North Eastern Electricity Supply Company of Orissa Limited

Western Electricity Supply Company of Orissa Limited

Southern Electricity Supply Company of Orissa Limited

TENDER SPECIFICATION FOR PROCUREMENT OF AAA CONDUCTORS (FOR CAPEX PROGRAMME)

Tender Notice No. CSO/CAPEX/AAA Conductor/01
Date: 17.01.2011

- DATE OF OPENING OF TENDER: 07.02.2011
- TIME: 3.30 PM
- PLACE: Regd. Office, NESCO, WESCO, SOUTHCO, N 1/22, IRC Village, Nayapalli, Bhubaneswar – 751015
North Eastern Electricity Supply Company of Orissa Ltd. (NESCO)
Western Electricity Supply Company of Orissa Ltd. (WESCO)
Southern Electricity Supply Company of Orissa Ltd. (SOUTHCO)

**Registered Office:**
N 1/22, IRC Village, Nayapalli, Bhubaneswar – 751015
Ph. No. 0674-2558737, Fax: 0674-2558343

TENDER NOTICE NO: -CSO/CAPEX/AAAC/01/2010-11

Material Name: All Aluminum Alloy Conductors (AAAC)

**CONTENTS**

<table>
<thead>
<tr>
<th>SECTION No.</th>
<th>DESCRIPTION</th>
<th>PAGE NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SECTION-I:</td>
<td>INVITATION FOR BIDS (IFB)</td>
<td>3 - 6</td>
</tr>
<tr>
<td>SECTION-II:</td>
<td>INSTRUCTION TO BIDDERS (ITB)</td>
<td>7 - 16</td>
</tr>
<tr>
<td>SECTION-III:</td>
<td>GENERAL TERMS AND CONDITIONS OF CONTRACT (GTCC)</td>
<td>17 - 24</td>
</tr>
<tr>
<td>SECTION-IV:</td>
<td>TECHNICAL SPECIFICATION</td>
<td>25 - 36</td>
</tr>
<tr>
<td>SECTION-V:</td>
<td>LIST OF ANNEXURES (SCHEDULES &amp; FORMATS)</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>• ANEXURE-I: Abstract of GCTC</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>• ANNEXURE-II: Declaration Form</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>• ANNEXURE-III: PBG Format</td>
<td>40 - 41</td>
</tr>
<tr>
<td></td>
<td>• ANNEXURE-IV: Price Schedule</td>
<td>42 - 44</td>
</tr>
<tr>
<td></td>
<td>• ANNEXURE-V (A): Technical Deviation Sheet</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>• ANNEXURE-V (B): Commercial Déviation Sheet</td>
<td>46</td>
</tr>
</tbody>
</table>
North Eastern Electricity Supply Company of Orissa Ltd. (NESCO)
Western Electricity Supply Company of Orissa Ltd. (WESCO)
Southern Electricity Supply Company of Orissa Ltd. (SOUTHCO)

Registered Office:
N 1/22, IRC Village, Nayapalli, Bhubaneswar – 751015
Ph. No. 0674-2558737, Fax: 0674-2558343

**********************************************************************************************************

**TENDER NOTICE**

**Tender Notice No: CSO/CAPEX/AAAC/01/2010-11 Dt. 17.01.2011**

For and on behalf of the North Eastern Electricity Supply Company of Orissa Ltd. (NESCO), Western Electricity Supply Company of Orissa Ltd. (WESCO) & Southern Electricity Supply Company of Orissa Ltd. (SOUTHCO), the undersigned invites sealed tenders in duplicate on two part bidding system from the eligible bidders, who comply to the terms and conditions for the supply of following materials superscribing the Tender Specification No., Name of the material & date of opening (as mentioned in the specifications).

The tender papers can be obtained from the undersigned at the above address on payment of the cost of Tender Paper indicated below in D.D drawn on any Nationalised / Scheduled bank in favour of the North Eastern Electricity Supply Company of Orissa Ltd. payable at Bhubaneswar. The cost of tender paper is non-refundable.

**SCHEDULE OF MATERIALS TENDERED:**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of Materials</th>
<th>Unit</th>
<th>Total Quantity (NESCO, WESCO &amp; SOUTHCO)</th>
<th>Cost of Tender Paper (Rs.)</th>
<th>EMD (Rs. in Lakhs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>232 mm2 AAAC</td>
<td>Km.</td>
<td>1192</td>
<td>10,000.00 + VAT @ 4% = Rs. 10,400.00</td>
<td>16.00</td>
</tr>
<tr>
<td>2</td>
<td>100 mm2 AAAC</td>
<td>Km.</td>
<td>7607</td>
<td></td>
<td>33.00</td>
</tr>
<tr>
<td>3</td>
<td>80 mm2 AAAC</td>
<td>Km.</td>
<td>5738</td>
<td></td>
<td>20.00</td>
</tr>
</tbody>
</table>

**TIME SCHEDULE:-**

<table>
<thead>
<tr>
<th></th>
<th>Last Date &amp; Time for selling of tender papers</th>
<th>05.02.2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Last Date &amp; Time for submission of Tender</td>
<td>07.02.2011 up-to 1PM</td>
</tr>
<tr>
<td>3</td>
<td>Last Date &amp; Time for Opening of Tender</td>
<td>07.02.2011 - 3.30 PM</td>
</tr>
</tbody>
</table>

The intending bidders can also download the tender document from our website [www.nescoorissa.com](http://www.nescoorissa.com), [www.wescoorissa.com](http://www.wescoorissa.com) & [www.southcoorissa.com](http://www.southcoorissa.com). However the bidder has to furnish a Demand Draft for the cost of the Tender Paper indicated above, along with his bid, failing of which the bid will be rejected outright. In the event of any specified date for the sale, submission or opening of bids being declared as holiday for NESCO/WESCO/SOUTHCO, the bids will be sold / received / opened up at the appointed time on the next working day. NESCO/WESCO/SOUTHCO also reserves the right to accept or reject any or all tenders without assigning any reason thereof, if the situation so warrants.

For detail Tender Specification & Terms and Conditions, please visit our website [www.nescoorissa.com](http://www.nescoorissa.com), [www.wescoorissa.com](http://www.wescoorissa.com) & [www.southcoorissa.com](http://www.southcoorissa.com)

(sd/-)
SECTION – I

INVITATION FOR BIDS (IFB)
INVITATION FOR BIDS (IFB)

FOR SUPPLY OF

All Aluminum Alloy Conductors (AAAC)

(COMpetitive Bidding)

(Tender Notice No. CSO/CAPEX/AAAC/01/2010-11 Dt. 17.01.2010)

SECTION –I

1.0 For and on behalf of the NESCO/WESCO/SOUTHCO, the undersigned invites bids under two part bidding system in sealed cover in duplicate duly superscribed with tender Notice no. CSO/CAPEX/AAAC/01/2010-11 date of opening 07.02.2011 from the reputed manufacturers only for design, manufacture, supply, type testing, inspection, loading at factory, transportation to & unloading at site / stores including guaranteed obligation for supply of AAA Conductors.

2.0 Submission of the Bids:

2.1 The Bidders are required to submit a detailed and comprehensive bid, consisting of Technical and Commercial Proposal and conditions / schedule of non-compliance, if any. The submission of the Bids shall be in the manner specified in the instruction to Bidders. The due date of submission shall be 07.02.2011 up-to 1 PM.

3.0 NESCO/WESCO/SOUTHCO will not be responsible for any costs or expenses incurred by bidders in connection with the preparation and delivery of bids.

3.1 NESCO/WESCO/SOUTHCO reserves the right to cancel, postpone, withdraw the invitation for Bids without assigning any reason thereof and shall bear no liability whatsoever consequent upon such a decision if the situation so warrants.

4.0 E.M.D & TIME SCHEDULES:

<table>
<thead>
<tr>
<th>Description</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last date for sale of tender papers</td>
<td>05.02.2011</td>
</tr>
<tr>
<td>Pre-Bid meeting / issue of clarification raised during pre-bid meeting</td>
<td>22.01.2011 at 3.30 PM</td>
</tr>
<tr>
<td>Submission of Tenders</td>
<td>07.02.2011 up-to 1 PM.</td>
</tr>
<tr>
<td>Opening of Tenders</td>
<td>07.02.2011 at 3.30 PM.</td>
</tr>
<tr>
<td>Required Quantities of Materials:-</td>
<td></td>
</tr>
<tr>
<td>Completion of the delivery</td>
<td>120 days from the date of issue of Purchase Order as per delivery schedule.</td>
</tr>
</tbody>
</table>
5.0 SCHEDULE OF REQUIREMENTS & DELIVERY:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of Materials</th>
<th>Unit</th>
<th>Quantity</th>
<th>Cost of Tender Paper (Rs.)</th>
<th>EMD (Rs. in Lakhs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AAA Conductors, Size 232 mm²</td>
<td>Kms</td>
<td>1192</td>
<td>10,000/- + 4% VAT = 10,400.00</td>
<td>16.00</td>
</tr>
<tr>
<td>2</td>
<td>AAA Conductors, Size 100 mm²</td>
<td>Kms</td>
<td>7607</td>
<td></td>
<td>33.00</td>
</tr>
<tr>
<td>3</td>
<td>AAA Conductors, Size 80 mm²</td>
<td>Kms</td>
<td>5738</td>
<td></td>
<td>20.00</td>
</tr>
</tbody>
</table>

Note: NESCO/WESCO/SOUTHCO may re-schedule the due date of delivery as per their requirement.

6.0 QUALIFICATION OF BIDDERS:

6.1 Criteria for qualification:

6.1.1 Technical:

a) The bidder should be a manufacturer of AAA Conductors for which he submits his offer.

b) The bidder may quote for any one or more sizes of conductors as specified in the tender specification. However, the bidder has to quote for 100% of the tendered quantity for the size(s) of conductors for which he is willing to submit his bid.

c) The bidder should have already supplied AAA Conductors for which he submits his offer not less than 50% of the quantity tendered as per this specification. Bidders should submit self attested copies of POs in last 3 years executed successfully and abstract thereof to prove the quantity as supplied. Bidders who have earlier supplied AAA Conductors to NESCO/ WESCO/ SOUTHCO may also be qualified to participate subject to the condition that there is no adverse report(s) against them with regard to business transactions, delivery, and performance and after sales service etc, and also further subject to condition that they meet all qualifying criteria mentioned in this tender specification.

d) The bid shall be accompanied by user’s certificate from any Distribution Utility/ Reputed Private Organization/ State Govt./ Central Govt. or their undertaking(s) in support of satisfactory performance of their above materials supplied earlier to them.
e) The offered materials should have been type-tested at CPRI/ NABL accredited laboratory. The bid shall accompany with type-test reports conducted at any of the above laboratories. The type-test should have been conducted within five years before the date of opening of the tender. **Bids not accompanied with type test reports conducted within five years shall not be considered for evaluation.**

f) NESCO/WESCO/SOUTHCO reserves the right to waive minor deviation, if they do not materially effect the capacity of the bidder to perform the contract.

g) The minimum average annual turnover of the intending bidder should not be less than following amounts in any financial year during last three years.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Description of Materials Tendered</th>
<th>Minimum Qualifying requirement for average annual turn over in last three years in Rs. Crores</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>232 mm2 AAA Conductor</td>
<td>32.00</td>
</tr>
<tr>
<td>2</td>
<td>100 mm2 AAA Conductor</td>
<td>66.00</td>
</tr>
<tr>
<td>3</td>
<td>80 mm2 AAA Conductor</td>
<td>40.00</td>
</tr>
</tbody>
</table>

**NB: Bidders offering multiple items must meet the sum of minimum turn over requirements of above items as indicated above. Accordingly bidders must furnish self attested audited Annual Profit & Loss accounts of last 3 years to establish their Turn Over requirement.**

6.1.3. **Documentation :**

6.1.3.1. Bidder shall furnish copies of original documents defining the constitution or legal status, place of registration and principal place of business namely of Memorandum and Article of Association.

6.1.3.2. Written power of attorney / Board Resolution of the authorised signatory of the bid.

6.1.3.3. Bidders shall submit their audited financial reports for last three years prior to the year of tender. In case the Bidder is in existence for less than three years the audited financial report/s from the date of its incorporation should be furnished.

7.0 **PRE-BID CONFERENCE:**

A pre-bid meeting will be held on dated **22.01.2011 at 3.30 P.M** in the Conference Hall of the Registered Office of NESCO, WESCO & SOUTHCO, Bhubaneswar for giving clarifications if any on the bid documents to the respective bidders, who may choose to attend the meeting as detailed in the bid documents. However, it is direction of the NESCO, WESCO & SOUTHCO to call for Pre-Bid Conference.

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

**CAPEX CELL**
**Registered Office of NESCO,WESCO &SOUTHCO:**
N 1/22, IRC Village, Nayapalli,
Bhubaneswar – 751015
Ph. No. 0674-2558737, 3254109
Fax: 0674-2558343
Email: capex@orissadiscoms.com
SECTION –II

INSTRUCTION TO BIDDERS (ITB)
SECTION –II

INSTRUCTION TO BIDDERS (ITB)

1. SOURCE OF FUNDS:

1.1 NESCO/WESCO/SOUTHCO hereinafter referred to as the “Purchaser” is desirous of procurement of materials for strengthening and improvement of distribution network under NESCO/WESCO/SOUTHCO from the funds available under Capex Programme of Govt. of Odisha.

2. SCOPE OF WORK:

2.1 The scope of work in brief shall include design, manufacture, type testing, inspection, supply, loading at factory, transportation to site / stores, unloading at site/stores including guaranteed obligation of complete supply of materials in conformity to the technical specification enclosed herewith in Section – IV.

3. DISCLAIMER:

3.1 This Document includes statements, which reflect various assumptions, which may or may not be correct. Each Bidder 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.

3.2 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 / provision of Services for the Project.

3.3 Though adequate care has been taken while issuing the Bid document, the Bidder should satisfy himself that documents are complete in all respects. Intimation of any discrepancy/doubt shall be sent to the Purchaser address for speedy response.

3.4 This document and the information contained herein are **Strictly Confidential** and are for use of only the person (s) to whom it is issued/ downloaded from the website. It may not be copied or distributed by the recipient to third parties (other than in confidence to the recipient’s professional advisors).

4. COST OF BIDDING:

4.1 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.

5. BIDDING DOCUMENTS:

5.1 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:

(a) Invitation of Bids (IFB) - Section –I
(b) Instruction to Bidders (ITB) - Section –II
(c) General Terms and Conditions of Contract (GTCC) - Section –III
(d) Technical Specification - Section –IV
(e) List of Annexures - Section –V
5.2 The Bidder is expected to examine the Bidding Documents, including all Instructions, Forms, Terms and Specifications. Failure to furnish all information required in 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. AMENDMENT OF BIDDING DOCUMENTS:

6.1 At any time prior to the deadline for submission of Bids, the Purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the Bidding Documents by way of issuing an addendum.

6.2 The Amendment/ Addendum shall be part of the Bidding Documents, pursuant to Clause 6.1, and it will be binding on the bidders.

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

7. 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 the literature is accompanied by an English translation, in which case, for purposes of interpretation of the Bid, the English translation shall govern.

8. DOCUMENTS COMPRISING THE BID:

8.1 The Bid prepared and submitted by the Bidder shall comprise of two parts i.e. Part-I (Techno-Commercial Bid), & Part-II (Price Bid) as detailed below. Each part shall contain the original & duplicate bids separately.

(A) The Part-I (Techno-Commercial Bid) must contain the following documents:

(a) Bid Document signed by the bidder in every page, all other Schedules / Formats enclosed in the Bid-Document (i.e. Annexure-I, II, IV, V (A), V (B) ) duly filled in & signed by the bidder with seal in a separate envelop superscribed as Techno Commercial Bid. Bids containing information in formats other than our prescribed formats shall not be acceptable and may make the bid non-responsive.

(b) Requisite Earnest Money Deposit (E.M.D) as per clause No. 4 of Section –I, IFB in a separate envelop superscribed as “EMD” failing which the bid may be treated non-responsive.

(c) Following Documentary evidence establishing in accordance with Clause-29, ITB, that the Bidder is qualified to perform the Contract if the Bid is accepted;

(i) Self attested copies of Purchase Orders executed in last 3 Years.
(ii) Self attested copies of Performance Certificates / Successful contract completion Certificates from the buyers preferably from Electricity Distribution Utilities / Government Organisations/Reputed Private Organisation.
(iii) Type Test Reports from CPRI or any NABL accredited Testing Laboratory for the offered equipments along with the copies of drawings duly approved by the Type Testing Agency for the tests conducted not before 5 years from the date of opening of Bids.
(iv) Copies of Audited Accounts for last 3 years.

(d) Power of Attorney / Board resolution indicating that the person(s) signing the Bid have the authority to sign the Bid and as such the Bid is binding upon the Bidder during the
full period of its validity, in accordance with clause 14.

(c) Requisite Cost of Tender Document as per clause 4 of Section –I, IFB in shape of account payee demand draft from a Nationalised / Scheduled Bank in favour of “The North Eastern Electricity Supply Company of Orissa Ltd.” Payable at Bhubaneswar is to be enclosed along with the Bid, if the document is downloaded from our web-site. Or else, the Original Copy of Money Receipt for the payment made towards the cost of Tender Document is to be enclosed along with Bid, if the document is directly purchased from our Cash Counter at our Regd. Office.

(B) Part-II (Price Bid) :

The Price Bid shall contain the price schedules as per the prescribed format enclosed as (Annexure-V) duly filled in & signed by the bidder with seal.

(This shall be submitted in a double sealed envelop separately duly superscribed as “Price Bid”)

9. SUBMISSION OF BID:

9.1 The Bidder shall complete and submit the Bid Document in duplicate enclosing all documents at clause “8” above in two sealed envelops for Original & Duplicate separately, superscribing the Tender Notice No…………, Date …,Date of Opening……… & Description of <Material >.

9.2 E.M.D:

9.2.1 The bidder shall submit E.M.D as a part of the bid in the prescribed manner for the amount mentioned in Clause No.4 of Section –I.

9.2.2 The E.M.D is required to protect the Purchaser against the risk of bidder’s conduct, which would warrant the security’s forfeiture.

9.2.3 The E.M.D shall be in the following form:

A/C payee demand draft in favour of North Eastern Electricity Supply Company of Orissa Ltd. issued by a nationalized or scheduled bank payable at Bhubaneswar.

9.2.4 Unsuccessful bidder’s E.M.D shall be refunded back as promptly as possible, but not later than thirty (30) days after the expiry of the period of bid validity. The successful bidder’s E.M.D shall be discharged upon furnishing of the performance security.

9.2.5 The E.M.D may be forfeited due to following reasons:

1) If the bidder withdraws bid during the period of bid validity specified by the bidder in the bid form.

2) In case the successful bidder fails to sign the contract in specified time and / or fails to submit the requisite performance Bank guarantee.

3) In case of seller fails to supply the materials/equipment during the contractual delivery period.

10. BID PRICE:

10.1 Bidders have to quote for the entire quantity of materials/equipment covered under this specification strictly as per the enclosed format in Section –V. 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, testing, inspection, Transportation to
site/stores, all in accordance with the requirement of Tender Documents. The Bidder shall complete the appropriate Price Schedules enclosed herein at Annexure – V, stating the Unit Price for each item, all other livable taxes & duties, freight & insurance separately and thereby arriving at the total amount.

10.2 In case there is any increase in the number of units as compared to those mentioned in the IFB, the Contract Price shall be subject to increase proportionately on pro-rata basis.

10.3 The Price offered shall be inclusive of all costs as well as Duties, Taxes and Levies paid or payable during implementation of the contract. If the Bidder is exempted from Excise duties, Concession in the Sales tax, levy of entry tax, same should be clearly mentioned supported with documentary evidence.

10.4 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 variable Price or an adjustable price clause shall be treated as non-responsive and rejected out rightly.

11. CONTRACT PRICE:

11.1 The Ex-Works Prices quoted for the Contract shall remain FIRM as per the above Parameters and Purchaser shall not compensate Bidder for any variations. However any variation in the taxes & duties within the schedule date of delivery shall be borne by the Purchaser, else the same shall be borne by the bidder.

11.2 In case the Purchaser, revise the scope of woks, bidders shall be compensated based on the Unit Rate (Ex-Works) agreed upon before Order placement or as per mutually acceptable rates.

12. BID CURRENCIES:

12.1 Prices shall be quoted in Indian Rupees Only.

13. DOCUMENTS ESTABLISHING CONFORMITY TO THE BIDDING DOCUMENTS:

13.1 The bidder shall confirm by documentary evidence of the Good’s conformity to the Bidding Documents by submitting materials/equipment data sheets.

14. PERIOD OF VALIDITY OF BIDS:

14.1 Bids shall remain valid for 180 days from the date of opening of commercial Bids.

14.2 Notwithstanding Clause 14.1 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 or by Fax.

15. ALTERNATIVE BIDS:

15.1 Bidders shall submit Bids, which comply with the Tender Documents. Alternative bids shall not be considered for evaluation. However, if the bidder(s) prefer to submit the revised price bid before the due date of opening of the price bid, the revised price bid shall be considered for evaluation.

16. FORMAT AND SIGNING OF BID:

16.1 The original Bid Form and accompanying documents (as specified in Clause 9), clearly marked “Original Bid”, plus one copy of the Techno-Commercial Proposal must be received by the Purchaser at the date, time and place specified pursuant to Clauses 17 and 18.

The Price Bid in Original should be submitted in a separate sealed envelope marked as “Price Bid”.

In the event of any discrepancy between the original and the copies, the original shall govern.
16.2 The original and the duplicate copy of the Bid shall be typed or written legibly and shall be signed by the Bidder or a person or persons duly authorised to sign on behalf of the Bidder. Such authorisation shall be indicated by written Power-of-Attorney/Board Resolution accompanying the Bid.

16.3 The Bid shall contain no interlineations, erasures, 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.

17. SEALING AND MARKING OF BIDS:

17.1 Bid submission: One Original, One Copy of all the Bid Documents shall be sealed and submitted to the Purchaser before the last date & time for submission of the bid.

17.2 The Bid proposal should be divided into two parts and should be submitted in two separate sealed envelopes, addressed to Purchaser. All the envelopes should bear the Name and Address of the Bidder and marking is made for the Original and the duplicate copy. The envelopes should be superscribed with the title of its contents, as follows:

i) TECHNO-COMMERCIAL BID ENVELOPE: Shall contain the Bid Security (EMD), Cost of Tender Document, all supporting documents for qualifying requirement of this tender, duly filled in formats Abstract of General Terms & Conditions, Declaration Form, Technical Data Schedule, Technical & Commercial Deviations formats, Un-quoted blank Price Schedule etc. enclosed at Annexure I, II, IV, V (A) & V (B) at Section-V of this document.

ii) PRICE BID ENVELOPE: Shall contain the Price schedule duly filled in & signed as per Annexure –V at Section-IV of this document. (This shall be submitted in a double sealed envelope separately.)

17.3 The inner and outer envelopes shall:

a) Be addressed to the Purchaser at the following address:

CAPEX CELL, Regd. Office, NESCO, WESCO & SOUTHCO. N 1/22, IRC Village, Nayapalli, Bhubaneswar - 751015


In addition to the information required in sub clause (a) and (b) above, the outer envelope shall indicate the name and address of the Bidder to enable the Bid to be returned unopened in case it is declared “Late” pursuant to Clause 20.

17.4 The Bidders have the option of sending the Bids by Post/ Courier services or 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/Courier Agents etc. shall be entertained by the Purchaser.

18. DEADLINE FOR SUBMISSION OF BIDS:

18.1 The original Bid together with required copies, must be received by the Purchaser at the address specified in Clause 17.3 not later than 13.00 HR (IST) on/before the due date as indicated in the invitation for bids.

18.2 The Purchaser may, at its discretion, extend the deadline for the submission of Bids by amending the Bidding Documents, 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.
19. **ONE BID PER BIDDER:**
   19.1 Each Bidder shall submit only one Bid either by himself, or as a partner in a Joint Venture. A Bidder who submits or participates in more than one Bid for the same item, either individually or jointly, will cause all those Bids to be rejected out rightly.

20. **LATE BIDS:**
   20.1 Any Bid received by the Purchaser after the deadline for submission of Bids prescribed by the Purchaser, pursuant to Clause 18, will be declared “Late” and will be rejected out rightly and will be returned unopened to the Bidder.

21. **MODIFICATION AND WITHDRAWAL OF BIDS:**
   21.1 The Bidder may modify or withdraw his Bid after the Bid’s submission, provided that written notice of the modification or withdrawal is received by the Purchaser prior to the deadline prescribed for submission of Bids.
   21.2 The Bidder’s modification or withdrawal notice shall be prepared, sealed, marked and dispatched in accordance with the provisions of Clause 17 & 18. A withdrawal notice may be sent by fax but must be followed by an original signed confirmation copy.
   21.3 No Bid can be modified subsequent to the deadline for submission of Bids.
   21.4 No Bid can be withdrawn in the interval between the deadline for submission of Bids and the expiry of the period of Bid validity specified by the Bidder on the Bid form as per clause 14.

22. **EVALUATION OF BID:**
   22.1 **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.

23. **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.

24. **PRELIMINARY EXAMINATION OF BIDS / RESPONSIVENESS:**
   24.1 Purchaser will examine the Bids to determine whether they are complete, whether any computational error have been made , whether required sureties have been furnished, whether the documents have been properly signed, and whether the Bids are generally in order.
   24.2 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 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.
   24.3 Prior to the detailed evaluation, pursuant to Clause 25, the Purchaser will determine the
substantial responsiveness of each Bid to the Bidding Documents including production capability and acceptable quality of the materials offered, pursuant to Clause 13. Substantially responsive Bid is one, which conforms to all the terms and conditions of the Bidding Documents without material deviation.

24.4 A Bid determined as not substantially responsive will be rejected by the Purchaser and will not subsequently allowed to be made responsive by the Bidder by correction of the non – conformity.

25 EVALUATION AND COMPARISON OF BIDS:

25.1 The evaluation of Bids shall be done basing on the delivered cost competitiveness basis for each item separately.

25.2 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 as detailed in the clause 24. The Technical Proposals and the Commercial terms & conditions of the Bidders would be evaluated and discussed as per clause 26 of this document.

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

25.3 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) Delivery Schedule:

b) Deviations from Bidding Documents as mentioned in Non-Compliance Schedule.

c) Past performance and capability to execute the contract.

d) Type test reports from CPRI/ NABL Accredited Laboratories.

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 his own assessment of the cost of any deviation for the purpose of ensuring fair comparison of Bids.

26.0 AWARD OF CONTRACT:

In normal circumstances the Purchaser will generally 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 perform the Contract satisfactorily. If the lowest evaluated price (L1) of more than one responsive bidder(s) are same, then in such event the tender quantity shall be awarded in equal proportion.

26.1 CONTACTING THE PURCHASER:

26.1.1 From the time between Bid opening to award of contract, if any Bidder wishes to contact the Purchaser on any matter related to the Bid, he should do so in writing.
26.1.2 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 of Award, will result in the rejection of the Bidder’s Bid.

26.2 THE PURCHASER’S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS OR TO RELAX ANY TERMS AND CONDITIONS:

26.2.1 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 regarding the grounds for the Purchaser’s action.

26.2.2 In the interest of work, the Purchaser reserves the right to relax any terms and conditions without affecting the quality & price of the equipments.

26.3 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 perform the Contract satisfactorily. The Purchaser at its option/ discretion may split the total quantity to be supplied between two or more Techno-Commercially responsive Bidders in case of the bid prices are same and early delivery is required by the purchaser.

26.4 THE PURCHASER’S RIGHT TO VARY QUANTITIES:

The Purchaser reserves the right to vary the quantity i.e. increase or decrease the number of materials without any change in terms and conditions at the time of placing the orders or during the execution of the Contract.

26.5 LETTER OF INTENT / NOTIFICATION OF AWARD:

26.5.1 The letter of intent / Notification of Award shall be issued to the successful Bidder(s) whose bid(s) 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 to it within 7 days of issue of the letter of intent / Notification of Award by Purchaser.

27.0 PERFORMANCE SECURITY:

27.1 Within 10 days of the receipt of Notification of Award / Letter of Intent from the Purchaser, the successful Bidder shall furnish the Performance Security in the form of Bank Guarantee executed on non-judicial stamp paper worth Rs.100/- (Rupees One hundred only) issued by a Nationalised / Scheduled Bank in favour of the Purchaser encashable at Bhubaneswar only for an amount of 10% (ten percent) of the Contract Price in accordance with the General Conditions of Contract in the Performance Security Form provided in Section –V of Bidding Documents. The Bank Guarantee shall be valid for a period not less than 90 days over and above the guarantee period.

28. CORRUPT OR FRAUDULENT PRACTICE:

28.1 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 amount 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) Purchaser will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practice in competing for the contract in question.

c) Purchaser will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded an contract if he at any time determines that the firm is engaged in corrupt or fraudulent practice in competing for, or in executing, the Contract.

28.2 Further more, Bidders shall be aware of the provision stated in the General Terms and Conditions of Contract.

30.0. LITIGATION HISTORY:

The Bidder should provide accurate information on any litigation or arbitration resulting on contracts completed or under execution by him over the last three (3) years. A consistent history of awards involving litigation against the Bidder or any Partner of the joint venture may result in disqualification of Bid.
SECTION –III

GENERAL TERMS AND CONDITIONS OF CONTRACT (GTCC)
SECTION – III
GENERAL TERMS AND CONDITIONS OF CONTRACT (GTCC)

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 the name the bid document has been originally issued and under no circumstances it shall be transferred / sold to the 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 NESCO/WESCO/SOUTHCO shall mean the “Purchaser” on whose behalf this bid enquiry is issued by its authorized representative / officers.

2.02 “Bidder” shall mean the firm who quotes against this bid document issued by the Purchaser. “Contractor / Seller” shall mean the successful Bidder(s) whose bid has been accepted by the Purchaser and shall include his heirs, legal representatives, successors and permitted assigns.

2.03 “Site” shall mean the Electricity Distribution Area of the Purchaser.

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 Section –V, 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”.

2.06 “Month” shall mean the calendar month and “Day” shall mean the calendar day.

2.07 “Codes and Standards” shall mean all the applicable codes and standards as indicated in the Technical Specification.

2.08 “Offer Sheet” shall mean Bidder’s firm offer submitted to Purchaser in accordance with the specification.

2.09 “Contract” shall mean the “Detailed Purchase Order” issued by the Purchaser.

2.10 “Contract Price” shall mean the Price referred to in the “Detailed Purchase Order”.

2.11 “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.

2.12 “Goods/Materials” shall mean all items to be supplied under Purchase Order whether raw materials, processes materials, equipment, fabricated Materials, drawings or other documents etc. as applicable.

2.13 “Store” shall mean the Purchaser’s Store as given in the tender document.

2.14 “Project / Unit” shall mean supply of Materials as per enclosed technical specification.

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 purchase order.

3.02 Priority: Should there be any discrepancy between any terms hereto and any term of the Purchase Order, the terms of this 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, at the time of placing order or 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 seller shall supply, deliver best quality Goods/Materials/Equipments & conduct the testing at their works of highest standards.

6.0 The seller shall be responsible & shall comply with the provisions of all statutory acts i.e Electricity Act 2003, Indian Electricity Rules 1956, Income Tax Act-1961 etc.

7.0 INSPECTION & TESTING:

i) The Purchaser’s representative shall be entitled at all reasonable times during manufacture to inspect examine and test on the Contractor’s premises the materials and workman-ship of all equipment to be supplied under this contract and if part of the said equipment is being manufactured else where in any Sub-Contractor’s premises, the Contractor shall obtain for the Purchaser’s representative, permission to inspect, examine and test as if the equipment were being manufactured on the Contractor’s premises. Such inspection, examination and testing shall not release the Contractor from his obligations under the contract.

ii) The Contractor shall give to the Purchaser adequate time/ notice (minimum of two weeks time) in writing for inspection of materials indicating the place at which the equipment is ready for testing and inspection and shall also furnish the Routine Test Certificates and Packing List along with offer for inspection to the Purchaser indicating the quantity which can be delivered in full truck load / Mini truck load to facilitate issue of dispatch instruction.

iii) Where the contract provides for test on the Premises of the Contractor or of any of his Sub-Contractors, the Contractor shall provide such assistance, labour, materials, electricity, fuel and instruments as may be required or as may be reasonably demanded by the Purchaser’s representative to carryout such tests efficiently. The Contractor is required to produce Shop Routine Test Certificates before offering their materials for inspection.
iv) After completion of the tests as indicated above, the Purchaser’s representative shall forward the test results to the Purchaser. If the test results confirm to the specific standard, the Purchaser shall approve the test results and communicate the same to the Contractor in writing. The Contractor shall provide at least three copies of the test certificates to the Purchaser.

v) The Purchaser has the right to have the test carried out at his own cost by an independent agency whenever there is a dispute regarding the quality of supply.

vi) The Purchaser at its discretion may re-test the Materials / Equipment at its own laboratory or laboratory of his choice for reconfirmation of the test results, particularly no load losses, load losses and percentage impedance, etc.

8.0 TRAINING FACILITIES:

The Contractor shall provide all possible facilities for training of Purchaser’s Technical personnel, when deputed by the Purchaser for acquiring first-hand knowledge in assembly of the equipment and for its proper operation and maintenance in service.

9.0 REJECTION OF MATERIALS:

In the event, any of the materials / equipment supplied by the Contractor is found defective due to faulty design, bad workmanship, bad materials used or otherwise not in conformity with the requirements of the Specification, the Purchaser shall either reject the materials / equipment or ask the Contractor in writing to rectify the same. The Contractor on receipt of such notification shall either rectify or replace the defective materials/equipment free of cost to the Purchaser. If the Contractor fails to do so, the Purchaser may :-

a) At its option replace or rectify such defective materials/equipment and recover the extra costs so involved from the Contractor plus (15%) fifteen percent and/or.

b) Terminate the contract for balance work / supplies with enforcement of penalty Clause as per contract for the un-delivered materials and with forfeiture of Performance Guarantee/Composite Bank Guarantee.

c) Acquire the defective equipment / materials at reduced price considered equitable under the circumstances.

10.0 EXPERIENCE OF BIDDERS:

10.1 The bidder(s) should furnish information regarding experience particularly on the following points:

i) Name of the manufacturer:

ii) Standing of the firm for manufacture of equipment/material quoted:

iii) Description of quoted materials/equipment supplied during the last 3 (three) years with the name(s) of the party(s) to whom supplies were made.

iv) Testing facilities at manufacturer’s work with copies of calibrated certificates of the major testing equipment.

v) If the manufacturer is having collaboration with other firm(s), details regarding the same:

vi) A list of Purchase orders, executed during the last three years along with user’s certificate and copies of Purchase orders.

10.2 Bids may not be considered if the past manufacturing experience is found to be unsatisfactory as mentioned under clause -6 of the IFB
11.0 LANGUANGE AND MEASURES:

All documents pertaining to the contract including Specifications, Schedule, Notice, Correspondence, Operating & Maintenance instructions, Drawings or any other writing shall be written in English language. The metric system of measurement shall be used exclusively in this contract.

12.0 DEVIATION FROM SPECIFICATION:

It is in the interest of the Bidder to study the Specification, drawing etc. specified in the tender document thoroughly before tendering so that, if any deviations are made by the Bidder, the same are prominently brought out on a separate sheet in the Technical & Commercial Deviation Formats enclosed at Annexure VI (A) & VI (B) in this document. Deviation mentioned in any other format or any other part of the offer document shall not be considered as a deviation & in such case it will be presumed that the bidder has accepted all the conditions, stipulated in the tender Specification, notwithstanding any exemptions mentioned therein.

13.0 PRICE BASIS:

13.01(a) Bidder shall quote “FIRM” price.

The breakup of prices shall indicate all types of Taxes, Duties and other Levies of whatsoever nature indicated separately and clearly, Packing & forwarding, transportation to site/store including transit insurances and entry tax etc. Exemption from any duties/taxes, if any, shall be supported with relevant documentary evidence.

(b) The above Prices shall also include loading at factory site & unloading at Purchaser’s site/stores. Price evaluation will be based on total landing cost, taking into account all taxes and duties.

(c) CST / VAT clearance certificate, Copy of PAN card.

14.0 TERMS OF PAYMENT:

100% value of each consignment will be paid within 30 days of receipt of materials in good conditions at stores/ desired destination and verification there of subject to approval of the Guarantee certificates & Test Certificates and submission & acceptance of Performance Bank Guarantee equivalent to 10% of Total Contract Price on non-judicial stamp paper worth Rs. 100/- in the prescribed format from a Nationalised / Scheduled Bank encashable at Bhubaneswar only.

Or else an equivalent amount of 10% of the Total Contract Price shall be deducted from the invoice of the first consignment & the same shall be refunded after submission and approval of the required Performance Bank Guarantee or expiry of Guarantee Period which ever is earlier.

15.0 PRICE VALIDITY:

15.01 All bids submitted shall remain valid, firm and subject to unconditional acceptance by Purchaser for 180 days post bid date. For award of Contract, the prices shall remain valid and firm till contract completion.

16.0 GUARANTEE:

16.01 The bidder shall guarantee for satisfactory performance of the equipments/materials for a minimum period of 24 months from the date of Commissioning or 30 months from the date of receipt of last consignment whichever is earlier. In the event of any defect in the equipment/ materials arising out of faulty design, inferior quality of raw material used or bad workmanship within the guarantee period, the Seller shall guarantee to
replace/ repair to the satisfaction of the Purchaser the defective equipments free of cost. Should however, the manufacturer fails to do so within a reasonable time, the Purchaser reserves the right to recover the amount from the seller either from the bills pending or may recover from the Performance Guarantee submitted by the firm. **Seller shall give a Performance Bank Guarantee in favour of the Purchaser for 10% of the order value valid for 90 days over and above the guarantee obligation.**

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

17.0 **RELEASE:**

The seller’s Performance Bank Guarantees / Assignable Bank Guarantee will be released without interest within thirty (30) days from the last date up to which the Performance Bank Guarantee has to be kept valid (as defined in Clause 16.01).

18.0 **TECHNICAL INFORMATION / DATA:**

The Purchaser 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 Purchaser and the Contractor agree to keep each other in confidence and to use the same degree of care as he uses with respect to his 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 nor misused in any other form. This technical information, drawing etc. shall be returned to the Purchaser with all approved copies and duplicates. In the event of any breach of this Contract, the Contractor shall indemnify the Purchaser against any loss, cost of damages of claim by any party in respect of such breach.

19.0 **EFFECTIVE DATE OF COMMENCEMENT OF CONTRACT :**

19.01 The date of the issue of the letter of award/ detailed Purchase Order whichever is earlier shall be treated as the effective date of the commencement of Contract.

20.0 The bidder shall quote the basic price as well as all taxes & duties as per the enclosed format for bid prices.

21.0 **PENALTY:**

21.01 If supply of materials / equipments is delayed beyond the supply schedule as stipulated in Purchase order, then the seller shall be liable to pay to the Purchaser as penalty for delay, a sum of 0.5% (half percent) of the contract price for every week delay or part thereof.

21.02 The total amount of penalty for delay under the contract will be subject to a maximum of five percent (5%) of the contract price.

21.03 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 seller or from the Performance Bank Guarantee or file a claim against the seller.

22. **VALIDITY OF THE ORDER:**

The Order is valid for 10 weeks beyond the schedule date of delivery, unless otherwise extended by the Competent Authority. The Order shall stand cancelled automatically
beyond the validity period without any correspondences and liabilities to the purchaser.

23. **PACKING:**

The materials / equipments shall be packed by the seller suitably as per the standard procedure for safe transport to the site / store. The cases shall be clearly marked showing distinctly the name and address of the consignee. In case of special instructions, such as “this end up”, “fragile”, “handles with care” etc., the same shall be clearly displayed on the cases.

24.0 **EVENTS OF DEFAULT:**

24.1 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 amount due under the Contracts.

(b) Seller fails or refuses to deliver Commodities conforming to his Bid document/specifications, or fails to deliver Commodities and, or execute the works assigned to them 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.

25.0 **CONSEQUENCES OF DEFAULT:**

(a) If an Event of Default occurs and would be continuing, Purchaser may forthwith terminate the Contract by written notice.

In the 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 Contract Performance Bank Guarantee;

ii) Recover any losses and / or additional expenses, Purchaser may incur as a result of Seller’s default.

26.0 **FORCE MAJEURE:**

26.01 The term “Force Majeure” as employed herein include, 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, 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:

1. Late delivery of materials caused by congestion of Seller’s facilities or elsewhere, and oversold condition of the market, inefficiencies, or similar occurrences.

2. Late performance by Seller and/or Sub-Seller caused by unavailability of raw materials, supervisors or labour, inefficiencies of similar occurrences.

3. Mechanical breakdown of any item of Seller’s or its Sub-Seller’s equipment, plant or machinery.

4. Delays due to ordinary storm or inclement weather or

5. 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.

26.02 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 the cause lasts.

26.03 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 even 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 10 (ten) days, the parties shall meet and determine the measures to be taken.

26.04 Any delay or failure in performance by either party hereto shall not give rise to any claims for damages or loss of anticipated profits if and to the extent, such delay or failure is caused by Force Majeure.

27 EMBOSsing / PUNCHING / CASTing

27.1 The all equipments and materials supplied under the CAPEX Programme shall bear distinct mark of “Name of the Purchaser, GoO, CAPEX Programme, PO Order No. & Date” by a way of embossing / punching / casting etc. This should be clearly visible to naked eye.

28 INDEMNIFY

28.1 The Vendor, its successor and assignee shall indemnify the Purchaser, its successor and assignee from all current & future liabilities that may arise out of purchase contract(s) entered into between the Vendor & the Purchaser under this CAPEX Programme. The Purchaser in term shall indemnify the GoO & GRIDCO.
SECTION –IV

TECHNICAL SPECIFICATIONS

FOR

ALL ALLUMINIUM ALLOY CONDUCTOR (AAAC)

(CAPEX PROGRAMME)
1. **SCOPE**

This specification covers design, Engineering, Manufacture, Testing, Inspection before dispatch, forwarding, packing, transportation to sites, Insurance (both during transit & storage ), storage, erection, supervision testing & commissioning of all sizes of All Aluminum Alloy Conductors of the aluminum – magnesium-silicon type for use in the distribution overhead power lines of NESCO, WESCO & SOUTHCO of Orissa.

The equipment offered shall have been successfully type tested and the design shall have been satisfactory operation for a period not less than two years on the date of bid opening. Compliance shall be demonstrated by submitting with the bid, (i) authenticated copies of the type test reports and (ii) performance certificates from the users.

The scope of supply includes the provision of type test, Rates of type tests shall be given in the appropriate price schedule of the bidding document and will be considered for evaluation. The Purchaser reserves the right to waive type tests as indicated in the section on Quality Assurance, Inspection and Testing in the specification.

The Aluminum Alloy Conductor shall conform in all respects to highest standards of engineering, design, workmanship, this specification and the latest revisions of relevant standards at the time of offer and the Purchaser shall have the power to reject any work or materials, which, in his judgment, is not in full accordance therewith.

**STANDARDS**

Except where modified by the specification, the Aluminum Alloy Conductor shall be designed, manufactured and tested in accordance with latest editions of the following standards.

<table>
<thead>
<tr>
<th>IEC/ISO/ Other International Standard</th>
<th>IS</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEC :1089</td>
<td>IS 398</td>
<td>Aluminum Alloy Stranded Conductors</td>
</tr>
<tr>
<td></td>
<td>IS 9997</td>
<td>Aluminum Alloy redraw rods for electrical purposes</td>
</tr>
<tr>
<td>IEC 502 : 1994</td>
<td>IS 398</td>
<td>Extruded solid dielectric insulated power cables for rated voltages 1.0 KV up to 30 KV</td>
</tr>
</tbody>
</table>
3. **GENERAL**

The wires shall be of heat treated aluminum, magnesium silicon alloy containing approximately silicon-0.5 to 0.9 %, magnesium-0.6 % to 0.9%, Fe-0.5% (maximum), Copper-0.1% (max), Mn-0.03%, Cr-0.03%, Zn-0.1%, B-0.06%, and having the mechanical and electrical properties specified in the table and be smooth and free from all imperfections, such as, spills, splits and scratches.

Neutral grease shall be applied between the layers of wires. The drop point temperature of the grease shall not be less than 120°C.

3.1 **Mechanical and Electrical Characteristics of Aluminium Alloy Wires used in the Construction of Stranded Aluminium Alloy Conductors**

<table>
<thead>
<tr>
<th>Nominal Diameter</th>
<th>Minimum Diameter</th>
<th>Max. Diameter</th>
<th>Cross Sectional Area</th>
<th>Mass</th>
<th>Minimum Breaking Load Before Stranding</th>
<th>Maximum Resistance at 20°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mm</td>
<td>mm</td>
<td>mm</td>
<td>mm²</td>
<td>Kg/km</td>
<td>KN</td>
<td>ohms/km</td>
</tr>
<tr>
<td>3.81</td>
<td>3.77</td>
<td>3.85</td>
<td>11.40</td>
<td>30.78</td>
<td>3.52</td>
<td>2.938</td>
</tr>
<tr>
<td>3.94</td>
<td>3.90</td>
<td>3.98</td>
<td>12.19</td>
<td>32.92</td>
<td>3.77</td>
<td>2.746</td>
</tr>
<tr>
<td>4.26</td>
<td>4.22</td>
<td>4.30</td>
<td>14.25</td>
<td>38.48</td>
<td>4.40</td>
<td>2.345</td>
</tr>
</tbody>
</table>

Maximum resistance values given in column 8 have been calculated from the maximum values of the resistively as specified and the cross sectional area based on the minimum diameter.

The minimum breaking load is calculated on nominal diameter at ultimate tensile strength of 0.309 KN/mm² for wire before stranding and 95% of the ultimate tensile strength after stranding.

4. **PHYSICAL CONSTANTS FOR ALUMINIUM ALLOY WIRES**

4.1 **Resistively**:

For the purpose of this specification, the standard value of resistively of aluminum alloy wire which shall be used for calculation is to be taken as 0.0325 ohm mm²/m at 20°C. The maximum value of resistively of any single wire shall not, however,
4.2 **Density**:

At a temperature of 20°C, the density of aluminum alloy wire is to be taken as 2700 kg/m³.

4.3 **Temperature Coefficient of Linear Expansion**:

The temperature coefficient of linear expansion of aluminium alloy wire is to be taken as 23 x 10⁻⁶/°C.

4.4 **Constant – Mass Temperature Coefficient**

At a Temperature of 20°C, the constant – mass temperature coefficient of resistance of aluminum alloy wires, measured between two potential points rigidly fixed to the wire, is taken as 0.00360/°C.

5. **STANDARD SIZES**

5.1 **Nominal Sizes of Wires**

The aluminum alloy wires for standard constructions covered by this specification shall have the diameters as specified in the table and a tolerance of ±1% shall be permitted on the nominal diameter.

5.2 **Standard Conductors**

The sizes, resistance and masses (excluding the mass of grease) of stranded aluminum alloy conductors shall be as given in table.

5.3 **Mechanical and Electrical Characteristics of Aluminum Alloy Stranded Conductors**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Actual Area</th>
<th>Stranding and Wire Dia</th>
<th>Approx. Overall Dia</th>
<th>Approx. Mass</th>
<th>Calculate Max Resis at 20°C</th>
<th>Approx Calculated Breaking Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>80</td>
<td>73.81</td>
<td>11.43</td>
<td>218.26</td>
<td>0.4250</td>
<td>23.41</td>
</tr>
<tr>
<td>2</td>
<td>100</td>
<td>74.26</td>
<td>12.78</td>
<td>272.86</td>
<td>0.3390</td>
<td>29.26</td>
</tr>
<tr>
<td>3</td>
<td>232</td>
<td>193.94</td>
<td>19.70</td>
<td>636.67</td>
<td>0.1471</td>
<td>68.05</td>
</tr>
</tbody>
</table>

5.3.1 **Increase in Length due to Stranding**

When straightened out, each wire in any particular layer of a stranded conductor, except the central wire, is longer than the stranded conductor by an amount depending on the lay ratio of that layer.
5.3.2 **Resistance and Mass of Conductor**

The resistance of any length of stranded conductor is the resistance of the same length of any one wire multiplied by a constant as set out in the table below.

The mass of each wire in any particular layer of the stranded conductor, except the central wire, will be greater than that of an equal length of straight wire by an amount depending on the lay ratio of that layer. The total mass of any length of an aluminium stranded conductor is, therefore, obtained by multiplying the mass of an equal length of straight wire by an appropriate constant as mentioned below. In calculating the stranding constants as mentioned in the table below, the mean lay ratio, that is the arithmetic mean of the relevant minimum and maximum values in table for lay ratio has been assumed for each layer.

5.3.3 **Calculated Breaking Load of Conductor**

- For a conductor containing not more than 37 wires, 95% of the sum of strength of the individual wires calculated from the values of the minimum breaking load given in this specification.

- For a conductor containing more than 37 wires, 90% of the sum of the strengths of the individual wire calculated from the values of the minimum breaking load given in this specification.

5.3.4 **Calculated Area and Maximum Resistance of Conductor**

The actual area of a stranded conductor has been taken as the sum of the cross-sectional areas of the individual wires of nominal diameter.

Maximum resistance values of stranded conductor have been calculated on the basis of maximum resistivity and the cross-sectional area based on the minimum diameter of wires.

5.4 **Stranding Constants**

<table>
<thead>
<tr>
<th>Number of Wires in Conductor</th>
<th>Stranding Constants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mass</td>
</tr>
<tr>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>7</td>
<td>7.091</td>
</tr>
<tr>
<td>19</td>
<td>19.34</td>
</tr>
</tbody>
</table>
6. **JOINTS IN WIRES**

6.1 **Conductor containing seven wires**

There shall be no joint in any wire of a stranded conductor containing seven wires, except those made in the base rod or wire before final drawing.

6.2 **Conductors containing more than seven wires**

In stranded conductors containing more than seven wires, joints in individual wires are permitted in any layer except the outermost layer (in addition to those made in the base rod or wire before final drawing) but no two such joints shall be less than 15 m apart in the complete stranded conductor. Such joints shall be made by cold pressure butt welding. They are not required to fulfill the mechanical requirements for unjointed wires.

7. **STRANDING**

The wire used in the construction of a stranded conductor shall, before and after stranding, satisfy all the relevant requirements of this standard.

The lay ratio of the different layers shall be within the limits given in the table for lay ratio.

In all constructions, the successive layers shall have opposite directions of lay, the outermost layer being right-handed. The wires in each layer shall be evenly and closely stranded.

In aluminum alloy stranded conductors having multiple layers of wires, the lay ratio of any layer shall not be greater than the lay ratio of the layer immediately beneath it.

7.1 **Lay Ratios for Aluminum Alloy Stranded Conductors**

<table>
<thead>
<tr>
<th>Number of Wires in Conductor</th>
<th>LAY RATIOS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3/6 Wire Layer</td>
</tr>
<tr>
<td></td>
<td>Min</td>
</tr>
<tr>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>19</td>
<td>10</td>
</tr>
</tbody>
</table>

NOTE: For the purpose of calculation the mean lay ratio shall be taken as the arithmetic mean of the relevant minimum and maximum values given in this table.
8. LENGTHS AND VARIATIONS IN LENGTHS:

Unless otherwise agreed between the Employer and the Contractor, stranded aluminium alloy conductors shall be supplied in the manufacturer’s usual production lengths to be indicated in the bid Schedule. The Employer reserves the right to specify particular lengths of conductor such that certain drum lengths will be shorter than others. There will in both cases be a permitted variation of \(-0 + 5\%\) in the length of any one conductor length.

9. TESTS

9.1 Type Tests

The following tests shall be carried out as per relevant ISS once on samples of completed line conductor during each production run of up to 500 kms of the conductor from each manufacturing facility.

9.1.1 Ultimate Tensile Strength Test

This test is intended to confirm not only the breaking strength of the finished conductor but also that the conductor has been uniformly stranded.

A conductor sample of minimum 5 m length fitted with compression dead end clamps at either end shall be mounted in a suitable tensile test machine. Circles perpendicular to the axis of the conductor shall be marked at two places on its surface. Tension on the conductor sample shall be increased at a steady rate upto 50% of the minimum UTS specified and held for one minute. The circles drawn shall not be distorted due to relative movement of the individual strands. Thereafter the load shall be increased at a steady rate to the specified minimum UTS and held at that load 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.

9.1.2 D.C Resistance Test

On a conductor sample of minimum 5 m length two contact clamps shall be fitted with a pre-determined bolt torque. The resistance between the clamps shall be measured using a Kelvin double bridge by initially placing the clamps at zero separation 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\(^0\) C, which shall conform to the requirements of this specification.

9.2 Routine Tests

Measurement of Physical Dimensions: The samples should meet the desired
dimensional requirements before conducting following Routine Tests as per relevant ISS.

9.2.1 Selection of Test Samples

Samples for the tests specified in this specification shall be taken by the manufacturer before stranding, from not less than 10% of the individual lengths of aluminium alloy wire included in any one final heat-treatment batch and which will be included in any one consignment of the stranded conductors to be supplied.

Alternatively, if desired by the Project Incharge at the time of placing an order, that the tests be made in the presence of his representative, samples of wire shall be taken from length of stranded conductor.

Samples shall then be obtained by cutting 1.2 meters from the outer end of the finished conductor from not more than 10% of the finished reels or drums.

Tests for electrical and mechanical properties of aluminium alloy wire shall ordinarily be made before stranding since wires unlaid from conductors may have different physical properties from those of the wire prior to stranding because of the deformation brought about by stranding and by straightening for test.

Spools offered for inspection shall be divided into equal lots, the number of lots being equal to the number of samples to be selected, a fraction of a lot being counted as s complete lot. One sample spool shall be selected at random from each lot.

The following test shall be carried out once on samples of completed line conductor during each production run of up to 500 kms of the conductor from each manufacturing facility.

9.2.2 Breaking Load Test

The breaking load of one specimen, cut from each of the samples taken shall be determined by means of a suitable tensile testing machine. The load shall be applied gradually and the rate of separation of the jaws of the testing machine shall be not less than 25 mm / min and not greater than 100mm /min.

9.2.3 Elongation Test
The elongation of one specimen cut from each of the samples taken shall be determined as follows:

The specimen shall be straightened by hand and an original gauge length of 200 mm shall be marked on the wire. A tensile load shall be applied as described above and the elongation shall be measured after the fractured ends have been fitted together. If the fracture occurs outside the gauge marks, or within 25 mm of either mark, and the required elongation is not obtained, the test shall be disregarded and another test should be made.

When tested before and after stranding, the elongation shall not be less than 4% on a gauge length of 200 mm.

**9.2.4 D.C Resistance Test**

The electrical resistance test of one specimen cut from each of the samples taken shall be measured at ambient temperature. The measured resistance shall be corrected to the value at 20\(^0\) C by means of the formula:

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

where,

\[
\begin{align*}
R_{20} & = \text{resistance corrected at } 20^0 \text{C} \\
R_T & = \text{resistance measured } T^0 \text{C} \\
\alpha & = \text{constant – mass temperature coefficient of resistance, 0.0036, and} \\
T & = \text{ambient temperature during measurement.}
\end{align*}
\]

The resistance corrected at 20\(^0\) C shall not be more than the maximum values specified.

**9.2.5 Chemical Analysis of Aluminium Alloy**

Samples taken from the alloy coils / strands shall be chemically / spectrographically analysed. The results shall conform to the requirements stated in this specification. The manufacturer shall make available material analyses, control documents and certificates from each batch as and when required by the **Purchaser**.

Test should be conducted at the independent test house by the purchaser in the case of absence of facility at manufacturer. However the cost of such testing shall be borne by the manufacturer.
9.2.6 **Dimensional and Lay Length Check**

The individual strands of the conductors shall be dimensionally checked and the lay lengths checked to ensure that they conform to the requirements of this specification.

Ten percent drums from each lot shall be rewound in the presence of the Purchaser or his representative to allow visual checking of the conductor for joints, scratches or other surface imperfections and to ensure that the conductor generally conforms to the requirements this specification. The length of conductor wound on the drum shall be re-measured by means of an approved counter / meter during the rewinding process.

9.2.7 **Visual and dimensional Checks on the Conductor Drums.**

The drums shall be visually and dimensionally checked to ensure that they conform to the requirements of this specification and of IS 1778: Specification for reels and drums of bare conductors. For wooden drums, a suitable barrel batten strength test procedure is required. The Bidder shall state in his bid the tests to be carried out on the drums and shall include those tests in the Quality Assurance Programme.

9.2.8 **Acceptance Tests :**

All tests required to confirm enclosed Guaranteed Technical Particulars (GTP) requirements of this specification in addition to acceptance test as per relevant ISS, needs to be conducted as Acceptance Tests.

10. **REJECTION AND RETESTS**

10.1 **Type Tests**

Should the conductor fail any of the type tests specified above, the Purchaser will not accept any conductor manufactured from the material, nor conductor made by the manufacturing methods used for the conductor which failed the test.

The manufacturer shall propose suitable modifications to his materials and techniques in order that he can produce conductor which will satisfactorily pass the type test requirements.

10.2 **Routine Tests**
Should any one of the test pieces first selected fail the requirements of the tests, two further samples from the same batch shall be selected for testings, one of which shall be from the length from which the original test sample was taken unless that length has been withdrawn by the manufacturer.

Should the test pieces from both these additional samples satisfy the requirements of the tests, the batch represented by these samples shall be deemed to comply with the standard. Should the test pieces from either of the two additional samples fail, the batch represented shall be deemed not to comply with the standard.

If checks on individual strand diameters, conductor lay lengths and conductor surface condition indicate non-compliance with the requirements of the specification, the particular drum will be rejected. Inspection will then be carried out on two further drums within the same batch. If the conductor on either of the drums is non-complaint, the complete batch will be rejected.

10.3 Delivery Extension due to Rejection of Conductor

The rejection of conductor due to its failure to pass either type or routine tests shall not permit the Contractor to apply for any extension to the time period within which he has contracted to complete the project.
<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Particulars</th>
<th>55mm(^2) AAAC</th>
<th>80mm(^2) AAAC</th>
<th>100 mm(^2) AAAC</th>
<th>232 mm(^2) AAAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Nominal Aluminium Alloy area of conductor in mm(^2)</td>
<td>55</td>
<td>80</td>
<td>100</td>
<td>232</td>
</tr>
<tr>
<td>2</td>
<td>No. of strands</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>19</td>
</tr>
<tr>
<td>3</td>
<td>Wire dia in mm.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nominal</td>
<td>3.15</td>
<td>3.81</td>
<td>4.26</td>
<td>3.94</td>
</tr>
<tr>
<td></td>
<td>Minimum</td>
<td>3.12</td>
<td>3.77</td>
<td>4.22</td>
<td>3.90</td>
</tr>
<tr>
<td></td>
<td>Maximum</td>
<td>3.18</td>
<td>3.85</td>
<td>4.3</td>
<td>3.98</td>
</tr>
<tr>
<td>4</td>
<td>Approximate overall dia of the conductor in mm.</td>
<td>9.45</td>
<td>11.43</td>
<td>12.78</td>
<td>19.70</td>
</tr>
<tr>
<td>5</td>
<td>Cross-sectional area of:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Individual wire in mm(^2)</td>
<td>7.793</td>
<td>11.4</td>
<td>14.25</td>
<td>12.19</td>
</tr>
<tr>
<td></td>
<td>Stranded conductor in mm(^2)</td>
<td>54.55</td>
<td>80</td>
<td>99.81</td>
<td>232</td>
</tr>
<tr>
<td>6</td>
<td>Approximate mass of:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Individual wire in Kg/Km</td>
<td>21.04</td>
<td>30.78</td>
<td>38.48</td>
<td>32.92</td>
</tr>
<tr>
<td></td>
<td>Stranded Conductor in Kg/Km</td>
<td>149.2</td>
<td>218.26</td>
<td>272.86</td>
<td>636.67</td>
</tr>
<tr>
<td>7</td>
<td>Minimum breaking load in KN</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Individual wire</td>
<td>2.29</td>
<td>3.34</td>
<td>4.18</td>
<td>3.58</td>
</tr>
<tr>
<td></td>
<td>Conductor (U.T.S.)</td>
<td>16.03</td>
<td>23.41</td>
<td>29.26</td>
<td>68.05</td>
</tr>
<tr>
<td>8</td>
<td>Calculated maximum DC resistance at 20(^\circ) C in Ohm/ Km</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Individual wire</td>
<td>4.29</td>
<td>2.938</td>
<td>2.345</td>
<td>2.746</td>
</tr>
<tr>
<td></td>
<td>Conductor</td>
<td>0.621</td>
<td>0.425</td>
<td>0.339</td>
<td>0.1471</td>
</tr>
<tr>
<td>9</td>
<td>Lay ratio for 7 wire conductor</td>
<td>Min</td>
<td>Max</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Lay ratio for 19 wire conductor</td>
<td>10</td>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Direction of Lay</td>
<td>Right hand</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Modulus of Elasticity (Kg/ cm(^3)) for 7 wire</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.6324 \times 10(^6)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Modulus of Elasticity (Kg/ cm(^3)) for 19 wire</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.612 \times 10(^6)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Co-efficient of linear expansion per 0(^\circ) C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>23.0 \times 10(^{-6})</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Standard length (Mtr.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2000 ± 5%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Size of drum in mm.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>To be offered by the bidder</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>No. of lengths in one drum</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>To be offered by the bidder</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>No. of cold pressure butt welding</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8 (Eight)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SECTION –V

LIST OF ANNEXURES

(SCHEDULES AND FORMATS)
Annexure – I

ABSTRACT OF GENERAL TERMS AND CONDITIONS
(Tender Notice No. CSO/CAPEX/AAAC/01/2010-11 Dt. 17.01.2010)

(For supply of AAA Conductor)

1. Whether the bidder is a Manufacturer & furnished relevant documents: Yes / No
2. Required Cost of Tender Furnished Yes / No
3. Required Earnest Money Furnished in Demand Draft Yes / No
4. Whether Type test certificates enclosed with the bid: Yes / No
5. Manufacturer’s past supply experience including user’s certificate furnished or not: - Yes / No
6. Audited annual reports for the last 3 years furnished or not: Yes / No
7. Deviation to the specification , if any (List enclosed or not):- Yes / No
8. Whether agreed to Purchaser’s Delivery schedule: Yes / No
   If agreed,
   a) Date of commencement :
   b) Rate of delivery per month :
9. Whether agreed to Purchaser’s Guarantee clause:- Yes / No
10. Whether agreed for 180 days’ validity period of Prices Yes / No
11. Whether the Prices are FIRM? Yes / No
12. Whether agreed to furnish security deposit in shape of B.G. encashable at Bhubaneswar in case his tender is successful: - Yes / No
13. Whether agreed to penalty for delayed delivery: - Yes / No
14. Whether agreed to Purchaser’s standard terms of payment or not: Yes / No
15. Valid ITCC & STCC furnished or not: Yes / No

Signature of the bidder
With seal of the Bidder

This form is to be duly filled up & signed by the Bidder along with seal & submitted along with the Part-I of tender.

38
Annexure – II

DECLARATION FORM
(Tender Notice No. CSO/CAPEX/AAAC/01/2010-11 Dt. 17.01.2010)

To

Sir,

Having examined the above specifications together with the Tender terms and conditions referred to therein.

1- I / we the undersigned do hereby offer to supply the materials covered thereon in complete shape in all respects as per the rules entered in the attached contract schedule of prices in the tender.

2- I / we do hereby undertake to have the materials delivered within the time specified in the tender.

3- I / we do hereby guarantee the technical particulars given in the tender supported with necessary reports from concerned authorities.

4- I / we do hereby certify to have furnished a copy of the tender specifications by remitting Cash/ Demand draft & this has been duly acknowledged by you in your letter No……………..Dt……………….

5- I / we do hereby agree to furnish the composite Bank Guarantee in the manner specified / acceptable by NESCO/WESCO/SOUTHCO & for the sum as applicable to me / us as per clause No.23 in Annexure-III(A) of this specification within fifteen days of issue of Letter of intent / Purchase Order, in the event of Purchase order being decided in my / us favour , failing which I / we clearly understand that the said LOI / P.O. shall be liable to be withdrawn by the Purchaser

Signed this…………….Day of……………………200….

Yours faithfully,

(Signature of Tenderer with Seal)

(This form should be duly filled up & signed by the bidder & submitted along with the original copy of the bid)
PROFORMA FOR COMPOSITE BANK GUARANTEE FOR SECURITY DEPOSIT, PAYMENT AND PERFORMANCE

This Guarantee Bond is executed this ___ day of ___________________ by us the
P.O.________ P.S.________ Dist ______________ State ________________

( indicate designation of Purchaser )

Whereas North Eastern Electricity Company of Orissa Ltd. (NESCO) /Western Electricity Supply Company of Orissa Ltd. (WESCO) /Southern Electricity Supply Company of Orissa Ltd. (SOUTHCO) (as the case may be) Regd. Office: N 1/22, IRC Village, Nayapalli, Bhubaneswar – 751015 registered under the Company Act 1956 (here in after called “the Purchaser”) has placed Purchase Order No._____________ Dt._____________ (hereinafter called “the Agreement”) with M/s_________________ _________________________ (hereinafter called “the Contractor”) for supply of ________________ (name of the material) and whereas NESCO/WESCO/SOUTHCO (as the case may be) has agreed (1) to exempt the Contractor from making payment of security deposit, (2) to release 100% payment of the cost of materials as per the said agreement and (3) to exempt from performance guarantee on furnishing by the Contractor to the NESCO/WESCO/SOUTHCO (as the case may be) a composite Bank Guarantee of the value of 10% (ten percent) of the Contract price of the said Agreement.

1. Now, therefore, in consideration of NESCO/WESCO/SOUTHCO (as the case may be) having agreed (1) to exempt the Contractor for making payment of security deposit, (2) to release 100% payment to the Contractor and (3) to exempt from furnishing performance guarantee in terms of the said Agreement as aforesaid, we the __________________ Bank, Address ____________________________ (code No. ________) (hereinafter referred to as “the Bank”) do hereby undertake to pay to the NESCO/WESCO/SOUTHCO (as the case may be) an amount not exceeding Rs._____________ (Rupees ________________ ) only against any loss or damage caused to or suffered by NESCO/WESCO/SOUTHCO (as the case may be) by reason of any breach by the said Contractor(s) of any of the terms or conditions contained in the said Agreement.

2. We, the __________________ Bank do hereby undertake to pay the amounts due and payable under the guarantee without any demur, merely on a demand NESCO/WESCO/SOUTHCO (as the case may be) stating that the amount claimed is due by way of loss or damage caused to or suffered by NESCO/WESCO/SOUTHCO (as the case may be) by reason of any breach by the said Contractor(s) of any of the terms or conditions contained in the said Agreement or by the reason of any breach by the said Contractor’s failure to perform the said Agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs.___________ (Rupees ________________ ) only.

3. We, the __________________ Bank also undertake to pay to NESCO/WESCO/SOUTHCO (as the case may be) any money so demanded notwithstanding any dispute or dispute raised by the Contractor(s) in any suit or proceeding instituted/ pending before any court or Tribunal relating thereto our liability under this Agreement being absolute and unrevocable.

The payment so made by us under this bond shall be valid discharge of our liability for payment there under and the Contractor(s) shall have no claim against us for making such payment.

4. We, the __________________ Bank further agree that the guarantee herein contain shall remain in full force and affect during the period that would be taken for the performance of the said Agreement and it shall continue to remain in force endorsable till all the dues of NESCO/WESCO/SOUTHCO (as the case may be) under by virtue of the said Agreement have been fully paid and its claim satisfied or discharged or till NESCO/WESCO/SOUTHCO (as the case may be) certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharge this guarantee and will not be revoked by us during the validity of the guarantee period.

Unless a demand or claim under this guarantee is made on us or with___________________________ (Local Bank Name, address and code No.) __________________________, Bhubaneswar in writing on or before ________________ (date) we shall be discharged from all liability under this guarantee thereafter.
5. We, the _________________________ Bank further agree that NESCO/WESCO/SOUTHCO (as the case may be) shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extend time of performance by the said Contractor(s) and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said Contractor(s) or for any forbearance act or omission on part of NESCO/WESCO/SOUTHCO (as the case may be) or any indulgence by NESCO/WESCO/SOUTHCO (as the case may be) to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would but for this provisions have effect of so relieving us.

6. The Guarantee will not be discharged due to change in the name, style and constitution of the Bank and or Contractor(s).

7. We, the _________________________ Bank lastly undertake not to revoke this Guarantee during its currency except with the previous consent of NESCO/WESCO/SOUTHCO (as the case may be) in writing.

Dated ___________ the __________ day of Two thousand __________

Not withstanding anything contained herein above.

Our liability under this Bank Guarantee shall not exceed Rs.______________ (Rupees __________ ____________ ) only.

The Bank Guarantee shall be valid up to ________________ only.

We or our Bank at Bhubaneswar (Name & Address of the Local Bank) are liable to pay the guaranteed amount depending on the filing of claim and any part thereof under this Bank Guarantee only and only if you serve upon us or our local Bank at Bhubaneswar a written claim or demand and received by us or by Local Branch at Bhubaneswar on or before Dt.__________ otherwise bank shall be discharged of all liabilities under this guarantee thereafter.

For ____________________________

( indicate the name of the Bank )

N.B.:
(1) Name of the Contractor:
(2) No. & date of the Purchase order / agreement:
(3) Amount of P.O. :
(4) Name of Materials :
(5) Name of the Bank:
(6) Amount of the Bank Guarantee:
(7) Name, Address and Code No. of the Local Branch:
(8) Validity period or date up to which the agreement is valid:
(9) Signature of the Constituent Authority of the Bank with seal:
(10) Name & addresses of the Witnesses with signature:
(11) The Bank Guarantee shall be accepted only after getting confirmation from the respective Banks.
Annexure- V
Price Schedule for Materials/ Equipments Offered as per Tender Notice No *(Tender Notice No. CSO/CAPEX/AAAC/01/2010-11 Dt. 17.01.2010)*

Name of Bidder ________________________________

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Item Description</th>
<th>Unit</th>
<th>Quantity</th>
<th>Price for each unit</th>
<th>Total Unit Price inclusive of taxes &amp; duties (Rs.)</th>
<th>Total Landing Price inclusive of taxes &amp; duties (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Unit</td>
<td></td>
<td>Ex-Works Price (Rs.)</td>
<td>Packing &amp; Forwarding Charges (Rs.)</td>
<td>Excise Duty with education cess (Rs.)</td>
</tr>
<tr>
<td>1</td>
<td>AAA Conductors, Size 232 mm²</td>
<td>Kms</td>
<td>554</td>
<td>10</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>2</td>
<td>AAA Conductors, Size 100 mm²</td>
<td>Kms</td>
<td>5138</td>
<td>10</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>3</td>
<td>AAA Conductors, Size 80 mm²</td>
<td>Kms</td>
<td>341</td>
<td>10</td>
<td>12</td>
<td>14</td>
</tr>
</tbody>
</table>

Signature of Bidder alongwith Seal & date ____________________________________________________________

Note: 1) Any column left blank shall be treated as NIL / Inclusive of .
2) Unit price under Column-11 is inclusive of all.
3) In case of discrepancy between unit price and total price, the unit price shall prevail over the total price.

The above is to be duly filled up, signed and submitted in sealed condition in a separate envelop superscribed as “Part-II Bid – Price Bid”
### Annexure- V
Price Schedule for Materials/ Equipments Offered as per Tender Notice No (Tender Notice No. CSO/CAPEX/AAAC/01/2010-11 Dt. 17.01.2010)

**WESCO**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Item Description</th>
<th>Unit</th>
<th>Quantity</th>
<th>Unit Ex-Works Price (Rs.)</th>
<th>Unit Packaging &amp; Forwarding Charges (Rs.)</th>
<th>Unit Excise Duty with education cess (Rs.)</th>
<th>Unit Sales Tax/ VAT (Rs.)</th>
<th>Unit Freight &amp; Insurance and other local costs incidental to delivery (Rs.)</th>
<th>Unit Entry Tax, if any (Rs.)</th>
<th>Total Unit Price inclusive of taxes &amp; duties (Rs.)</th>
<th>Total Landing Price inclusive of taxes &amp; duties (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AAA Conductors, Size 232 mm2</td>
<td>Kms</td>
<td>3</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>$11 = (5+6+7+8+9+10)</td>
<td>$12 = 4 x 11</td>
</tr>
<tr>
<td>2</td>
<td>AAA Conductors, Size 100 mm2</td>
<td>Kms</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>$11 = (5+6+7+8+9+10)</td>
<td>$12 = 4 x 11</td>
</tr>
<tr>
<td>3</td>
<td>AAA Conductors, Size 80 mm2</td>
<td>Kms</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>$11 = (5+6+7+8+9+10)</td>
<td>$12 = 4 x 11</td>
</tr>
</tbody>
</table>

Total amount in Words
Rupees……………..only

Signature of Bidder alongwith Seal & date

Note:
1) Any column left blank shall be treated as NIL / Inclusive of.
2) Unit price under Column-11 is inclusive of all.
3) In case of discrepancy between unit price and total price, the unit price shall prevail over the total price.

The above is to be duly filled up, signed and submitted in sealed condition in a separate envelop superscribed as “Part-II Bid – Price Bid”
Annexure- V
Price Schedule for Materials/ Equipments Offered as per Tender Notice No (Tender Notice No. CSO/CAPEX/AAAC/01/2010-11 Dt. 17.01.2010)

SOUTHCO

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Item Description</th>
<th>Unit</th>
<th>Quantity</th>
<th>Unit Ex-Works Price (Rs.)</th>
<th>Unit Packing &amp; Forwarding Charges (Rs.)</th>
<th>Unit Excise Duty with education cess (Rs.)</th>
<th>Unit Sales Tax/ VAT (Rs.)</th>
<th>Unit freight &amp; insurance and other local costs incidental to delivery (Rs.)</th>
<th>Unit Entry Tax, if any (Rs.)</th>
<th>Total Unit Price inclusive of taxes &amp; duties (Rs.)</th>
<th>Total Landing Price inclusive of taxes &amp; duties (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AAA Conductors, Size 232 mm²</td>
<td>Kms</td>
<td>40</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11 = (5+6+7+8+9+10)</td>
<td>12 = 4 x 11</td>
</tr>
<tr>
<td>2</td>
<td>AAA Conductors, Size 100 mm²</td>
<td>Kms</td>
<td>2227</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>AAA Conductors, Size 80 mm²</td>
<td>Kms</td>
<td>4961</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total amount in Words Rupees………………only

Signature of Bidder alongwith Seal & date ___________________________________________________________________________

Note: 1) Any column left blank shall be treated as NIL / Inclusive of.
4) Unit price under Column-11 is inclusive of all.
3) In case of discrepancy between unit price and total price, the unit price shall prevail over the total price.

The above is to be duly filled up, signed and submitted in sealed condition in a separate envelop superscribed as “Part-II Bid – Price Bid”
### ANNEXURE VI (A)

**TECHNICAL DEVIATION FORMAT**

<table>
<thead>
<tr>
<th>Clause No</th>
<th>Prescribed as per Tender Specification</th>
<th>Deviation in the bidder's Offer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Bidder's Signature with Seal.

**N.B:**

The bidder has to mention all technical deviations in his offer which differs from the Technical Requirement of this Tender in above format. Deviations not mentioned in above format but mentioned in any other format or in any other part of the offer document shall not be considered as deviation and the bidder shall be deemed to have accepted our technical requirement without deviation.

---

**ANNEXURE VI (B)**

45
(COMMERCIAL DEVIATION FORMAT)

<table>
<thead>
<tr>
<th>Clause No</th>
<th>Prescribed as per Tender Specification</th>
<th>Provided in the bidder’s Offer</th>
</tr>
</thead>
</table>

Bidder’s Signature with Seal.

N.B :

The bidder has to mention all commercial deviations in his offer which differs from the Commercial Requirement of this Tender in above format. Deviations not mentioned in this format but mentioned in any other format or in any other part of the offer document shall not be considered as deviation and the bidder shall be deemed to have accepted our commercial requirement without deviation.