _____ 1 for which payment well and truly to be made to the said Purchaser the Bank binds himself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this ___ day of _____ 20___.

THE CONDITIONS of this obligation are:

- 1) If the Bidder withdraws its Bid during the period of bid validity specified by the Bidder in the Bid Submission Sheet, except as provided in the relevant Bid **Clause**;
- Or
- 2) If the Bidder refuses to accept the correction of errors in his Bid;
- Or
- 3) if the Bidder, having been notified of the acceptance of his Bid by the Employer during the period of Bid validity;
 - a) fails or refuses to execute the Form of Contract Agreement in accordance with the Instructions to Bidders, if required; or
 - b) fails or refuses to furnish the Performance Security, in accordance with the Instructions to Bidders;

We undertake to pay to the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it owing to the occurrence of one or all of the three conditions, specifying the occurred condition or conditions.

This Guarantee will remain in force up to and including the date ___ days after the deadline for submission of bids as such deadline is stated in the Instructions to Bidders or as it may be extended by the Purchaser, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this Guarantee should reach the Bank not later than the above date.

DATE _____ SIGNATURE OF THE BANK _____

WITNESS _____ SEAL _____

(Signature, Name, and Address)

Manufacturer's Authorization Format

Date:

NIT no:

To,

WHEREAS _____ who are official manufacturers
of _____ having factories at
_____ do hereby
authorize _____ to submit a bid in relation to the Invitation
for Bids indicated above, the purpose of which is to provide the following goods manufactured by us
_____ and to subsequently negotiate and sign the Contract.

Name _____

In the Capacity of _____

Signed _____

Duly authorized to sign the Authorization for and behalf of

Date _____

ANNEXURE: I

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

(Please tick mark where necessary.)

1)	Earnest money (EMD)	:Submitted/Not submitted
	a) Amount of EMD	:Rs.
	b) Submitted in the form of	
	Bank Guarantee /Demand Draft	: Yes/No.
2)	Validity of the offer	: days from the date of opening of 'Technical & Commercial Bid' &'Price bid'.
3)	Nature of price offered	
	i) 'FIRM' Price	: Yes/No
4)	Terms of payment (Whether agreeable to accept payment as specified in clause- 39)	: Yes/No
5)	Date of completion of supply/Erection. (Please specify the date of completion of supply/Erection as per specification)	: Yes/No
6)	Delay in Supply/Construction (Whether agreeable to accept AEGCL's terms as specified in Clause no- 31 of 'General conditions of supply & erection of AEGCL')	: Yes/No
7)	'Security and performance guarantee' (Whether agreeable to accept as specified in Clause no-40&41)	: Yes/No
8)	Sales tax clearance certificate of the current year furnished	: Yes/No
9)	Whether drawing etc. as per specification are furnished	: Yes/No
10)	List of orders executed for similar works furnished	: Yes/No
11)	Performance certificate from the Govt/Govt undertaking furnished	: Yes/No
12)	Deviation from the specifications	
	a) Technical	: Yes/No

	b) Commercial	: Yes/No
13)	Information in respect of technical capability is furnished	: Yes/No
14)	Information in respect of Financial capability certificate from the Banker is furnished	: Yes/No
15)	Certificate as per Cl.no. 15.2 enclosed	: Yes/No
16)	Certificate as per Cl.no. 15.3 enclosed	: Yes/No
17)	Copy of Contract Labour License, Cl. No. 15.5	: Yes/No
18)	PAN card as per Cl. No. 15.6	: Yes/No
19)	GST registration no. and valid labour license as per Cl. No. 15.7	: Yes/No
20)	Registered Power of Attorney as per Cl.no. 15.8 enclosed.	: Yes/No
21)	Audited Balance Sheet & IT Return as per Cl. No. 15.9	: Yes/No
22)	Valid Electrical License as per Cl. No. 15.10	: Yes/No

It is certified that the rates have been quoted as per terms and conditions laid down in the tender specification and without any deviation.

Name of the Bidder:-

Signature of the Bidder/Firm

Full Name

Postal Address

Phone/Mobile No.

ANNEXURE-II

GUARANTEED TECHNICAL PARTICULARS REQUIRED BY AEGCL FOR DISC INSULATOR, INSULATOR STRING

(A) DISC INSULATOR			
	DESCRIPTION	TECHNICAL PARAMETERS	
1	Type of insulators		
2	Colour		
3	Surface		
4	Size of the Disc		
5	Size of the pin Ball		
6	Maker's Name & Address		
7	Dimensions		
	(a) Porcelain disc diameter (mm)		
	(b) Unit spacing (mm)		
	(c) Creepage distance (mm) of each disc (min)		
8	Mechanical Values		
	(a) Electro Mechanical Strength (KN)		
	(b) Mechanical failing load (KN)		
9	Minimum dry Impulse withstand Test voltage		
10	Power frequency withstand test voltage		
11	Puncture Voltage		
(B) INSULATOR STRINGS			
		Single Suspension String	Single Tension String
1	Maker's Name & Address		
2	Applicable Standard		
	a) Type of Insulator units (Ball & socket)		
	b) Size and designation of ball & socket with standard to which it will conform		
	c) No. of Disc per String		
3	Minimum Failing Load		
4	Power frequency withstand test voltage		
5	Impulse withstand Test voltage		
6	Total length of the string without Arching horn (mm)		

7	Weight of the complete Insulator strings (Kg)		
8	Confirm whether string type tested with offered disc insulator as per IS (yes/No)		

(C)	PG CLAMP, T CLAMP, ISOLATOR TERMINAL CLAMP & Spacers	PG CLAMP (Zebra)	T CLAMP (Twin Zebra to Panther)	ISOLATOR TERMINAL CLAMP (Twin zebra)	Spacers (Twin Zebra)
1	Manufacture's Name & Address				
2	Standard to which confirming				
3	Application				
4	Type				
5	For connection to				
	1)Conductor size and arrangement				
	2)Equipment terminal size				
6	Material (State percentage composition of constituents and impurities present)				
	a)Clamp Body				
	b)Bolts and Nuts				
	c)Spring washers				
	d)Liners if any				
7	Rated current (Ampere)				
8	Maximum temperature rise over ambient temperature when carrying rated current(°C)				
9	Rated terminal load				
10	Factor of safety				
11	Maximum thickness of any part				
12	Weight of Clamp complete with hardware				
13	Maching accuracy for matching surface				
14	Service indoor/outdoor				
15	Manufactures Drg No.				
16	Type Tests Certificate				
17	Mechanical test				
	a)Heat run test				
	b)Materials compositing tests				
	c)Tests for checking blow holes cracks etc				