

ASSAM ELECTRICITY GRID CORPORATION LIMITED

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

CIN: U40101 AS2003SGC007238

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Bidding Document

For

**PROCUREMENT OF ACDB AND ARMOURED POWER CABLE(ALUMINIUM) AT
220/132/33kV SAMAGURI GSS**

DEPUTY GENERAL MANAGER

TEZPUR T&T CIRCLE

AEGCL, TEZPUR-784001

Tender Cost: ₹ 1000.00

EMD: ₹20,000.00

BID NO: AEGCL/DGM/TTC/TEZ/T-20/2023/220

Date:08.09.2023

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	PROCUREMENT OF ACDB AND ARMOURED POWER CABLE(ALUMINIUM) AT 220/132/33kV SAMAGURI GSS	9,90,138.00	30 days from the date of issue of dispatch clearance

1.0 Cost of Bidding Document:

Bidder must 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, Bijulee Bhawan, 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.**

2.1 Key Dates: -

- a) Bid Document available date: 10.00 Hrs. of 08-09-2023
- b) Bid Submission Start Time & date: 11:00hrs of 08-09-2023
- c) Bid Submission end time & date: 11:00hrs of 29-09-2023
- d) Techno-Commercial Bid Opening time: 13:00hrs of 29-09-2023

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. 20,000.00** only in the form of Bank Guarantee/Demand Draft from any Nationalized Bank payable at Guwahati in favour of **AEGCL, Bijulee Bhawan, 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 with in 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 initialed by the person signing the bid.

5.3 A bid submitted by a JV shall be signed to be legally binding on all partners.

5.4 Any interlineations, erasures, or overwriting shall be valid only if they are signed or initialed 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 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 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 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 2,98,000.00** 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 **2,98,000.00** and
- (2) the overall cash flow requirements for this contract and its current works commitment.

9.0 Experience:

9.1 Experience on similar nature of works 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. Bidder may be manufacturer of the offered products or a firm/company having authorization from a manufacturer. In case the bidder is not a manufacturer of the offered products, bidder must submit manufacturer's authorization

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

- (a) Three (3) similar completed works costing not less than **3,97,000.00**.
- (b) Two (2) similar completed works costing not less than **4,96,000.00**
- (c) One (1) similar completed works costing not less than **7,93,000.00**

9.3 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. 6.0*, Eligibility, Cl. No. 7.0, Financial Capability, Cl. No. **8.0**., 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.

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

(i) Absolute Approach is to be considered when there is fewer than five substantially responsive bidders and if the bid price is 20% or more below AEGCL's cost estimate then AEGCL's tender evaluation committee should clarify the Bid price with the bidder to determine whether the Bid is

Abnormally low.

(ii) Relative approach is to be considered when there are at least 5(five) nos. of substantially responsive bids and the lowest bid price is 20% or more below AEGCL's cost estimate. In this approach, first the Average bid price is determined and then by deducting the standard deviation from the Average bid price, potentially ALB may be determined.

(iii) 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:

- To identify ALB as per the steps mentioned in SI no. 10.6.(i) and 10.6.(ii), whichever is applicable.
- To seek and analyses the clarifications from the abnormally low Bidder in terms of resource inputs and pricing, including overheads, contingencies, and profit margins. In that respect, the committee may refer to guideline of World Bank, AIIB, ADB etc. prescribed for ALB.
- To decide whether to accept or reject the bid.
- On acceptance of the bid, whether Additional Performance Security is to be imposed on the bidder supplemented by adequate justification.

(iv) In case of acceptance of ALB with Additional Performance Security:

- If any abnormally low bid is accepted with additional performance security, it is to be noted that the total performance security should not exceed 20% of the

total contract value.

- 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.
- 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.

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 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, 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 must 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 been 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 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:

- 15.3.1 Bidders(s) knowledge from actual personal investigation of the resources of the region or District (S) in which he/they offers the work.
- 15.3.2 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.
- 15.3.3 In case the tenderer is a partnership Firm, the work experience, solvency and turn over shall be in the name of partnership Firm only.

15.3.4	GST registration No., Latest Bank solvency
15.3.5	Registered Power of attorney, if any.
15.3.6	I T Return for last three Years
15.3.7	Audited Balance Sheet for last three years
15.3.8	All other information and documents such as Guaranteed and Technical Particulars, type test reports, drawings etc., as required in the Technical Specification
15.3.9	In case the bidder is not a manufacturer of the offered products, bidder must submit manufacturer’s authorization

16.0 Negotiation with successful bidder:

	The AEGCL reserve the right to negotiate 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 PROCUREMENT OF ACDB AND ARMoured POWER CABLE (ALUMINIUM) AT 220/132/33kV SAMAGURI GSS. The Contractor's proposal shall be based on the use of materials complying fully with the requirements specified herein.
18.0	Scope The scope of work under this contract consists of design, engineering, manufacture, assembly, inspection, testing at manufacturer’s works before dispatch, packing, supply, including insurance

	during transit, delivery at site, providing all equipment and plants and transportation of incidental items not shown or specified but reasonably implied or necessary for the completion of work. The works to be executed shall be as per the items mentioned in the BOQ and as per the directions of the site engineer.
19.0	Contractor to inform himself fully
19.1	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.
19.2	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	Drawing and Documents
21.1	All drawings shall be provided by AEGCL during execution, wherever applicable. The Single line diagram of 415 V Sub AC Distribution Board is provided along with this bid for reference. Also, refer to clause 25.1.14
22.0	Employer Supervision
22.1	The scope of the duties of the Employer, pursuant to the contract, will include but not be limited to the following. <ul style="list-style-type: none"> 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.

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| | <ul style="list-style-type: none"> d) Review and suggest modification and improvement in completion schedules from time to time. e) Issue completion certificate. |
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23. 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 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.

24. 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 dispatch clearance will be provided only after Employer is satisfied.

25 TECHNICAL SPECIFICATIONS OF ACDB PANEL AND CABLES

25.1 General arrangement for LTAC panel

25.1.1 General Arrangement

The 415 volts L.T.A.C. panels shall be indoor floor mountings sheet metal clad type comprising of combination MCCBs and bus-bar chambers and equipped with circuits and equipment as specified. The different circuits shall be mounted above and below the bus bar chamber to form a suitable arrangement, except that the incomings shall be located at the front and mounted below the bus bar chamber. All equipment shall be suitable for the reception of the cables rising from the ground level. The switchboards shall be so designed as to be readily extensible. Panel shall have LED type phase indication lamps in incoming chamber.

25.1.2 BUS BARS

The phase and neutral bus bars shall be of high conductivity Copper of adequate uniform cross section. The current density shall not be more than $0.8A/mm^2$. The bus bars shall be insulated from the structure by means of durable non-hygroscopic, non-combustible, and non-tracking materials. Busbar joints shall be of bolted type. The current rating of bus bar shall not be less than 600A, 25kA for 1sec, IP54, 2mm cold rolled /3mm hot rolled (for both the 250KVA transformers)

25.1.3 CONNECTIONS:

All the connections for the tees from the bus bars shall be bolted type and suitable spring washers shall be provided to ensure proper jointing and material of the bolts shall be of suitable metal. All the connections shall be provided with thimbles of suitable rating.

25.1.4 EARTHING

Two separate earths shall be run and each metallic part of the stand/switches/bus bar chambers shall be earthed at two different places independently. The size of the earthing conductor for the switches and individual parts shall not be less than No. 8 SWG copper conductor and size of the main for earthing shall not be less than No. 3 SWG copper conductor.

25.1.5 BUS BAR CHAMBER

The bus bar chamber shall be made out of angle iron of suitable size as specified below along with other details: -

a) Thickness of sheet steel enclosures, doors, covers	
i) Cold rolled	2mm minimum
ii) Hot rolled	+2.5mm minimum
b) Degree of protection	IP-54 as per BS-2817/IEC-144
c) Colour of finish shade	
i) Interior	Glossy white
ii) Exterior	Light grey
	Semi glossy shade
d) Earthing bus material size	Copper 25x6 mm
e) Purchaser's earthing conductor Galvanised steel Material	Size 30x6 mm

f) Clearance in air of live parts	
i) Phase to Phase	80 mm
ii) Phase to Earth	80 mm

25.1.6 LABELS:

Each switch shall be provided with hard plastic sheet and duly held in boss framed of the size 75x50 mm for the incoming and outgoing feeders. The hard plastic sheet shall be of white colour and shall be suitably painted to indicate the incoming and outgoing feeders (as per the instructions of site engineer).

25.1.7 INTERLOCKING

Interlocks must be provided to ensure that the switch cover cannot be opened when the switch is in the closed position. It should however be possible for competent examiner to override this interlock and operate the switch with enclosure open.

25.1.8 FIRE HAZARDS

The switch and its associated apparatus shall be arranged to minimize fire hazards.

25.1.9 CLEARANCES

The clearances between phases and between phases and earth shall be as per IS-3072-1975 with latest amendments.

25.1.10 CONTACTS

All live contacts of the switch shall be adequately shrouded to prevent accidental contact when the equipment is either in the isolated or normal closed position and shall be silver plated of suitable thickness. The fixed contacts of the fuse switch unit shall be fully shrouded with arc resistant material. Material needs to be specified in the tender.

25.1.11 RUPTURING CAPACITY

The rupturing capacity of the bus bar switchgear/cartridges shall not be lower than 8 MVA at 415 volts. The individual fuse switch unit shall be provided in such a way that they can be removed from the front of the switch board for servicing and maintenance.

25.1.12 MARKING

All the switchgears shall be clearly marked with the following particulars: -

- a) Reference to the standard.
- b) Rated voltage.
- c) Rated normal current.
- d) Rated making capacity.
- e) Breaking capacity.
- f) Type of fuse/links to be used.
- g) Serial No.
- h) Year of Manufacturing

25.1.13 OTHER PARTICULARS

The Bidder should clearly furnish the following information in their offer: -

- a) Material and plating of the contacts.
- b) Current density assumed.
- c) Temperature rises under continuous full load over the ambient temp. of 50°C.
- d) Temperature rises under short circuit condition.
- e) Guaranteed Technical particulars as required in Annexure II

25.1.14 Detail Requirements

The 415 Volts, L.T.A.C. Switchgears shall have following circuits and equipment:

a) INCOMING: Three numbers fitted with following:

- i. Two Nos. 500 Amp TPN MCCB for Incomer (Microprocessor based) and 1 No. 500 Amp TPN MCCB for Bus-coupler (Microprocessor based).
- ii. One voltmeter, 0-500 Volts with selector switch.
- iii. One ammeter, 0-500 Amps with selector switch.
- iv. One K.W.H. meter with connected C.T. (as stated above)
- v. The Led lamp for each phase R, Y & B

b) OUTGOING:

- i) 6 nos. of 63A TPN MCCB
- ii. 6 nos. of 32A TPN MCCB
- iii. 10 nos. of 16A SP MCCB
- iv. 8 nos. of 10A SP MCCB

Detailed requirement of 1.1 kV grade, Copper conductor and Control cables

25.2.1 STANDARD

This section covers the technical specifications for design, engineering, manufacturing, inspection, testing at manufacturer's works, packaging, and delivery by road (properly packed in non-returnable steel drums), 1.1KV grade, Multi-stranded Copper, and Aluminium conductor, XLPE insulated, extruded PVC inner sheathed, GI round-wire armoured, extruded FRLS PVC ST2 outer sheathed. Power Cables and Control Cables for effectively grounded system, conforming to the latest revisions of IS: 7098 (Part -I), 1988 & as per the technical specifications attached herewith.

The materials covered under this specification shall comply with the requirements of the latest version of the following standards as amended up to date, except where specified otherwise.

i)	IS: 7098 (Part-I): 1988 (Amended up to date)	Specification for Cross Linked Polyethylene Insulated PVC sheathed Cables for working Voltage up to & including 1100 Volt
ii)	IS:8130-1984 (Amended up to date)	Specification for Conductors for insulated electric cables and flexible cords
iii)	IS:5831-1984 (Amended up to date)	PVC insulation & sheath of electric cables
iv)	IS: 3975-1970 (Amended up to date)	Specification for Low Carbon Galvanized steel strip for armouring of Cables.

	date)	
v)	IS:10810-1984 (Amended up to date)	Methods of test for Cables.
vi)	IS:10418-1982 (Amended up to date)	Cable Drums for Electric Cables.

25.2.2 RATED VOLTAGE:

The rated voltage of the cables shall be 1100 V.

25.2.3 CABLE SIZE & DATA

Cable sizes shall be offered /manufactured in accordance with parameters specified in standard technical data sheets / BOQ. Technical data sheet for any other cores/sizes required during detailed engineering shall be separately offered for Employer's approval by the contractor/supplier.

25.3 TECHNICAL REQUIREMENTS OF ARMoured CABLES

25.3.1 General

- a) The cables shall be suitable for laying in racks, ducts, trenches, conduits and underground buried installation with uncontrolled back fill and chances of flooding by water.
- b) The PVC and XLPE insulated cables shall be capable of withstanding a conductor temperature of 160°C during a short circuit.
- c) The Aluminium wires used for manufacturing the cables shall be true circular in shape before stranding and shall be uniformly good quality, free from defects. All aluminium used in the cables for conductors shall be of H2 grade.
- d) The fillers and inner sheath shall be of non-hygroscopic, fire-retardant material, shall be softer than insulation and outer sheath shall be suitable for the operating temperature of the cable
- e) Progressive sequential marking of the length of cable in metres at every one metre shall be provided on the outer sheath of all cables.
- f) Strip wire armouring method shall not be accepted for any of the cables. For control, cables only round wire armouring shall be used.
- e) The cables shall have outer sheath of a material with an oxygen index of not less than 29 and a temperature index of not less than 250°C.
- f) All the cables shall pass fire resistance test as per IS:1554 (Part-I)
- g) The normal current rating of all PVC insulated cables shall be as per IS:3961.
- h) Allowable tolerance on the overall diameter of the cables shall be plus or minus 2 mm.
- i) The PVC (70°C) insulated power cables shall be of FR type, C1 category, conforming to IS: 1554 (Part-I) and its amendments read along with this specification and shall be suitable for a steady conductor temperature of 70°C. The conductor shall be stranded aluminium. The Insulation shall be extruded PVC to type-A of IS: 5831. A distinct inner sheath shall be provided for the cable and shall be of extruded PVC. The outer sheath shall be extruded PVC to Type ST-1 of IS 5831 for all cables.
- j) round wire GI Steel armouring shall be used.

25.4. XLPE Power Cables

The XLPE (90°C) insulated cables shall be of FR type, C1 category conforming to IS: 7098 (Part-I) and its amendments read along with this specification. The conductor shall be stranded aluminium circular/sector shaped and compacted. In multicore cables, the core shall be identified by red, yellow, blue, and black coloured strips or colouring of insulation. A distinct inner sheath shall be provided in all multicore cables. For XLPE cables, the inner sheath shall be of extruded PVC of type ST-2 of IS: 5831. When armouring is specified for single core cables, the same shall consist of aluminium wires/strips. The outer sheath shall be extruded PVC of Type ST-2 of IS: 5831 for all XLPE cables.

25.5 PVC Power Cables

The PVC (70°C) insulated power cables shall be of FR type, C1 category, conforming to IS: 1554 (Part-1) and its amendments read along with this specification and shall be suitable for a steady conductor temperature of 70°C. The conductor shall be stranded aluminium. The Insulation shall be extruded PVC to type-A of IS: 5831. A distinct inner sheath shall be provided in all multicore cables. For multicore armoured cables, the inner sheath shall be of extruded PVC. The outer sheath shall be extruded PVC to Type ST-1 of IS 5831 for all cables.

25.5.1 DATA SHEET FOR CABLE

Sl No	Description	3 ½ C 300mm2	Other Power Cables	
			70 mm2, 35 mm2, 25mm2, 16 mm2	6 mm2& 4mm2
1	Applicable standard	IS: 7098/PT-I & its referred standards	IS: 1554/PT-I& its referred standards	
2	Type Designation	A2XWY	AYFY	AYWY
3	Rated Voltage	1100	1100	
4	Type & Category	FR&C1	FR&C1	
5	Suitable for earthed or unearthed system	Suitable		
6	Conductor			
	a) Material	Standard aluminium as per IS:8130		
	b) Grade	H2(Electrolyte grade)		
	c)Number of wires(no)	As per IS 8130		
	d)Form of Conductor	Stranded compacted circular/sector shaped	Stranded compacted circular/sector shaped	Noncompactd Stranded circular
	e) Direction of lay of stranded layers	Outermost layer shall be R.H lay & opposite in successive layers.		
7	Insulation			
	a) Composition	Extruded	Extruded PVC type	Extruded PVC type

	of insulation	XLPE as per IS-7098 Part (1)	A as per IS-5831	A as per IS-5831
	b) Thickness of insulation(mm)	As per applicable Standard		
8	Inner Sheath material	Extruded PVC type ST-2 as per IS-5831	Extruded PVC type ST-1 as per IS-5831	
9	Type and material of armour	Gal.Steel wire		
10	Outer Sheath (PVC)	ST-1 & FR	ST-2 & FR	
11	Overall diameter of cable	As per applicable Standard		

25.5.2 Requirement: The requirement of cables is supply of armoured power cable (aluminium) of 2 Core 6 sq mm, 4 core 16 sq mm, 3 ½ core 35 sq mm and 3 ½ core 300 sq mm of 300 meters each respectively.

25.6. TESTS

All the tests specified below shall be carried out in accordance with the Indian Standards by the manufacturer in the presence of Purchaser's representative. If the cable fails to pass the test specified, the Purchaser shall have the option to reject it. Shipping release shall be obtained from the Purchaser's representative. The Purchaser, however reserves the right to waive off the inspection.

The tests at works shall include electrical, mechanical, and hydraulic tests in accordance with the appropriate clauses of Statutory Regulation, relevant codes, and standards, in addition any test called for by the Purchaser or his representative to ensure that the equipment being supplied fulfils the requirement of the specification.

For test not covered by any code or specifically mentioned in this specification, the test procedures are to be agreed with the Purchaser.

25.6.1 Pre-Dispatch Inspection

The manufacturer shall be given at least 15 days advance notice prior to the commencement of testing, so that Purchaser's representative can plan to witness the tests.

All the tests indicated in the test clause of this specification shall be carried out in the presence of Purchaser's representative by the manufacturer and shall provide all the facilities and equipment for testing.

Six copies of the Test Certificate shall be furnished to the Purchaser for approval prior to dispatch of cables from factory.

Visual check to conform the details given in this specification is to be done. In addition to the above, the general workmanship of the cable drums and cables laid in drums shall be checked.

Manufacturer shall have proper test set up for testing all the routine tests & type

tests on finished cables as per IEC.

List of type tests mentioned in the tender specifications shall be conducted on four drum irrespective of type test certificates given or not.

25.6.2. Type Test

Type tests on four randomly selected cable drums will have to be conducted in the presence of the department's representative. The test samples will be taken from finished cables. This test shall be in accordance to IS: 7098, Part-1,1988.

a. Test on Conductor

- Annealing test for copper conductors
- Tensile test for aluminium conductor
- Wrapping test for aluminium conductor
- Conductor Resistance Test

b. Test on Insulation

- Physical dimension measurement
- Tensile strength and elongation at break
- Hot set test
- Shrinkage test
- Ageing in air oven
- Water absorption test

c. Test on round Armour

- Physical dimension measurement
- Tensile strength
- Elongation at break
- Torsion test for round wires
- Winding test for firmed wire
- Mass of zinc coating.
- Uniformity of zinc coating
- Resistivity measurement, Resistance test for armour

d. Test on Sheath

- Physical dimension measurement
- Tensile strength & Elongation at break test
- Ageing in air oven
- Loss of mass in air oven
- Shrinkage test
- Hot deformation test
- Heat shock test
- Thermal stability test

e. Insulation Resistance Test

f. High Voltage Test at room temperature

g. Volume resistivity at room temperature & at 90° C. (IS-10810-Part 43)

h. Flammability test

i. *Test requirement of FRLS inner and outer sheath*

The inner and outer sheath of cables shall meet the following test requirements related to flame retardant, low smoke emission, low acid, and toxic gas emission. The BIDDERS shall have proper test apparatus to conduct all the relevant tests as per the applicable standards:

- Flame retardant test on single cable.
- Oxygen Index Test

The critical oxygen index value shall be minimum 29 when tested at 27±2°C as per ASTM-D-2863

- Temperature index test

Temperature index value shall be minimum 250°C at oxygen index of 21 when tested as per NES 715.

- Flammability test

- Smoke Density Test

The cables shall satisfy the tests conducted to evaluate the percentage obscuration by smoke in an optical system placed in the path of the smoke. The maximum smoke density rating shall not be more than 60% when tested as per ASTM-D-2843.

- Acid Gas Generation test (halogen acid gas evolution)

The hydrochloric acid generation when tested as per IEC 754-1 shall be less than 20% by weight.

- Test for specific optical density of smoke
- Anti termite and rodent property test

The sequence of electric tests shall be as per the relevant Indian/International standards. The Bidder shall submit the sequence of tests for the approval of the purchaser before conducting the tests. A copy of the adopted standard shall also be supplied.

25.6.3 Routine Test (On each drum)

The following routine tests shall be carried out by the Manufacturer on each and every length of the cable in the presence of Purchaser's representative at manufacturer's works.

- a. Resistance test for conductors
- b. Insulation resistance test
- c. High voltage test

25.6.4. Conductor purity test

Two samples of aluminium and copper shall be taken from any of the finished set of cables at random and the sample shall be tested for its purity at a NABL accredited lab.

25.6.5. Qualifying Criteria:

The test results should be within limits as per IS 7098. All the routine tests as per IS 7098 / IEC shall be conducted and passed as per the limits given in the standards. All the bought-out certificates will be verified and the test results shall be as per respective standards.

26. PACKAGING

- i. Each drum shall consist of single length cable ≥ 500 metres (for sizes less than 1000sqmm.).
- ii. The cable shall be wound on *non-returnable steel drums* of suitable size, packed, and marked.
- iii. Packing shall be sturdy to protect the cable from any injury during transportation, handling, and storage. The cut ends of the cable shall be sealed by means of non-hygroscopic sealing material preferably Heat shrinkable end caps.
- iv. One end of the cable shall be brought out of the drum and suitably clamped to the drum flange with proper mechanical protection. Location of the other end may be marked on the drum.
- v. The cable shall be placed on drums in such a manner that it will be protected from injury during transit. Each end of the cable shall be firmly and properly secured to the drum. No undue stress shall appear on cables when laid on drums.
- vi. The cable drum shall carry the following information stencilled on a metallic label, securely attached to each end of the drum:
 1. Reference to the Indian standard
 2. Manufacturer's name, brand, or trade mark
 3. Type of cable and voltage grade
 4. No. of cores
 5. Nominal cross-sectional area of conductor
 6. Cable code
 7. Length of cable on drum
 8. No. of lengths on reel, drum, or coil (if more than one)
 9. Gross weight
 10. Country of manufacture
 11. Year of manufacture
 12. Direction of rotation of drum (an arrow)
 13. ISI certification mark

27. PREFERRED MAKE

POLYCAB/KEI/KEC or reputed brand possessing system certification of ISO 9001:2008, ISO14001:2004, OHSAS18001:2007 & EN 16001-2009 and product certifications IS: 7098 (Part-I), CE, UL etc. Quotations without these certification details will not be considered for technical evaluation.

Preferred make of bought out material:

- | | | |
|----------------------------|---|---------------------------|
| a. Aluminium for Conductor | : | Hindalco/Balco/Nalco |
| b. Copper for Conductor | : | Hindustan Copper/Hindalco |
| c. XLPE compound of | : | Dow/Borealis |

Insulator

28. . GUARANTEE

All the cables shall be guaranteed against faulty material, defective design & poor workmanship for a period of 18 months from the date of commissioning. The materials becoming defective during the guarantee period shall be replaced free of cost and the defects arising out of the works shall be rectified free of charge without delay.

29. QUALITY ASSURANCE

To ensure that the supply under the scope of this Contract whether manufactured or performed within the Contractor's works or at his Sub Contractor's premises or at site or at any other place of work are in, accordance with the specifications, the Contractor shall adopt suitable quality assurance programme to control such activities at all points necessary

The Quality plan shall be mutually discussed and approved by the Employer. The Contractor shall be required to submit all the Quality Assurance Documents as stipulated in the Quality Plan at the time of Employers inspection of equipment/material. 2.8.2 The Employer or his duly authorized representatives reserves the right to carry out Quality Audit and quality surveillance of the systems and procedures of the Contractors/his vendors Quality Management and Control Activities.

30.0 **Contract Agreement:**

30.1 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.

30.2 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.

31.0 **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:

31.1 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.

31.2 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.

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

2009.

32.0 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.

33.0 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.

34.0 Warranty:

34.1 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.

34.2 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 destination. The supplier will provide warranty for the works executed by them.

34.3 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.

34.4 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.

34.5 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. The successful bidder should warrant the free replacement of any damaged/malfunctioning switchgear or measuring equipment and its accessories during the warranty period .

35.0 Safety:

35.1 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.

35.2 **COVID-19 rules must be strictly followed during the working period.**

36.0 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.
37.0	Payment terms:
37.1	No advance/Mobilization advance shall be made in this contract.
37.2	Progressive payments for erection works
37.2.1	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.
37.2.2	Maximum 4(four) Nos. of progressive erection Invoice/ Bill would be entertained during entire erection work.
37.2.3	The 1 st Progressive erection Invoice/Bill would be entertained on completion of 30% of total erection cost of the Project.
37.2.4	Minimum value of 2 nd and 3 rd invoice should be 20% of the total order value for the foundation, erection, and civil works.
37.2.5	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.
37.3	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
38	Performance security deposit:
38.1	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, Bijulee Bhawan, Paltanbazar, Guwahati-1 , and such security deposit shall be valid up to 30 days beyond the warranty period of 18 (Eighteen) 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.
38.2	Please note that, if the selected Bidder / Firm fails to furnish the requisite performance security as stated above and signs the contract within the stipulated period, 10 percent security money will be deducted from the total Bill value.
38.3	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.

38.4	No interest shall be payable on such deposits.
39	Retention Money:
39.1	In addition to above performance security deposit, retention money will be retained by the Engineer/Purchaser as per Bid Clause 33. The amount will be held by the Purchaser (AEGCL) till the work under the contract is completed and the completion certificate is issued.
39.2	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.
39.3	No interest shall be payable on such deposit.

40.0 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 be 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.

41.0 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.

42.0 Right to Reject:

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

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

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	Item Description	Qty	Unit	Rate(in Rs)	Amount (in Rs)
1.	Supply of Sub ACDB at 220/132/33kV Samaguri GSS	1	No.		
2	Armoured Power Cable (Aluminium)				
	2CX 6 Sqmm	300	mtr		
	4CX 16 Sqmm	300			
	3 ½ CX 35 Sqmm	300			
	3 ½ CX 300 Sqmm	300			
Total inclusive of F&I					
Add 18% GST					
Grand 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 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

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- 37)	: Yes/No
5)	Date of completion of supply/Erection. (Please specify the date of completion of supply/Erection as per specification)	: Yes/No
6)	'Security and performance guarantee' (Whether agreeable to accept as specified in Clause no- 34&35)	: Yes/No
7)	List of orders executed for similar works furnished	: Yes/No
8)	Performance certificate from the Govt/Govt undertaking furnished	: Yes/No

9)	Deviation from the specifications	
	a) Technical	: Yes/No
	b) Commercial	: Yes/No
10)	Information in respect of technical capability is furnished	: Yes/No
11)	Information in respect of financial capability certificate from the Banker is furnished as per Cl. No. 15.3.6 and 15.3.7	: Yes/No
12)	PAN card as per Cl. No. 15.3.2	: Yes/No
13)	GST registration no. as per Cl. No. 15.3.4	: Yes/No
14)	Registered Power of Attorney as per Cl.no. 15.3.5 enclosed.	: Yes/No

Name of the Bidder: -

Signature of the Bidder/Firm

Full Name

Postal Address

Phone/Mobile No.

ANNEXURE-II

GUARANTEED TECHNICAL AND OTHER PARTICULARS

(To be filled in by Bidder and shall be furnished with the Technical Bid)

1. 415V ACDB

S No.	Description	Particulars
1.0	Manufacturer's name and address	
2.0	Detail dimensions of ACDB	
3.0	Thickness of steel sheets proposed to be used	
4.0	Paint used	
5.0	Busbars: a. Standard applicable: b. Material and cross section: c. Current density d. Current rating e. Type of insulator	
6.0	Details of wiring: a. Cross-section: b. Voltage grade: c. Solid or stranded: d. Material	
7.0	Details of indicating Instruments: a. Standards Applicable: b. Manufacturer's name and type: c. Range: d. Accuracy class	
8.0	Details of 500A TPN MCCB (Microprocessor based) a. Manufacturer's name: b. Standard applicable c. Rated Voltage d. Rated Continuous current e. Rated making/breaking current	
9.0	Details of 63A TPN MCCB	

S No.	Description	Particulars
	a. Manufacturer's name: b. Standard applicable c. Rated Voltage d. Rated Continuous current e. Rated making/breaking current	
10.0	Details of 32A TPN MCCB a. Manufacturer's name: b. Standard applicable c. Rated Voltage d. Rated Continuous current e. Rated making/breaking current	
11.0	Details of 16A SP MCB a. Manufacturer's name: b. Standard applicable c. Rated Voltage d. Rated Continuous current e. Rated making/breaking current	
12.0	Details of 16A SP MCB a. Manufacturer's name: b. Standard applicable c. Rated Voltage d. Rated Continuous current e. Rated making/breaking current	
13.0	Details of CT operated Static energy meter	
14.0	Details of CTs	

2) Power cable(armoured)

Sl no	Description	Details			
		2Cx6sqmm	4CX 16 Sqmm	3 ½ CX 35 Sqmm	3 ½ C X 300

					Sqmm
A	Cores				
1	Nom Area of conductor in sq mm.				
2	Voltage Grade				
B	Conductor				
1	Standard Applicable				
2	Material Copper Grade				
3	Purity				
4	Nominal Cross Sectional Area				
5	Form of conductor/circular shaped				
6	No. of strands				
7	Nominal dia of each strand				
8	Temperature co-efficient of resistance at 20 degrees Celsius				
9	Continuous current rating when laid in air in ambient temp. of 50° C and of maximum conductor temp. of 90° C of XLPE cable				
C	Insulation				
1	Standard Applicable				
2	Material (Mention Type)				
3	XLPE is cured by steam process or Gas process?				
4	Minimum Average Thickness				
5	Tolerance on the smallest of the measured values of thickness of Insulation				
6	Minimum volume resistivity at 27 deg cel				
7	Minimum volume resistivity at 70 deg cel				
8	Colour Scheme for identification of cores				
9	Average Dielectric Strength				
D	Inner Sheath				
1	Standard Applicable				
2	Material for inner sheath				

3	Minimum thickness of inner sheath				
4	Whether extruded				
E	Armour				
1	Standard Applicable				
2	Shape				
3	Size				
4	Material for Armour				
F	Outer Sheath/Overall Covering				
	Standard Applicable				
2	Material (type)				
3	Whether extruded				
4	Minimum average thickness				
5	Whether anti-termite treatment has been given in the outer sheath				
6	Whether flame retardant low smoke compound added in the outer sheath				
G	Electrical Properties				
1	Maximum DC Resistance of conductor at 20 deg Celsius in ohms/km				
2	Maximum DC Resistance of amour at 20 deg Celsius in ohms/km				
3	Maximum Permissible conductor temperature				
	Under continuous full load				
	Under transient conditions				
4	Loss Tangent at normal frequency				
5	Reactance at maximum operating temperature 50 Hz (ohm/km)				
6	Capacitance at maximum operating temperature 50 Hz				

	(ohm/km)				
7	Total Impedance at maximum operating temperature 50 Hz (ohm/km)				
8	Recommended continuous current rating				
	In Ground at 30 deg C Ground Temperature (A)				
	In Trench/Ducts at 40 deg C (A)				
	In Air at 40 deg C ambient Temperature (A)				
9	Short Ckt Current Rating for 1 sec duration (in KA)				
	Conductor				
	Armour				
10	Minimum volume Resistivity of insulation				
	At 27 °C in Ohm cm				
	At Max operating temperature in Ohm-cm				
11	Approximate AC resistance at max. Operating temperature				
	Phase				
	Neutral				
H	Mechanical Data				
1	Overall Dia of the cable				
2	Dia of the cable under the sheath				
3	Diameter under armour				
4	Diameter over the stranded cores				
5	Wight of cable per km.				
6	Drum length				
7	Tolerance on drum length				
8	Total weight of the drum				
9	Dimension of the drum				
10	Recommended minimum				

	installation radius/ bending radius				
11	Maximum safe pulling force				
12	Whether identification as per clause of the specification is being provided				
13	Whether packing has been done as per clause of the specification				