

North Eastern Electricity Supply Company of Orissa Limited (NESCO)
Western Electricity Supply Company of Orissa Limited (WESCO)
Southern Electricity Supply Company of Orissa Limited (SOUTHCO)
Registered Office,
Plot No-N-1/22, Nayapalli, Bhubaneswar, Orissa-751015
Tel No. (0674) 255 0043, Fax No. (0674) 255 8343

VOLUME- I

(Tender Notification: CSO/28/55 & 100 mm² AAAC)

2009 - 2010

Date: 23.10.1009

Section – I

INVITATION FOR BIDS (IFB)

2009-10

(Tender Notification: CSO/28/55 & 100 mm² AAC)

Date: 23.10.2009

Registered Office of NESCO, WESCO & SOUTHCO

- 1.0 The Registered Office of NESCO, WESCO & SOUTHCO (here in after referred as CSO) invites Sealed tenders in Two part Bids ("Technical Bids" & "Commercial Bids") for supply of Power Transformers from reputed manufacturers having requisite experience and financial capabilities as specified in clause 6.0 below. The sealed envelopes shall be duly superscribed as "TENDER NOTICE/CSO /28/ 55 & 100 mm² AAAC due for opening on dt. 05.11.09".

Sl. No.	Size of Conductor	Qty in Km.			
		WESCO	NESCO	SOUTHCO	TOTAL
1	55 mm ² AAA Conductor	80	80	250	410
2	100 mm ² AAA Conductor	50	50	13	113

- 2.0 The schedule of specifications with detail terms & conditions can be obtained from address given below against demand draft of Rs. 10,000/- plus 4% VAT drawn in favour of NESCO Ltd., payable at Bhubaneswar. The tender papers will be issued in all working days upto of each day & will continue upto 04.11.2009.

The tender documents can also be downloaded from the website of the three companies as stated below:-

"nescoorissa.com", "wescoorissa.com" & "southcoorissa.com"

In case tender papers are downloaded from the above websites, then the bidder has to enclose a demand draft covering the cost of bid documents as stated above in a separate envelope with suitable superscription "Cost of Bid Documents : Tender Notice Ref : CSO/28/ 55 & 100 mm² AAAC ". This envelope should accompany the Bid Documents and to be enclosed in the envelope containing the "Technical Bid" & "Bid Security".

In case the prospective bidder wants that the tender documents are to be forwarded to him by post, the same can be availed by sending a request letter along with Demand Draft covering the cost of the bidding document + Rs.50.00. This office shall not take any responsibility for delay in receipt of such request letter by the purchaser or delay in receipt of tender documents by bidder in transit on account of any reasons what so ever.

- 3.0 Offers will be received upto 1.00 PM. on dt. 05.11.2009 & the "Technical Bid" will be opened the same day at 3.00 PM. in presence of the authorized representatives of the bidders. After evaluation of Technical Bids, the eligible bidders shall be intimated to attend the Opening of Commercial Bids not later than 15 days from the date of opening of the Technical Bid as stated earlier.
- 4.0 The schedule of specifications with detail terms & conditions are enclosed. It is the sole responsibility of the bidder to ensure that the bid documents reach this office on or before the cut off due date of tender opening.

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5.0 Purchaser reserves the right to reject any or all bids without assigning any reason thereof and alter the quantity of materials mentioned in the Tender documents at the time of placing purchase orders. Tender will be summarily rejected if:

- (i). Bid security @ 1% (One percent) of the Tender value is not deposited in shape of Bank Draft in favor of NESCO Ltd., payable at Bhubaneswar or Bank Guarantee. Bid security if any submitted against previous Tenders, will not be adjusted towards Bid security against this Tender.
- (ii). The offer does not contain "FOR, Berhampur price indicating break-up towards all taxes & duties".
- (iii). Complete Technical details are not enclosed.
- (iv). Tender is received after due time due to any reason.

6.0 Qualification Criteria:-

The prospective bidder must qualify all of the following requirements to be eligible to participate in the bidding.

- a) Bidder must be a manufacturer & have successfully carried out Type Test of conductors from any NABL Accredited Laboratory. The said Type Test report should not be prior to 5 yrs. from the due date of opening of the Technical Bid. Type test is mandatory for each size of Conductor to be quoted.
- b) Bidder must quote 100% tender qty. against any or both size of conductors.
- c) Bidder should have supplied at least 100% of the offered quantity in any one year out of the past 3 financial years to electricity supply utilities / PSUs. The bidder should enclose Performance Certificates from the above users as proof of successful operation in field for minimum 2 years.

7.0 Project Completion Schedules:-

Description	Date
Issue of Tender Document	23.10.2009
Receipt of Queries from Bidders (if any)	28.10.2009
Replies to the Queries	29.10..2009
Submission of Bids	05.11.2009 by 1.00 PM
Opening of Technical Bids	05.11.2009 at 3.00 PM
Intimation to Bidders for Opening of Commercial Bid	15.11.2009
Opening of Commercial Bid (To be confirmed later)	22.11.2009 (Tentative Date)
Supply completion	To be completed by 2 months from the date of LOI

8.0 All correspondences with regard to the above shall be made to the following address:

Registered Office of NESCO, WESCO & SOUTHCO

Dy.General. Manager (Tech) / Sr. Manager (MA&RA)

Central Services Office

(NESCO, WESCO & SOUTHCO)

Plot No. N-1/22, Nayapalli, Bhubaneswar – 751 015

Fax: (0674) 255 8343, Ph-(0674) 255 0043

Email: biswakesh.dash@orissadiscoms.com / susanta.saranghi@orissadiscoms.com

Mobile: 93382 14150 / 93376 46022

SECTION – II

**INSTRUCTION TO BIDDERS (ITB)
2009-2010**

(Tender Notification: CSO/28/55 & 100 mm² AAC)

Date: 23.10.2009

Registered Office of NESCO, WESCO & SOUTHCO

A. GENERAL

1.0 NESCO, WESCO & SOUTHCO hereinafter referred to as the "Purchaser" are desirous of implementing the various Systems Improvement works at their respective licensed area in the state of Orissa.

2.0 SCOPE OF WORK

The scope shall include Design, Manufacture, Shop Testing at works of 55 & 100 mm² AAA Conductor conforming to the Technical Specifications enclosed along with Packing, Forwarding, Freight and Insurance and Unloading and proper stacking at Purchaser's stores.

3.0 DISCLAIMER

3.01 This Document includes statements, which reflect various assumptions, which may or may not be correct. Each Bidder/Bidding Consortium should conduct its own estimation and analysis and should check the accuracy, reliability and completeness of the information in this Document and obtain independent advice from appropriate sources in their own interest.

3.02 Neither Purchaser nor its employees will have any liability whatsoever to any Bidder or any other person under the law or contract, the principles of restitution or unjust enrichment or otherwise for any loss, expense or damage whatsoever which may arise from or be incurred or suffered in connection with anything contained in this Document, any matter deemed to form part of this Document, provision of Services and any other information supplied by or on behalf of Purchaser or its employees, or otherwise arising in any way from the selection process for the Supply.

3.03 Though adequate care has been taken while issuing the Bid document, the Bidder should satisfy itself that documents are complete in all respects. Intimation of any discrepancy shall be given to this office immediately.

3.04 This Document and the information contained herein are Strictly Confidential and are for the use of only the person(s) to whom it is issued. It may not be copied or distributed by the recipient to third parties (other than in confidence to the recipient's professional advisors).

4.0 COST OF BIDDING

The Bidder shall bear all costs associated with the preparation and submission of its Bid and Purchaser will in no case be responsible or liable for those costs.

B. BIDDING DOCUMENTS

5.01 The Scope of Work, Bidding Procedures and Contract Terms are described in the Bidding Documents. In addition to the covering letter accompanying Bidding Documents, the Bidding Documents include:

Volume - I

- | | | | |
|-----|---|---|---------------|
| (a) | Invitation for Bids (IFB) | - | Section - I |
| (b) | Instructions to Bidders (ITB) | - | Section - II |
| (c) | General Conditions of Contract (GCC) | - | Section - III |
| (d) | Technical Specifications (TS) & GTP Formats | - | Section - IV |

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Volume - II

- (a) Bid Form - Annexure – I
- (b) BG Formats - Annexure – II
- (c) Price Schedule - Annexure – III
- (d) Cost Analysis - Annexure - IV
- (e) GTP Formats - Annexure – V
- (f) Past Performance Details - Annexure - VI

5.02 The Bidder is expected to examine the Bidding Documents, including all Instructions, Forms, Terms and Specifications. Failure to furnish all information required by the Bidding Documents or submission of a Bid not substantially responsive to the Bidding Documents in every respect will may result in the rejection of the Bid.

6.0 AMENDMENT OF BIDDING DOCUMENTS

6.01 At any time prior to the deadline for submission of Bids, the Purchaser may, for any reasons, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the Bidding Documents by Amendment.

6.02 The Amendment shall be part of the Bidding Documents, pursuant to Clause 5.01, and it will be notified in writing by Fax / e-mail to all the Bidders who have received the Bidding Documents and confirmed their participation to Bid, and will be binding on them.

6.03 In order to afford prospective Bidders reasonable time in which to take the Amendment into account in preparing their Bids, the Purchaser may, at its discretion, extend the deadline for the submission of Bids.

C. PREPARATION OF BIDS

7.0 LANGUAGE OF BID

The Bid prepared by the Bidder, and all correspondence and documents relating to the Bid exchanged by the Bidder and the Purchaser, shall be written in the English Language. Any printed literature furnished by the Bidder may be written in another Language, provided that this literature is accompanied by an English translation, in which case, for purposes of interpretation of the Bid, the English translation shall govern.

8.0 DOCUMENTS COMPRISING THE BID

The Bid prepared and submitted by the Bidder shall comprise the following components:

- (a) Bid Form, Price & other Schedules (STRICTLY AS PER FORMAT) and Technical Data Sheets completed in accordance with Clause 9.0, 10.0, 11.0 and Technical Specification;
- (b) All the Bids must be accompanied with the required bid security as mentioned in the Section-I against each tender.
- (c) Power of Attorney indicating that the person(s) signing the Bid have the authority to sign the Bid and thus that the Bid is binding upon the Bidder during the full period of its validity, in accordance with clause 12.0.

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9.0 BID FORM

9.01 The Bidder shall complete an 'Original' and another one 'Copy' of the Bid Form and the appropriate Price & Other Schedules and Technical Data Sheets furnished in the Volume-II of the Bidding Documents.

9.02 Bid Security

Pursuant to Clause 8.0 (b) above, the bidder shall furnish, as part of its bid, a bid security amounting to 1% (one percent) of the total bid value (FOR Destination) as already specified in the Section-I. The bid security is required to protect the Purchaser against the risk of Bidder's conduct which would warrant the security's forfeiture.

The bid security shall be denominated in the currency of the bid, and shall be in the following form:

(a) Bank Guarantee issued by any scheduled bank strictly as per the format enclosed and shall be valid for a period of thirty (30) days beyond the validity of the bid.

(b) Bank Draft in favour of NESCO Ltd, payable at Bhubaneswar.

Unsuccessful bidders' bid security will be discharged or returned as promptly as possible but not later than thirty (30) days after the expiration of the period of bid validity.

The successful bidder's bid security will be discharged upon furnishing the performance security.

The bid security may be forfeited:

(a) if the Bidder:

(i) Withdraws its bid during the period of bid validity specified by the Bidder in the Bid Form; or

(b) In the case of a successful Bidder, if the Bidder fails:

(i) to sign the Contract, or

(ii) to furnish the required performance security.

10.0 BID PRICES

10.01 Bidders shall quote with a break-up of prices for individual items. The total Bid Price shall also cover all the Supplier's obligations mentioned in or reasonably to be inferred from the Bidding Documents in respect of Design, Supply, Transportation to site, all in accordance with the requirement of Bidding Documents. The Bidder shall complete the appropriate Price Schedules included herein, stating the Unit Price for each item & total Price.

10.02 The prices offered shall be inclusive of all costs as well as Duties, Taxes and Levies paid or payable during execution of the supply work, break up of price constituents, should be there.

10.03 Prices quoted by the Bidder shall be "Firm" and not subject to any price adjustment during the performance of the Contract. A Bid submitted with an adjustable price quotation will be treated as non-responsive and rejected.

11.0 BID CURRENCIES

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Prices shall be quoted in Indian Rupees Only.

12.0 PERIOD OF VALIDITY OF BIDS

12.01 Bids shall remain valid for 120 days from the date of opening of the Commercial Bid.

12.02 Notwithstanding Clause 12.01 above, the Purchaser may solicit the Bidder's consent to an extension of the Period of Bid Validity. The request and the responses thereto shall be made in writing by Fax / e-mail.

13.0 ALTERNATIVE BIDS

Bidders shall submit Bids, which comply with the Bidding Documents. Alternative Bids will not be considered. The attention of Bidders is drawn to the provisions of Clause 22.03 & 22.04 regarding the rejection of Bids, which are not substantially responsive to the requirements of the Bidding Documents.

14.0 FORMAT AND SIGNING OF BID

14.01 The original Bid Form and accompanying documents (as specified in Clause 9.0), clearly marked "Original Bid", plus one copy must be received by the Purchaser at the date, time and place specified pursuant to Clauses 15.0 and 16.0. In the event of any discrepancy between the original and the copies, the original shall govern.

14.02 The original and copy of the Bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to sign on behalf of the Bidder. Such authorization shall be indicated by written Power-of-Attorney accompanying the Bid.

14.03 The Bid shall contain no interlineations, erasures or overwriting except as necessary to correct errors made by the Bidder, in which case such corrections shall be initialed by the person or persons signing the Bid.

D. SUBMISSION OF BIDS

15.0 SEALING AND MARKING OF BIDS

15.01 Bid submission: One original & one Copy (hard copies) of all the Bid Documents shall be sealed and submitted to the Purchaser before the closing time for submission of the bid. One set print out of Section III & Section IV of the Bid Document duly signed and stamped at every page shall have to be submitted along with the bid.

15.02 The Technical Documents and the Bid Security shall be enclosed in a sealed envelope and the said envelope shall be superscribed with "Technical Bid & Bid Security". The price bid shall be inside another sealed envelope with superscription "Price Bid". Both these envelopes shall be sealed inside another big envelope. All the envelopes should bear the Name and Address of the Bidder and marking for the Original and Copy. The envelopes should be super-scribed with "Tender Notice No. & Due date of opening".

15.03 The Bidders have the option of sending the Bids in person. Bids submitted by Telex/Telegram/Fax will not be accepted. No request from any Bidder to the Purchaser to collect the proposals from Airlines/Cargo Agents etc shall be entertained by the Purchaser.

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16.0 DEADLINE FOR SUBMISSION OF BIDS

16.01 The original Bid, together with the required copies, must be received by the Purchaser at the address specified no later than **1.00 PM. on 05.11.2009.**

16.02 The Purchaser may, at its discretion, extend the deadline for the submission of Bids by amending the Bidding Documents in accordance with Clause 9.0, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

17.0 ONE BID PER BIDDER

Each Bidder shall submit only one Bid either by itself, or as a partner in a Joint Venture. A Bidder who submits or participates in more than one Bid will cause all those Bids to be rejected.

18.0 LATE BIDS

Any Bid received by the Purchaser after the deadline for submission of Bids prescribed by the Purchaser, pursuant to Clause 16.0, will be declared "Late" and rejected and returned unopened to the Bidder.

19.0 MODIFICATIONS AND WITHDRAWAL OF BIDS

19.01 The Bidder is not allowed to modify or withdraw its Bid after the Bid's submission.

19.02 No Bid may be modified to the deadline for Bids.

E. EVALUATION OF BID

20.0 PROCESS TO BE CONFIDENTIAL

Information relating to the examination, clarification, evaluation and comparison of Bids and recommendations for the award of a contract shall not be disclosed to Bidders or any other persons not officially concerned with such process. Any effort by a Bidder to influence the Purchaser's processing of Bids or award decisions may result in the rejection of the Bidder's Bid.

21.0 CLARIFICATION OF BIDS

To assist in the examination, evaluation and comparison of Bids, the Purchaser may, at its discretion, ask the Bidder for a clarification of its Bid. All responses to requests for clarification shall be in writing and no change in the price or substance of the Bid shall be sought, offered or permitted.

22.0 PRELIMINARY EXAMINATION OF BIDS / RESPONSIVENESS

22.01 Purchaser will examine the Bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the Bids are generally in order.

22.02 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price per item that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price per item will be corrected. If there is a discrepancy between the

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Total Amount and the sum of the total price per item, the sum of the total price per item shall prevail and the Total Amount will be corrected.

22.03 Prior to the detailed evaluation, Purchaser will determine the substantial responsiveness of each Bid to the Bidding Documents including production capability and acceptable quality of the Goods offered. A substantially responsive Bid is one, which conforms to all the terms and conditions of the Bidding Documents without material deviation.

22.04 A Bid determined as not substantially responsive will be rejected by the Purchaser and / or the Purchaser and may not subsequently be made responsive by the Bidder by correction of the non-conformity.

23.0 EVALUATION AND COMPARISON OF BIDS

23.01 The evaluation of Bids shall be done based on the delivered cost competitiveness basis.

23.02 The evaluation of the Bids shall be a stage-wise procedure. The following stages are identified for evaluation purposes:

In the first stage, the Bids would be subjected to a responsiveness check. The Technical Proposals and the Conditional ties of the Bidders would be evaluated.

Subsequently, the Financial Proposals along with Supplementary Financial Proposals, if any, of Bidders with Techno-commercially Acceptable Bids shall be considered for final evaluation.

23.03 The Purchaser's evaluation of a Bid will take into account, in addition to the Bid price, the following factors, in the manner and to the extent indicated in this Clause:

(a) Supply Schedule

(b) Deviations from Bidding Documents

Bidders shall base their Bid price on the terms and conditions specified in the Bidding Documents.

The cost of all quantifiable deviations and omissions from the specification, terms and conditions specified in Bidding Documents shall be evaluated. The Purchaser will make its own assessment of the cost of any deviation for the purpose of ensuring fair comparison of Bids.

23.04 Any adjustments in price, which result from the above procedures, shall be added for the purposes of comparative evaluation only to arrive at an "Evaluated Bid Price". Bid Prices quoted by Bidders shall remain unaltered.

F. AWARD OF CONTRACT

24.0 CONTACTING THE PURCHASER

24.01 From the time of Bid opening to the time of contract award, if any Bidder wishes to contact the Purchaser on any matter related to the Bid, it should do so in writing.

24.02 Any effort by a Bidder to influence the Purchaser and / or in the Purchaser's decisions in respect of Bid evaluation, Bid comparison or Contract Award, will result in the rejection of the Bidder's Bid.

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25.0 PURCHASER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

The Purchaser reserves the right to accept or reject any Bid and to annul the Bidding process and reject all Bids at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for the Purchaser's action.

26.0 AWARD OF CONTRACT

The Purchaser will award the Contract to the successful Bidder whose Bid has been determined to be the lowest - evaluated responsive Bid, provided further that the Bidder has been determined to be qualified to satisfactorily perform the Contract. Purchaser reserves the right to award order other bidders in the tender, provided it is required for progress of project & provided he agrees to come to the lowest rate.

27.0 THE PURCHASER'S RIGHT TO VARY QUANTITIES

The Purchaser reserves the right to vary the quantity i.e. increase or decrease the numbers/ quantities without any change in terms and conditions during the execution of the Order.

28.0 LETTER OF INTENT/ NOTIFICATION OF AWARD

The letter of intent / Notification of Award shall be issued to the successful Bidder whose bids have been considered responsive, techno-commercially acceptable and evaluated to be the Lowest (L1). The successful Bidder shall be required to furnish a letter of acceptance within 7 days of issue of the letter of intent /Notification of Award by Purchaser.

29.0 CORRUPT OR FRAUDULENT PRACTICES

30.01 The Purchaser requires that the Bidders observe the highest standard of ethics during the procurement and execution of the Project. In pursuance of this policy, the Purchaser:

(a) Defines, for the purposes of this provision, the terms set forth below as follows:

(i) "Corrupt practice" means behavior on the part of officials in the public or private sectors by which they improperly and unlawfully enrich themselves and/or those close to them, or induce others to do so, by misusing the position in which they are placed, and it includes the offering, giving, receiving, or soliciting of anything of value to influence the action of any such official in the procurement process or in contract execution; and

(ii) "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Purchaser, and includes collusive practice among Bidders (prior to or after Bid submission) designed to establish Bid prices at artificial non-competitive levels and to deprive the Purchaser of the benefits of free and open competition.

(b) Will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question;

(c) Will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded an contract if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, an contract.

30.02 Furthermore, Bidders shall be aware of the provision stated in the General Conditions of Contract.

SECTION - III

(GENERAL CONDITIONS OF CONTRACT)

2009-2010

(Tender Notification: CSO/28/55 & 100 mm² AAC)

Date: 23.10.2009

Registered Office of NESCO, WESCO & SOUTHCO

GENERAL CONDITIONS OF CONTRACT (GCC)

1.0 General Instructions

- 1.01 All the Bids shall be prepared and submitted in accordance with these instructions.
- 1.02 Bidder shall bear all costs associated with the preparation and delivery of its Bid, and the Purchaser will in no case shall be responsible or liable for these costs.
- 1.03 The Bid should be submitted by the Bidder in whose name the bid document has been issued and under no circumstances it shall be transferred/sold to any other party.
- 1.04 The Purchaser reserves the right to request for any additional information and also reserves the right to reject the proposal of any Bidder, if in the opinion of the Purchaser, the data in support of Tender requirement is incomplete.
- 1.05 The Bidder is expected to examine all instructions, forms, terms & conditions and specifications in the Bid Documents. Failure to furnish all information required in the Bid Documents or submission of a Bid not substantially responsive to the Bid Documents in every respect may result in rejection of the Bid. However, the Purchaser's decision in regard to the responsiveness and rejection of bids shall be final and binding without any obligation, financial or otherwise, on the Purchaser.

2.0 Definition of Terms

- 2.01 "Purchaser" shall mean NESCO / WESCO / SOUTHCO.
- 2.02 "Bidder" shall mean the firm who quotes against this bid document issued by the Purchaser. "Contractor" or "Seller" shall mean the successful Bidder and/or Bidders whose bid has been accepted by the Purchaser and on whom the "Letter of intent" is placed by the Purchaser and shall include his heirs, legal representatives, successors and permitted assigns wherever the context so admits.
- 2.03 "Site" shall mean the Electricity Distribution Area of the Company.
- 2.04 "Specification" shall mean collectively all the terms and stipulations contained in those portions of this bid document known as Instruction to Bidder, Bid form and other forms as per Volume - III, General Conditions of Contract, Specifications and the Amendments, Revisions, Deletions or Additions, as may be made by the Purchaser from time to time.
- 2.05 "Letter of Intent" shall mean the official notice issued by the Purchaser notifying the Contractor that his proposal has been accepted and it shall include amendments thereto, if any, issued by the Purchaser. The "Letter of Intent" issued by the Purchaser shall be binding on the "Contractor". The date of Letter of Intent shall be taken as the effective date of the commencement of contract.
- 2.06 "Purchase Order" shall mean the Purchase Order and amendments thereof and the drawings, specifications and other documents / papers referred to therein which shall constitute the "Contract".
- 2.07 "Month" shall mean the calendar month and "Day" shall mean the calendar day.
- 2.08 "Codes and Standards" shall mean all the applicable codes and standards as indicated in the Technical Specification.
- 2.09 "Offer Sheet" shall mean Bidder's firm offer submitted to Purchaser in accordance with the specification.

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- 2.10 "Contract" shall mean THE "letter of Intent" issued by the Purchaser.
- 2.11 "Contract Price" shall mean the price referred to in the "Letter of intent".
- 2.12 "Contract Period" shall mean the period during which the "Contract" shall be executed as agreed between the Contractor and the Purchaser in the Contract inclusive of extended contract period for reasons beyond the control of the Contractor and/or Purchaser due to force majeure.
- 2.13 "Goods" shall mean all items to be supplied under Purchase Order whether raw materials, processes materials, equipment, fabricated products, drawings or other documents as applicable.
- 2.14 "Store" shall mean the Purchaser store as defined elsewhere in this tender document.
- 3.0 Contract Documents & Priority
- 3.01 Contract Documents: The Specification, terms and conditions of the contract shall consist solely of these Tender conditions and offer sheet.
- 3.02 Priority: Should there be any discrepancy between any term hereof and any term of the Offer Sheet, the terms of these tender document shall prevail.
- 4.0 Scope of Work
- 4.01 The "Scope of Work" shall be on the basis of Bidder's responsibility, completely covering the obligations, responsibility and workmanship, provided in this Bid Enquiry whether implicit or explicit.
- 4.02 The Purchaser reserves the right to vary the quantity i.e increase or decrease, which shall be communicated to successful bidder during project execution.
- 4.03 All relevant drawings, data and instruction manuals and other necessary inputs shall be under the scope of contract.
- 5.0 General Requirements
- 5.01 The bidder shall supply, deliver best quality goods.
- 5.02 The company also reserves the right to add from the scope of work or delete from the scope of work so assigned to the Supplier, if the circumstances so warrant.
- 5.03 The contractor shall be responsible for loading and unloading of all materials with proper material handling equipment.
- 6.0 Quality Assurance and Inspection
- 6.01 Immediately on award of contract, the bidder shall prepare detailed quality assurance plan / test procedure identifying the various stages of manufacture, quality checks performed at each stage, raw material inspection and the Customer hold points. The document shall also furnish details of method of checking, inspection and acceptance standards / values and get the approval of Purchaser before proceeding with manufacturing. However, Purchaser shall have the right to review the inspection reports, quality checks and results of contractors in house inspection department which are not Customer hold points and the contractor shall comply with the remarks made by purchaser or his representative on such reviews with regards to further testing, rectification or rejection, etc.

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- 6.02 Witness and Hold points are critical steps in manufacturing, inspection and testing where the contractor is obliged to notify the Purchaser in advance so that it may be witnessed by the Purchaser. Final inspection is a mandatory hold point. The contractor has to proceed with the work past a hold point only after clearance by purchaser or a witness waiver letter from Purchaser.
- 6.03 The performance of waiver of QA activity by Purchaser at any stage of manufacturing does not relieve the contractor of any obligation to perform in accordance with and meet all the requirements of the procurement documents and also all the codes & reference documents mentioned in the procurement document nor shall it preclude subsequent rejection by the purchaser.
- 6.04 On completion of manufacturing the items can be dispatched only after issue of shipping release by the Purchaser.
- 6.05 All testing and inspection shall be done without any extra cost.
- 6.06 Purchaser reserves the right to send any material out of the supply to any recognized laboratory for testing. In case the material is found not in order with the technical requirement / specification, the charges of testing along with any other penalty which may be levied is to be borne by the bidder. To avoid any conflict the Seller is advised to send his representative to the stores to see that the material sent for testing is being sealed in the presence of bidder's representative.
- 7.0 Packing, Packing List & Marking
- 7.01 Packing: Seller shall pack or shall cause to be packed all Commodities in such a manner as shall be reasonably suitable for shipment by road or rail to Orissa Distribution Companies without any risk of damage in transit. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage.
- 7.02 Packing List: One copy of the packing list shall be enclosed in each package delivered. There shall also be enclosed in one package a master packing list identifying each individual package, which is part of the shipment. On any packaging where it is not feasible to place the packing list inside the container, all pertinent information shall be stenciled on the outside and will thus constitute a packing list.
- 7.03 Marking: Seller shall mark each container, box or package for easy identification of his materials as follows:
- Commodity Name:
Name of the Supplier:
Net Weight:
Size:
- 8 Commissioning Spares: The Seller shall replace, free of cost, any spares which may be found defective at the time of commissioning.
- 9.0 Price Basis
- Bidders shall quote individual price breakup for the quoted items.
- The price shall be inclusive of all taxes, Duties and other Levies of whatsoever nature, transportation to site and vice versa and in-transit Insurances.

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The above Prices shall also include unloading and proper stacking at/ from Purchaser Stores to site / stores.

10.0 Terms of Payment

10.01 The Payment shall be made as under:

- a) 100% Payment with taxes & duties on Prorata basis within 30 days of receipt of goods in our specified stores in good condition subject to detailed verification thereof and approval of Guarantee & Test certificate.
- b) For claiming 100% payment a Composite Performance Bank Guarantee of 10% of the total order value of the goods, is to be provided which shall remain valid for a period beyond 90 days from the warranty period as per clause no. 12.0.
- c) All Payments shall be made after certification from Purchaser's Engineer Incharge. All Payments are subject to receipt of correct Documents.

11.0 Price Validity

All bids submitted shall remain valid, firm and subject to unconditional acceptance by Purchaser for 120 days post bid opening date. For awarded Contract, the prices shall remain valid and firm till contract completion.

12.0 Warranty / Guarantee

12.01 The bidder shall guarantee for the equipments/workmanship for a minimum period of 24 months from the date of commissioning or 30 months from the date of last receipt goods at stores, whichever is earlier. The manufacturer shall guarantee to replace or repair to the satisfaction of the purchaser the defective parts at site free of cost within the above period. Should however, the manufacturer fails to do so within a reasonable time, the purchaser reserves the right to effect repair or replacement and recover such charges for repair or replacement from the contractor.

12.02 If during the defect liability period any services performed found to be defective, these shall be promptly rectified by contract its own cost (including the cost of dismantling and reinstallation) on the instruction of Purchaser.

13.0 Composite Performance Bank Guarantee

13.01 Within Fifteen (15) days from the date of the Award notice, Seller shall submit a "Composite Performance Bank Guarantee" (CPBG) in favour of Purchaser equivalent to Ten percent (10%) of the total price of the Contract. The CPBG shall be valid for a period beyond 90 days from the warranty period as per clause no. 12.0. The BG format is provided in Vol.-II, Annexure - II of the Bidding Documents

13.02 The Composite Performance Bank Guarantee established under Clause 13.01 shall be forfeited without recourse to the seller and payable against the presentation by Purchaser to the bank with a claim that the seller has failed to comply with any term or condition set forth in the Contract.

13.03 The Composite Performance Bank Guarantee established under will be automatically and unconditionally forfeited without recourse if Purchaser in its sole discretion determines that Seller has failed to comply with any Terms or Condition set forth in the contract.

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- 13.04 The Composite Performance Bank Guarantees will be released without interest within thirty (30) days from the last date up to which the Composite Performance Bank Guarantee has to be kept valid (as defined in Clause 13.01).
- 13.05 Upon submission of the composite bank guarantee, the bid security (EMD) shall be released
- 14.0 TECHNICAL INFORMATION / DATA.
- The company and the contractor, to the extent of their respective rights permitting to do so, shall exchange such technical information and data as is reasonably required by each party to perform its obligations and responsibilities. The company and the contractor agree to keep each other in confidence and to use the same degree of care as it uses with respect to its own proprietary data to prevent its disclosure to third parties of all technical and confidential information. The technical information, drawings, records and other document shall not be copied, transferred, traced or divulged and / or disclosed to third party in full / part not misused in any other form. This technical information, drawing etc. shall be returned to the company with all approved copies and duplicates. In the event of any breach of this contract, the contractor shall indemnify the company against any loss, cost of damages or claim by any party in respect of such breach
- 15.0 Effective Date of Commencement of Contract:
- The date of the issue of the Letter of Intent/Purchase Order which ever is earlier shall be treated as the effective date of the commencement of contract.
- 16.0 Taxes & Duties:
- All taxes, duties, levies of whatsoever nature, octroi, turnover tax, service tax, income tax, work contract tax etc., levied by State or Central Governments or local bodies shall be to the contractor 's account including any taxes, duties and levies which may be levied fresh by the Governments during currency of the Contract. The contractor shall furnish their Excise/Sales Tax registration number, PAN No. etc. in the bid documents as well as Invoice/Challans etc.
- 17.0 Time – The Essence of Contract
- The time and the date of completion of the "Supply" as stipulated in the Letter Of Intent / Purchase order issued to the Contractor shall be deemed to be the essence of the "Contract". The Supply has to be completed not later than the aforesaid Schedule and date of completion of supply.
- 18.0 Liquidated Damages (LD)
- 18.01 If supply of items / equipments is delayed beyond the supply schedule as stipulated in purchase order/LOI, then the Contractor shall be liable to pay to the Purchaser as LD for such delay, a sum of 1% of the contract price for every week delay or part thereof. The LD shall be computed on the undelivered value of goods as per the delivery schedule.
- 18.02 The total amount of LD for delay under the contract will be subject to a maximum of Ten percent (10%) of the contract price
- 18.03 The Purchaser may, without prejudice to any method of recovery, deduct the amount for such damages from any amount due or which may become due to the Contractor or from the Performance Bank Guarantee or file a claim against the contractor.
the contractor.

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19.0 The Laws and Jurisdiction of Contract:

19.01 The laws applicable to this Contract shall be the Laws in force in India.

19.02 All disputes arising in connection with the present Contract shall be settled amicably by mutual consultation failing which shall be finally settled as per the rules of Arbitration and Conciliation Act, 1996 at the discretion of Purchaser. The jurisdiction of arbitration shall be at Bhubaneswar, Orissa, India

20.0 Events of Default

20.01 Events of Default. Each of the following events or occurrences shall constitute an event of default ("Event of Default") under the Contract:

- (a) Seller fails or refuses to pay any amounts due under the Contract;
- (b) Seller fails or refuses to deliver Commodities conforming to this Bid document / specifications, or fails to deliver Commodities within the period specified in P.O. or any extension thereof
- (c) Seller becomes insolvent or unable to pay its debts when due, or commits any act of bankruptcy, such as filing any petition in any bankruptcy, winding-up or reorganization proceeding, or acknowledges in writing its insolvency or inability to pay its debts; or the Seller's creditors file any petition relating to bankruptcy of Seller;
- (d) Seller otherwise fails or refuses to perform or observe any term or condition of the Contract and such failure is not remediable or, if remediable, continues for a period of 30 days after receipt by the Seller of notice of such failure from Purchaser.

21.0 Consequences of Default.

- (a) If an Event of Default shall occur and be continuing, Purchaser may forthwith terminate the Contract by written notice.
- (b) In the event of an Event of Default, Purchaser may, without prejudice to any other right granted to it by law, or the Contract, take any or all of the following actions;
 - (i) Present for payment, to the relevant bank the Performance Bank Guarantee;
 - (ii) Purchase the same or similar Commodities from any third party; and/or
 - (iii) Recover any losses and/or additional expenses Purchaser may incur as a result of Seller's default.

22.0 Force Majeure

22.01 The term "Force Majeure" as employed herein include, but are not limited to, acts of God or force of nature, landslide, earthquake, flood, fire, lightning, explosion, major storm (hurricane, typhoon, cyclone etc.) or major storm warning, tidal wave, shipwreck and perils of navigation, act of war (declared or undeclared) or public enemy, strike (excluding employee strikes, lockouts or other industrial disputes or action solely among employee of Contractor or its subcontractors) act or omission of sovereign states or those purporting to represent sovereign states, blockade, embargo,

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quarantine, public disorder, sabotage, accident or similar events beyond the control of the parties or either of them.

Force Majeure shall not include occurrences as follows:

- a) Late delivery of materials caused by congestion at Seller's facilities or elsewhere, an oversold condition of the market, inefficiencies, or similar occurrences.
- b) Late performance by Seller and/or Sub-Seller caused by unavailability of raw materials, supervisors or labour, inefficiencies or similar occurrences.
- c) Mechanical breakdown of any item of Seller's or its Sub-Seller's equipment, plant or machinery.
- d) Delays due to ordinary storm or inclement weather or
- e) Non-conformance by Sub-Seller.

Unless the delay arises out of a Force Majeure occurrence and is beyond both Seller's and Sub-Seller's or Seller's control and an alternate acceptable source of services, equipment or material is unavailable. Additionally, Force Majeure shall not include financial distress of Seller or any Sub-Seller.

- 22.02 In the event of either party being rendered unable by Force Majeure to perform any obligation required to be performed by them under the Contract, the relative obligation of the party affected by such Force Majeure shall be suspended for the period during which such cause lasts. Time for performance of the relative obligation suspended by Force Majeure shall then stand extended by the period for which cause lasts.
- 22.03 Upon the occurrence of any Force Majeure event, the party so affected in the discharge of its obligation shall promptly, but no later than seven (7) days give written notice of such event to the other party. The affected party shall make every reasonable effort to remove or remedy the cause of such Force Majeure or mitigate its effect as quickly as possible. If such occurrence results in the suspension of all or part of the Work for a continuous period of more than, the parties shall meet and determine the measures to be taken.
- 22.04 Any delay or failure in performance by either party hereto shall not give rise to any claims for damages or loss of anticipated profits it, and to the extent, such delay or failure is caused by Force Majeure.
- 23.0 Transfer and Sub-Letting
- The Contractor shall not sublet, transfer, assign or otherwise part with the Contract or any part thereof, either directly or indirectly, without prior written permission of the Purchaser.
- 24.0 THIRD PARTY INSURANCE
- Contractor shall take the Insurance of Equipment during Transit. Any Claim pertaining to this shall be the responsibility of the Contractor.
- 25.0 Recoveries
- When ever under this contract any money is recoverable from and payable by the bidder, the purchaser shall be entitled to recover such sum by appropriating in part or in whole by detecting any sum due to which any time thereafter may become due from the Seller in this or any other contract. Should the sum be not sufficient to cover the full amount recoverable the bidder shall pay to the purchaser on demand the remaining balance.

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26.0 Waiver

Failure to enforce any condition herein contained shall not operate as a waiver of the condition itself or any subsequent breach thereof.

27.0 Indemnification

27.01 Notwithstanding contrary to anything contained in this Tender, Contractor shall at his costs and risks make good any loss or damage to the property of the Purchaser and/or the other Contractor engaged by the Purchaser and/or the employees of the Purchaser and/or employees of the other Contractor engaged by the Purchaser whatsoever arising out of the negligence of the Contractor while performing the obligations under this contract.

27.02 Subject to this Clause 23.0 Purchaser shall, at its sole cost and expense, defend, indemnify and hold harmless Contractor and his assignees /or the employees of the Contractor whatsoever arising out of the negligence or willful act or omission or from the default of the Purchaser in the performance of the Contractor.

SECTION - IV

(TECHNICAL SPECIFICATIONS)

2009-2010

(Tender Notification: CSO/28/55 & 100 mm² AAC)

Date: 23.10.2009

55&100 mm² ALL ALUMINIUM ALLOY CONDUCTOR (AAAC)

TECHNICAL SPECIFICATIONS

1.0 Applicable Standards

The AAAC Conductors shall generally confirm to IS: 398 (Part-IV), IEC: 104-1987 except where otherwise specified herein.

2.0 Technical details

The details of the AAAC Conductors of various sizes are given below:

2.1 100 mm² AAA Conductor

a)	Code name	:	AAAC
b)	Stranding and wire	:	7/4.26 mm dia
c)	Number of Strands	:	7
d)	Total sectional area	:	100 mm ² .
e)	Overall diameter	:	12.78 mm
f)	Approximate mass	:	273 kg/km
g)	Calculated D.C. resistance at 20 deg. Centigrade maximum	:	0.3390 ohm/km
h)	Approx. Calculated breaking load (Minimum UTS)	:	29.26 kN
i)	Direction of lay of outer layer	:	Right hand.
j)	Modulus of Elasticity	:	0.6324x10 ⁶ kg/cm ²
k)	Co-efficient of Linear Expansion (Per°C)	:	23.0x10 ⁻⁶
l)	Details of aluminum strand:		
(i)	Minimum breaking load of Strand before stranding	:	4.40 Kn
(ii)	Minimum breaking load of Strand after stranding	:	4.18 kN
(iii)	Maximum D., C, resistance of strand at 20 dg. Centigrade	:	2.345 Ohms/km
(iv)	Weight	:	38.48 kg/km
(M)			
(i)	Standard length of conductor	:	2000 mtr
(ii)	Conductor length in drum	:	4000 mtr

2.2 55 mm² AAA Conductor

a)	Code name	:	AAAC
b)	Stranding and wire	:	7/3.15 mm dia
c)	Number of Strands	:	7
d)	Total sectional area	:	55 mm ² .
e)	Overall diameter	:	9.45 mm
f)	Approximate mass	:	149.2 kg/km
g)	Calculated D.C. resistance at 20 deg. Centigrade maximum	:	0.6210 ohm/km

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h)	Approx. Calculated breaking load (Minimum UTS)	:	16.03 kN
i)	Direction of lay of outer layer	:	Right hand.
j)	Modulus of Elasticity	:	0.6324x10 ⁶ kg/cm ²
k)	Co-efficient of Linear Expansion (Per°C)	:	23.0x10 ⁻⁶
l)	Details of aluminum strand:		
(i)	Minimum breaking load of Strand before stranding	:	1.52 Kn
(ii)	Minimum breaking load of Strand after stranding	:	1.44 kN
(iii)	Maximum D., C, resistance of strand at 20 dg. Centigrade	:	6.845 Ohms/km
(iv)	Weight	:	13.25 kg/km
(M)			
(i)	Standard length of conductor	:	2000 mtr
(ii)	Conductor length in drum	:	4000 mtr

3.0 Workmanship

3.1 All the Al-alloy strands shall be smooth, uniform and free from all imperfections, such as spills and splits, die marks, scratches, abrasions, etc., after drawing and also after stranding.

3.2 The finished conductor shall be smooth, compact, uniform and free from all imperfections including kinks (protrusion of wires), scuff marks, dents, pressmarks, cut marks, wire cross over, over riding, looseness (wire being dislocated by finger/hand pressure and/or unusual bangle noise on tapping), material inclusions, white rust, powder formation or black spot (on account of reaction with trapped rain water etc.) dirt, grit etc.

4.0 Joints in Wires.

There will be no joint in any wire of the conductor, except those made in the base rod or wire before final drawing.

4.0 Stranding.

In all constructions, the successive layers shall be stranded in opposite directions. The wires in each layer shall be evenly and closely stranded round the underlying wire or wires. The outer most layer of wires shall have a right hand lay. The lay ratio of any layer shall not be greater than the lay ratio of the layer immediately beneath it.

6.0 Tolerances.

The manufacturing tolerances to the extent of the following limits only shall be permitted in the diameter of individual strands and lay-ratio of the conductor.

Lay ratio of Conductor

	Maximum	Minimum
Aluminum Alloy 3/6 wire layer	14	10

7.0 Materials

Aluminum Alloy

The wire shall be of heat treated aluminum, magnesium silicon alloy having a composition appropriate to the mechanical & electrical properties as specified in IS 398 (Part-4)

The Aluminum Alloy strands drawn from heat treated aluminum alloy redraw rods conforming to Type B as per IEC: 104-1987, the chemical composition of redrawn rods shall conform to IS 1997-91, as given below:

Elements	Present
Si	0.50-0.90
Mg	0.60-0.90
Fe	0.50 max
Cu	0.10 max
Mn	0.03 max
Cr	0.03 max
Zn	0.10 max
B	0.06 max
Other Element (Each)	0.03 max
Other Element (Total)	0.10 max
Al	Remainder

8.0 Standard Length

8.1 The standard length of the conductor shall be 2000 meters. Contractor shall indicate the standard length of the conductor to be offered by them. A tolerance of +/- 0.5% on the standard length offered by the Bidder shall be permitted.

8.2 Bidder shall also indicate the maximum single length, above the standard length, he can manufacture in the guaranteed technical particulars of offer. The Owner reserves the right to place orders for the above lengths on the same terms and conditions applicable for the standard lengths during the execution of the Contract.

9.0 Tests

The following tests shall be conducted on samples of each type of conductor.

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9.1 Acceptance Tests.

- (a) Visual check for joints scratches etc.)
And length measurement of) As per clause 14
Conductor by rewinding.)
- (b) Dimensional check on Al-alloy)
Strands
- (c) Check for lay-ratio) As per clause 14
- (d) Elongation test)
- (e) Breaking load/tensile test on)
Aluminum alloy strands.)
- (f) DC resistance test on Aluminum)
Alloy strands) IEC 104, IEC 1089
- (g) Wrap test on Aluminum)
Alloy strands
- (h) Visual and dimensional)
Check on drum) IS: 1778-1980

9.2 Routine Test.

- (a) Check to ensure that there are no joints.
- (b) Check that there are no cuts, fins etc. on the strands.
- (c) Check that drums are as per Specification.
- (d) All acceptance test as mentioned above to be carried out on each

9.3 Tests During Manufacture

- Chemical analysis of Aluminum alloy)
Used for making strands.) As per clause 14

9.4 Testing Expenses.

- a) The type test charges for the conductor should be to the account of the quoted in the relevant schedule of Bid proposal Sheets.
- b) 3.5.1 Contractor shall indicate the laboratories in which they propose to conduct the type tests. They shall ensure that adequate facilities are available in the laboratories and the tests can be completed in these laboratories within the time schedule guaranteed by them.
- c) 3.5.2 In case of failure in any type test, the Contractor is either required to manufacture fresh sample lot and repeat all the tests successfully once or repeat

that particular type test three times successfully on the sample selected from the already manufactured lot at his own expenses. In case a fresh lot is manufactured for testing, then the lot already manufactured shall be rejected.

- d) 3.5.3 The entire cost of testing for the acceptance and routine tests and Tests during manufacture specified herein shall be treated as included in the quoted unit price of conductor, except for the expenses of the inspector/Owner's representative.
- e) 3.5.4 In case of failure in any type test, if repeat type tests are required to be conducted, then all the expenses for deputation of Inspector/Owners' representative shall be deducted from the contract price. Also if on receipt of the Contractor's notice of testing, the Owner's representative does not find 'PLANT' to be ready for testing the expenses incurred by the Owner for re-deputation shall be deducted from contract price.

9.5 Additional Tests.

- a) The Owner reserves the right of having at his own expenses any other test(s) of reasonable nature carried out at Contractor's premises, at site or in any other place in addition to the aforesaid type, acceptance and routine tests to satisfy himself that the materials comply with the Specifications.
- b) The Owner also reserves the right to conduct all the tests mentioned in this specification at his own expense on the samples drawn from the site at Contractor's premises or at any other test centre. In case of evidence of non-compliance, it shall be binding on the part of Contractor to prove the compliance of the items to the technical specifications by repeat tests, or correction of deficiencies, or replacement of defective items all without any extra cost to the Owner.

9.6 Sample Batch for Type Testing

- a) The contractor shall offer material for selection of samples for type testing only after getting Quality Assurance Plan approved from Owner's Quality Assurance Deptt. The sample shall be manufactured strictly in accordance with the Quality Assurance Plan approved by Owner.
- b) The Contractor shall offer at least three drums for selection of sample required for conducting all the type tests.
- c) The Contractor is required to carry out all the acceptance tests successfully in presence of Owner's representative before sample selection.

9.7 Test Reports.

- a) Copies of type test reports shall be furnished in at least six copies along with one original. One copy will be returned duly certified by the Owner only after which the commercial production of the material shall start.
- b) Record of routine test reports shall be maintained by the Supplier at his works for periodic inspection by the Owner's representative.

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- c) Test certificate of tests during manufacture shall be maintained by the Contractor. These shall be produced for verification as and when desired by the Owner.

9.8 Inspection.

- a) The Owner's representative shall at all times be entitled to have access to the works and all places of manufacture, where conductor shall be manufactured and representative shall have full facilities for unrestricted inspection of the Contractor's works, raw materials and process of manufacture for conducting necessary tests as detailed herein.
- b) The Contractor shall keep the Owner informed in advance of the time of starting and of the progress of manufacture of conductor in its various stages so that arrangements can be made for inspection.
- c) No material shall be dispatched from its point of manufacture before it has been satisfactorily inspected and tested, unless the inspection is waived off by the Owner in writing. In the latter case also, the conductor shall be dispatched only after satisfactory testing for all tests specified herein have been completed.
- d) The acceptance of any quantity of material shall in no way relieve the Contractor of any of his responsibilities for meeting all requirements of the Specification, and shall not prevent subsequent rejection if such material is later found to be defective.

9.9 Test Facilities.

The following additional test facilities shall be available at the Contractor's works:

- a) Calibration of various testing and measuring equipment including tensile testing machine, resistance measurement facilities, burette, thermometer, barometer etc.
- b) Standard resistance for calibration of resistance bridges.
- c) Finished conductor shall be checked for length verification and surface finish on separate rewinding machine at reduced speed (variable from 8 to 16 meters per minute). The rewinding facilities shall have appropriate clutch system and free of vibrations, jerks etc. with traverse laying facilities.

10. Packing.

- a) The conductor shall be supplied in returnable, strong, wooden drums provided with lagging of adequate strength, constructed to protect the conductor against any damage and displacement during transit, storage and subsequent handling and stringing operations in the field. The Contractor shall be responsible for any loss or damage during transportation handling and storage due to improper packing. The drums shall generally conform to IS: 1778-1980, except as otherwise specified hereinafter.
- b) The drums shall be suitable for wheel mounting and for letting off the conductor under a minimum controlled tension of the order of 5 KN.
- c) The Contractor should submit their proposed drum drawings along with the bid.
- d) The Contractor may offer more than one length of the conductor in a single drum.

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- e) All wooden components shall be manufactured out of seasoned soft wood free from defects that may materially weaken the component parts of the drums. Preservative treatment shall be applied to the entire drum with preservatives of a quality, which is not harmful to the conductor.
- f) The flanges shall be of two ply construction with a total thickness of 64 mm with each ply at right angles to the adjacent ply and nailed together. The nails shall be driven from the inside face flange, punched and then clenched on the outer face. Flange boards shall not be less than the nominal thickness by more than 2mm. There shall not be less than 2 nails per board in each circle. Where a slot is cut in the flange to receive the inner end of the conductor the entrance shall be in line with the periphery of the barrel.
- g) The wooden battens used for making the barrel of the conductor shall be of segmental type. These shall be nailed to the barrel supports with at least two nails. The batten shall be closely butted and shall provide a round barrel with smooth external surface. The edges of the battens shall be rounded or chamfered to avoid damage to the conductor.
- h) Barrel studs shall be used for the construction of drums. The flanges shall be holed and the barrel supports slotted to receive them. The barrel studs shall be treaded over a length on either end, sufficient to accommodate washers, spindle plates and nuts for fixing flanges at the required spacing.
- i) Normally, the nuts on the studs shall stand protruded of the flanges. All the nails used on the inner surface of the flanges and the drum barrel shall be counter sunk. The ends of barrel shall generally be flushed with the top of the nuts.
- j) The inner cheek of the flanges and drum barrel surface shall be painted with bitumen based paint.
- k) Before reeling, card board or double corrugated or thick bituminous water proof bamboo paper shall be secured to the drum barrel and inside of flanges of the drum by means of a suitable commercial adhesive material. The paper should be dried before use. After reeling the conductor, the exposed surface of the outer layer of conductor shall be wrapped with water proof thick bituminous bamboo paper to preserve the conductor from dirt, grit and damage during transport and handling.
- l) A minimum space of 75 mm for conductor shall be provided between the inner surface of the external protective lagging and outer layer of the conductor. Outside the protective lagging, there shall be minimum of two binders consisting of hoop iron/galvanized steel wire. Each protective lagging shall have two recesses to accommodate the binders.
- m) Each batten shall be securely nailed across grains as far as possible to the flange, edges with at least 2 nails per end. The length of the nails shall not be less than twice the thickness of the battens. The nails shall not protrude above the general surface and shall not have exposed sharp, edges or allow the battens to be released due to corrosion.
- n) The nuts on the barrel studs shall be tack welded on the one side in order to fully secure them. On the second end, a spring washer shall be used.
- o) A steel collar shall be used to secure all barrel studs. This collar shall be located between the washers and the steel drum and secured to the central steel plate by welding.
- p) Outside the protective lagging, there shall be minimum of two binders consisting of hoop iron/ galvanized steel wire. Each protective lagging shall have two recesses to accommodate the binders.
- q) The conductor ends shall be properly sealed and secured with the help of U-nail on the side of one of the flanges to avoid loosening of the conductor layers during transit and handling.

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- r) As an alternative to wooden drum Contractor may also supply the conductors in non-returnable painted steel drums. After preparation of steel surface according to IS: 9954, synthetic enamel paint shall be applied after application of one coat of primer. Wooden/Steel drum will be treated at par for evaluation purpose and accordingly the Contractor should quote in the package.

11.0 Marking.

Each drum shall have the following information stenciled on it in indelible ink along with other essential data:

- (a) Contract/Award letter number
- (b) Name and address of consignee.
- (c) Manufacture's name and address.
- (d) Drum and lot number
- (e) Size and type of conductor
- (f) Length of conductor in meters
- (g) Arrow marking for unwinding
- (h) Position of the conductor ends
- (i) Number of turns in the outer most layer.
- (j) Gross weight of the drum after putting lagging.
- (k) Average weight of the drum without lagging.
- (l) Net weight of the conductor in the drum
- (m) Month and year of manufacture of conductor

The above should be indicated in the packing list also.

12.0 Verification Conductor Length

The Owner reserves the right to verify the length of conductor after unreeling at least five (5) percent of the drums in a lot offered for inspection. For the balance drums, length verification shall be done by the owner based on report/certification from Manufacturer/ Contractor.

13.0 Standards.

- a) The conductor shall conform to the following Indian/International Standards, which shall mean latest revisions, with amendments/changes adopted and published, unless specifically stated otherwise in the Specification.

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- b) In the event of the supply of conductor conforming to standards other than specified, the Bidder shall confirm in his bid that these standards are equivalent to those specified. In case of award, salient features of comparison between the standards proposed by the Contractor and those specified in this document will be provided by the Contractors to establish their equivalence.

Sl. No.	Indian Standard	Title	International Standard
1.	IS: 398(Part-IV)	Aluminum Ally Standard conductor	IEC: 208-1966 BS-3242-1970
2.	IS: 9997-1988	Aluminum Ally Redraw Rods.	IEC 104-1987
3.	IS: 1778-1980	Reel and Drums for Bare Conductors.	BS: 1559-1949

14.0 TESTS ON AAAC CONDUCTORS

14.1 UTS Test on Stranded Conductor

Circles perpendicular to the axis of the conductor shall be marked at two places on a sample of conductor of minimum 5 m length between fixing arrangement suitably fixed on a tensile testing machine. The load shall be increased at a steady rate up to 50% of minimum specified UTS and held for one minute. The circles drawn shall not be distorted due to relative movement of strands. Thereafter the load shall be increased at steady rate to minimum UTS and held for one minute. The Conductor sample shall not fail during this period. The applied load shall then be increased until the failing load is reached and the value recorded.

14.2 D.C. Resistance Test on Stranded Conductor

On a conductor sample of minimum 5 m length two contact-clamps shall be fixed with a predetermined bolt torque. The resistance shall be measured by a Kelvin double bridge by placing the clamps initially zero meter and subsequently one meter apart. The test shall be repeated at least five times and the average value recorded. The value obtained shall be corrected to the value at 20° C as per IS: 398-(Part-V)-1982. The resistance corrected at 20°C shall conform to the requirements of this Specification.

14.3 Chemical Analysis of Aluminum alloy

Samples taken from the Aluminum alloy ingots/coils/strands shall be chemically/spectrographically analyzed. The same shall be in conformity to the requirements stated in this Specification.

14.4 Visual and Dimensional Check on Drums

The drums shall be visually and dimensionally checked to ensure that they conform to the requirements of this Specification.

14.5 Visual Check for Joints, Scratches etc.

Conductor drums shall be rewound in the presence of the Owner. The Owner shall visually check for scratches, joints etc. and that the conductor generally conforms to the requirements of this Specification. Five percent (5%) drums from each lot shall be rewound in the presence of the Owner's representative.

14.6 Dimensional Check on Aluminum alloy Strands.

The individual strands shall be dimensionally checked to ensure that they conform to the requirement of this Specification.

14.7 Check for Lay-ratios of Various Layers.

The lay-ratios of various layers shall be checked to ensure that they conform to the requirements of this Specification.

14.8 Torsion and Elongation Tests on Aluminum ally Strands.

The test procedures shall be as per clause No. 10.3 of IE: 888. In torsion test, the number of complete twists before fracture shall not be less than 18 on a length equal to 100 times the standard diameter of the strand. In case test sample length is less or more than 100 times the stranded diameter of the strand, the minimum number of twists will be proportioned to the length and if number comes in the fraction then it will be rounded off to next higher whole number. In elongation test, the elongation of the strand shall not be less than 4% for a gauge length of 250 mm.

14.9 Check on Barrel Batten strength of Drums.

The details regarding barrel batten strength test will be discussed and mutually agreed to by the Contractor & Owner in the Quality Assurance Programme.

14.10 Breaking Load Test on Individual Aluminum Alloy Wires.

The test shall be conducted on Aluminum alloy wires. The breaking load of one specimen cut from each of the samples taken shall be determined by means of suitable tensile testing machine. The load shall be applied gradually Si the jaws of the testing machine shall be not less than 25mm/min. and not greater than 100 mm/min. The ultimate breaking load of the specimens shall be not less than the values specified in the Specification.

14.11 Resistance test on Aluminum alloy wire.

The test shall be conducted on aluminum alloy wires only, conforming to procedure as per IERC: 889. The electrical resistance of one specimen of aluminum wire cut from each of the samples taken shall be measured at ambient temperature. The measured resistance shall be corrected to the value corresponding to 20 degree C by means of following formula.

$$R_{20} = \frac{R_T}{1 + \alpha (T - 20)}$$

Where

R₂₀ = Resistance corrected at 20 degrees C.

R_T = Resistance measured at T degrees C.

Alpha = Constant mass temperature coefficient of resistance
0.004.

T = Ambient temperature during measurement

This resistance calculated to 20 degrees C. shall be not more than the maximum value specified in the specification.

VOLUME- II

(SAMPLE FORMS)

2009-2010

(Tender Notification: CSO/28/55 & 100 mm² AAC)

Date: 23.10.2009

BID FORM

DESIGN & SUPPLY OF 55 & 100 mm² AAA CONDUCTOR TO SOUTHCO

To
**Central Services Office
(NESCO, WESCO & SOUTHCO)
Plot No. N-1/22, Nayapalli
Bhubaneswar – 751 015**

Sir,

1. We understand that NESCO,WESCO & SOUTHCO is desirous of procuring 55 & 100 mm² AAA Conductor in their respective licensed distribution network area in the state of Orissa.
2. Having examined the Bidding Documents for the above named works, we the undersigned, offer to deliver the goods in full conformity with the Drawings, Conditions of Contract and specifications for the sum of..... (figures.....) or such other sums as may be determined in accordance with the terms and conditions of the contract. The above amounts are in accordance with the Price Schedules attached herewith and are made part of this bid.
3. If our Bid is accepted, we undertake to deliver the entire goods within 60days (2 months) from the date of award of purchase order/letter of intent.
4. If our Bid is accepted, we will furnish a " Composite performance bank guarantee" for an amount of 10% (Ten) percent of the total contract value for due performance of the Contract including warranty & guarantee obligation in accordance with the General Conditions of Contract.
5. We agree to abide by this Bid for a period of 120 days from the date fixed for bid opening under clause 9.0 of GCC, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
6. We declare that we have studied the provision of Indian Income Tax Law and other Indian Laws for supply of equipments/materials and the prices have been quoted accordingly.
7. Unless and until Letter of Intent is issued, this Bid, together with your written acceptance thereof, shall constitute a binding contract between us.
8. We understand that you are not bound to accept the lowest, or any bid you may receive.
9. There is provision for Resolution of Disputes under this Contract, in accordance with the Laws and Jurisdiction of Contract, Clause 19 of GCC.

Dated this..... day of..... 20.....

Signature..... In the capacity of

.....duly authorized to sign for and on behalf of

(IN BLOCK CAPITALS).....

FORMAT FOR BID SECURITY BANK GUARANTEE

(To be issued in a Non Judicial Stamp Paper of Rs. 50/- purchased in the name of the bank)

Whereas [name of the Bidder] (hereinafter called "the Bidder") has submitted its bid dated [date of submission of bid] for the supply of [name and/or description of the goods] (hereafter called "the Bid").

KNOW ALL PEOPLE by these presents that WE [name of bank] at [Branch name and address], having our registered office at [address of the registered office of the bank] (hereinafter called "the Bank"), are bound unto North Eastern Electricity Company of Orissa Ltd., with it's Registered Office at Plot No-N-1/22,Nayapalli, Bhubaneswar – 751 015, (hereinafter called "the Purchaser") in the sum of Rsfor which payment well and truly to be made to the said Purchaser, the Bank binds itself, its 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 on the Bid Form; or
2. If the Bidder, having been notified of the acceptance of its Bid by the Purchaser during the period of bid validity:
 - (a) fails or refuses to execute the Contract Form, if required; or
 - (b) fails or refuses to furnish the performance security, in accordance with the Instructions to Bidders/ GENERAL CONDITIONS.;

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 is its demand the purchaser will note that amount claimed by it is due to it, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including thirty (30) days after the period of bid validity, and any demand in respect thereof should reach the Bank not later than the above date.

(Signature of the bank)

Signature of the witness

Registered Office of NESCO, WESCO & SOUTHCO

PROFORMA FOR COMPOSITE PERFORMANCE BANK GUARANTEE

(To be issued in a Non Judicial Stamp Paper of Rs. 50/- purchased in the name of the bank)

Bank Guarantee No.....
Date.....
Ref.....

To

NESCO/ WESCO /SOUTHCO (As the case may be)

Registered Office at:

Plot No.: N-1/22, Nayapalli ,

Bhubaneswar – 751 015

Dear Sirs,

In consideration of the NESCO,WESCO &SOUTHCO as applicable here in after termed as "Purchaser" having awarded to M/s. with its Registered Office/Head Office at..... (Hereinafter referred to as the 'Contractor' which expression shall unless repugnant to the context meaning thereof, include its successors administrators, executors and assigns), a Contract by issue of Letter of Award No.dated.....and the same having been acknowledged by the Contractor, valued for.Rs.....and the Contractor having agreed to provide a "Composite Performance Guarantee" for the faithful performance of the entire Contract including guarantee & warrantee obligation equivalent to 10% (Ten Percent) of the said value of the Contract to the Purchaser.

We.....(Name & Address of the Bank) having its Registered Office at..... hereinafter referred to as the 'Bank', which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns) do hereby Guarantee and undertake to pay the Purchaser, on demand any and all monies payable by the Contractor to the extent of.....**.....as aforesaid at any time upto(days/month/year) without any demur, reservation, contest, recourse or protest and/or without any reference to the Supplier. Any such demand made by the Purchaser on the Bank shall be conclusive and binding notwithstanding any difference between the Purchaser and the Contractor or any dispute pending before any Court, Tribunal, Arbitrator or any other authority. The Bank undertakes not to revoke this Guarantee during its currency without previous consent of the Purchaser and further agrees that the Guarantee herein contained shall continue to be enforceable till the Purchaser discharges this Guarantee.

The Purchaser shall have the fullest liberty without affecting in any way the liability of the Bank under this Guarantee, from time to time to extend the time for performance of the Contract by the Contractor. The Purchaser shall have the fullest liberty, without affecting this Guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the Contractor, and to exercise the same at any time in any manner, and either to enforce or to forbear to enforce any covenants, contained or implied, in the Contract between the Purchaser and the Contractor or any other course or remedy or security available to the Purchaser. The Bank shall not be released of its obligations under these presents by any exercise by the Purchaser of its liberty with reference to the matters aforesaid or any of them or by reason of any other act of forbearance or other acts of omission or commission on the part of the Purchaser or any other

Registered Office of NESCO, WESCO & SOUTHCO

indulgences shown by the Purchaser or by any other matter or thing whatsoever which under law would, but for this provision have the effect of relieving the Bank.

The Bank also agrees that the Purchaser at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against Supplier and notwithstanding any security or other Guarantee the Purchaser may have in relation to the Contractor's liabilities.

Notwithstanding anything contained hereinabove our liability under this Guarantee is restricted toand it shall remain in force upto and including and shall be extended for such period, as may be desired by M/s..... on whose behalf this Guarantee has been given.

Dated this..... day of 20..... At.....

WITNESS

(Signature)..... (Signature).....

(Name)..... (Name).....

..... (Official Address)
(Designation with Bank Stamp)

Attorney as per Power of Attorney No.....
Dated.....

NOTE:

1. **The date will be ninety (90) days after the end of Warranty Period as specified in the Contract.
2. The stamp papers of appropriate value shall be purchased in the name of issuing bank.

Registered Office of NESCO, WESCO & SOUTHCO

Annexure-III

TENDER NOTICE NO. CSO/28/55 & 100 mm² AAAC dtd.23.10.2009, Due date of opening 05.11.2009

Price Schedule for Goods Offered

Name of Bidder -----Page -----Of-----

1	2	3	4	5							6	7
Sl. No.	Item Description	Tender Qty (In Km.)	Offered Qty(In Km.)	Price for KM (In Rs.)							Unit Price(a+b+c+d+e+f+g)	Total Price (col.4 x6) (In Rs.)
				Ex-works	Excise Duty Amnt.@ of	Sales Tax/VAT Amnt.@ of with Surcharge (If any)	Packing & Forwarding	Inland transportation ,insurance& other local costs incidental to delivery	Entry Tax @ of.	Any other taxes & duties		
				(a)	(b)	©	(d)	(e)	(f)	(g)		

Signature of Bidder-----

- Note:** 1) In case of discrepancy between unit price & total, the unit shall prevail.
 2) Uniform price must be quoted for all three companies.

100 mm² / 55 mm² ALL ALUMINIUM ALLOY CONDUCTOR (AAAC)

GUARANTEED TECHNICAL PARTICULARS
(To be submitted by the bidders along with bid)

Item No.	Description	Unit	100 mm ²	55mm ²
1	Manufacturer Address			
2	Indian Standard No. IS 398 (Part-4) 1994		IS 398 (Part-4) - 1994	
3	IEC Standard No. IEC 1089		IEC - 1089	
4	Material of Conductor	AAAC		
5	Aluminum alloy redraw rod manufacturer			
6	Drawing aluminum alloy wire manufacturer			
7	Standing complete conductor manufacturer			
8	Number of Strands			
9	Dia. Of each Strand	mm		
10	Total Cross Sectional Area of Conductor	mm ²		
11	Overall dia of stranded conductor	mm		
12	Mass of conductor per kilometer (without grease)	Kg		
13	Mass of grease per kilometer of Conductor	Kg		
14	Total mass of greased conductor per Kilometer	Kg		
15	Conductor grease Type			
16	Ultimate strength of conductor	Newton		
17	Assumed equivalent modulus of elasticity of conductor	N/mm ²		
18	Assumed equivalent coefficient of elasticity	N/mm ²		
19	Assumed equivalent coefficient of linear Expansion	Per deg. C		
20	Maximum length of conductor supplied in one drum	Km		
21	Maximum D.C. resistance at 20 degree centigrade	Ohm/Km		
22	Maximum full load current at 75 degree centigrade	Ampere		
23	Individual Aluminum Alloy Strands			

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a	Tensile breaking stress	N/mm ²		
b	Elongation on 200 mm length in breaking	%		
c	Maximum electrical resistance at 20 degree C.	Ohm/Km		
24	Particulars of Raw Materials			
24.1	Aluminum			
	(a) Minimum Purity of aluminum	%		
24.2	Aluminum Alloy			
	a) Aluminum redraw rod conforming to	Type		
	Elements			
	(a) Si	%		
	(b) Mg	%		
	(c) Fe	%		
	(d) Cu	%		
	(e) Mn	%		
	f) Cr	%		
	g) Zn	%		
	h) B	%		
	i) Other Element	%		
25	D.C resistance of conductor at 20 deg. C (Max)	Ohm/Km		
26	Standard length of conductor that can be manufactured	meter		
27	Maximum length of conductor that can be manufactured	meter		
28	Tolerance on stranded length of conductor	%		
29	Direction of layer for outside layer	RH/LH		
30	Weight of the drum (only)	Kg		
30	mass of Conductor with drum			
	(a) Standard	Kg/Km		
	(b) Minimum	Kg/Km		
	(c) Maximum	Kg/Km		
31	Modulus of Elasticity	Kg/sq cm		
32	Coefficient of Linear Expansion (per deg. Cent.)			