

NORTH EASTERN ELECTRICITY SUPPLY COMPANY OF ORISSA LIMITED
OFFICE OF CHIEF EXECUTIVE OFFICER, JANUGANJ
BALASORE-756019 Ph No-(06782)-269864 Fax No-(06782)-263259

No

Date-

To

Sub : Issue of Tender Paper.

Ref : (1) Tender Notice No- 1010 dtd.17.01.08.
(2) Your Letter No. _____ dt. _____ .

Dear Sirs,

With reference to above, one copy of the tender document for supply of materials is enclosed for taking further action.

Please acknowledge the receipt of the same.

Yours faithfully,

General Manager (Works)

**NORTH EASTERN ELECTRICITY SUPPLY COMPANY OF ORISSA LIMITED
OFFICE OF THE CHIEF EXECUTIVE OFFICER**

Corporate Office: Januganj, Balasore – 756019, Orissa, Fax No.-06782-263259
Regd. Office: 123, Sec-A, Zone-A, Mancheswar Industrial Estate, Bhubaneswar-756010, Orissa

TENDER DOCUMENT
FOR

**SUPPLY OF TRANSFORMERS, PSC POLES ,
AAA CONDUCTOR & TRANSFORMER OIL**

TENDER NOTICE NO. 1010 dtd.17.01.08

Last date of submission of tender papers: Up to 1.00 pm of 20.02.08.

Date of opening of tender: At 3.30pm of 20.02.08.

**General Manager (Works)
NESCO, Balasore.**

**NORTH EASTERN ELECTRICITY SUPPLY COMPANY OF ORISSA LIMITED
OFFICE OF THE CHIEF EXECUTIVE OFFICER**

Corporate Office: Januganj, Balasore – 756019, Orissa, Fax No.-06782-263259
Regd. Office: 123, Sec-A, Zone-A, Mancheswar Industrial Estate, Bhubaneswar-756010, Orissa

Tender Notice No. 1010

Dt.17.01.08

NOTICE INVITING BIDS

1. The NORTH EASTERN ELECTRICITY SUPPLY COMPANY OF ORISSA LIMITED (NESCO), Balasore invites sealed bids for the supply of following Transformer materials for use in Deposit and Maintenance & Repair, System Improvement schemes.

Group.	Sl. No.	Description of Materials / Equipment	Quantity	Cost of Tender Paper	Closing time and date for submission of Bids	Time & date for opening of Bids	Bid Security in (Rs.)
A.	1.	63KVA 11/0.4KV Al.wound Distribution Transformer	50 nos	1000/- +VAT	Up to 1.00 pm of Dt.20.02.08	At 3.30pm of Dt.20.02.08	(1% of the total quoted landed value of the offered quantity)
	2.	25KVA 11/0.4KV Al.wound Distribution Transformer	100 nos				
	3.	16KVA 11/0.25KV Al.wound Distribution Transformer	150 nos				
	4.	10KVA 11/0.25KV Al.wound Distribution Transformer	40 nos				
B.	1.	8mtr long 200Kg PSC Poles	1800 nos	1000/- +VAT	Up to 1.00 pm of Dt.20.02.08	At 3.30pm of Dt.20.02.08	(1% of the total quoted landed value of the offered quantity)
	2.	9mtr long 300Kg PSC Poles	500 nos				
	3.	9mtr long 415Kg PSC Poles	50 nos				
	4.	10mtr long 425Kg PSC Poles	50 nos				
	5.	11mtr long 300Kg PSC Poles	30 nos				
C.	1.	34mm ² AAA Conductor	400 Kms	1000/- +VAT	Up to 1.00 pm of Dt.20.02.08	At 3.30pm of Dt.20.02.08	(1% of the total quoted landed value of the offered quantity)
	2.	55mm ² AAA Conductor	150 Kms				
	3.	100mm ² AAA Conductor	150 Kms				
D.	1.	EHV Grade Transformer Oil	150000	500/- +VAT	Up to 1.00 pm of Dt.20.02.08	At 3.30pm of Dt.20.02.08	(1% of the total quoted landed value of the offered quantity)

2. Complete set of bidding documents is available at www.nescoorissa.com. Interested eligible vendors may download the bidding documents and furnish their bids before the due date and time. Prospective bidders can also obtain the complete set of bidding documents from the office of the undersigned up to one day prior to the date of bid opening. Bidders will remit the above tender cost towards non-refundable cost of the Bid-Specification for each group in the form of Cash/ DD / pay Order on any scheduled bank drawn in favour of NESCO Ltd and payable at Balasore to be enclosed in a separate cover

and submit the same along with the Bids. Failure to enclose the cost of the Bid will result in the bid being rejected and returned unopened. Prospective bidders can obtain the complete set of bidding documents from the office of the undersigned up to one day prior to the date of bid opening.

3. NESCO Ltd. will not be responsible for any postal delay in delivery of the Bid document.
4. Clearing of doubts: If a bidder has any doubt on any portion of this document, he should obtain the required clarification / information from the undersigned in writing.
5. Bids must be addressed to The Chief Executive Officer, NESCO Ltd, Balasore and delivered on or before the time and date indicated. All bids must be accompanied by Bid Security as indicated in the bid.
6. Superscription as detailed at Salient Features of the Bid must be invariably written on the bid cover, failing which the bid cover will be returned unopened. Late submission of bids will not be accepted. Bids will be opened in the presence of Bidder's representatives who choose to attend at the time and date indicated and at the Office of the undersigned.

The undersigned reserve the rights to reject any or all tenders without assigning any reasons thereof.

General Manager (Works)
NESCO, Balasore.

NORTH EASTERN ELECTRICITY SUPPLY COMPANY OF ORISSA LIMITED
OFFICE OF THE CHIEF EXECUTIVE OFFICER
CORPORATE OFFICE: JANUGANJ, BALASORE-756019

SECTION – 1

INSTRUCTION TO THE BIDDERS

1. Tender papers of only those cases, which have purchased the tender paper from this office, will be considered. Original money receipts should be enclosed with the tender in the absence of which the offers will be rejected.
2. The purchaser may alter the quantities of materials at the time of placing orders or may also be split up among more than one Tender for any particular item.
3. The Tenderer may deviate from the specification while quoting if in the opinion, such deviation is / are in line with the manufacturer standard practice and conducive to a better and more economical offer. All such deviation should, however be clearly indicated given full justifications for such deviation.
4. Sealed tender is to be submitted in containing technical specification, test reports, Descriptive Literature, EMD, Statutory clearances & price Bid for the respective items as per the enclosed format. The tender should reach this office on or before **Dt.20.02.08 up to 1.00 PM** in double sealed cover super-scribing on the cover as ***“Tender Notice No.1010 dtd.17.01.08 due to be opened on dt.20.02.08 at 3.30 PM”***. Tender shall be submitted in person or by Registered Post with A.D.. Any other means of delivery shall not be accepted. When submitted by Post, Postal delay shall not be considered. When delivered in person, the tenders shall be received by a responsible Officer of purchase branch of this office, who shall officially acknowledge the receipt of the same. Tender will be opened in the office of the undersigned on Dt.20.02.08 at 3.30 pm Tenders received after due time and date shall not be considered.
5. Telegraphic Tender shall not be accepted under any circumstances.
6. The Purchaser reserves the rights to reject the lowest or any other tender or all tenders without assigning any reason thereof.
7. The tenders should be accompanied with the Bid Security @ 1% of the tender value in shape of Cash /Bank Draft/ Bank Guarantee (from a nationalized bank or scheduled Bank for a period of at least 3 months, which may be extended if required) in favour of Chief Executive Officer, NESCO, Balasore.
No adjustment towards earnest money deposit shall be permitted against any outstanding amount with Chief Executive Officer, NESCO, Balasore.

8. (i) In case of unsuccessful bidder, the Bid Security will be refunded to them immediately after the Tender is decided. In the case of successful bidder, this will be refunded only after furnishing of Security Money.
(ii) The Bid Security will be forfeited, if the successful bidder fails to accept the letter of intent or Purchase order issued in their favour.
(iii) The Tenders not accompanied with Bid Security shall be disqualified.
(iv) The tenders should be kept valid for a period of 180 days from the date of opening of the tender.
9. After opening of the tender and within the validity period no reduction or enhancement in price will be entertained. On the other hand, it will make the tender liable for rejection.
10. The Bidders are expected to be fully conversant with the meaning of all the clauses of the specification before submitting their tender. In case of doubt regarding the meaning of any clause may ask for clarification in writing from the undersigned. This, however does not entitled the Bidder to ask for time beyond due date fixed for receipt of tender.

Conditional Offers shall not be accepted.

11. The bidders should quote their bids in **computerized or typing** only.
12. The Tenders should be accompanied with PAN,TIN,CST,VAT registration nos., failing which the tenders will not be taken into consideration.

General Manager (Works)
NESCO, Balasore

SECTION – II

GENERAL TERMS & CONDITION OF CONTRACT

1. **Scope of Contract:** - The Scope of contract shall be delivered FADS (Free At Destination Stores), of the materials or equipment is in accordance with the enclosed Technical Specification and Bill of Quantity.
2. **Supplier to inform himself fully:** - The supplier shall examine the instructions of Tenders, General Condition of contract, specification and the scheduled of quantity delivered to satisfy him self as to all the terms and conditions and circumstances effecting the contract price. He shall quote price(s) according to his bidding on these matters and understand that no additional cost except otherwise provided therein will be levied. The purchasers shall not be responsible for any misconception or incorrect information acquired by the supplier other than information given in writing by the purchaser.
3. **Manner of Execution:** - All materials to be supplied under the contract shall confirm to the relevant ISS.
4. **Inspection and Testing:** -
Competent authority will depute any authorized person for pre-despatch inspection for which bidder has to provide necessary assistance and facilities at its work site. Intimation about readiness for despatch should be sent at least 15 days in advance for arranging inspection by the purchaser. Physical inspection of the materials shall be carried out at destination after receipt of materials.
5. **Delivery :-** The materials should be kept ready for inspection within 30days from the date of issue of the purchase order . The materials should be despatched only after the inspection is conducted and despatch instruction issued by this office. The inspection note with tests certificate as per relevant IS & Guarantee Certificate of each consignment should be furnished to this office immediately after inspection for approval and issuing Despatch instruction. This may be waived at our discretion. The Purchaser, however reserves the right to reschedule the delivery and change the destination, if required. The bidders shall give their delivery schedule
6. **Despatch Instruction:** -
The materials should be securely packed and dispatched on freight paid basis. The Railway/ Road receipt shall be in the name of the consignee and not booked to self. Materials should be despatched by Road Transport through reputed and licensed Carrier Agencies to Balasore Stores/ Jajpur Road Stores, where required.

7. **Contractors Default Liability:** -
- (i) The Purchaser may act upon in writing, of default to the supplier terminates the Contract in circumstances on quote
“If the judgment of the Purchase, the supplier fails to make delivery within the time specified in the contract or within the period for which extension has been granted by the Purchaser. The supplier fails to comply with any of the other provisions of this contract”.
 - (ii) In the event Purchaser terminates the contract in whole or in parts as provided in Clause-7 (1) of the Section-II, the Purchaser reserves the right to pursue upon such terms and in such a manner as he will be liable to the purchase for any additional costs in Clause- 17 of Section-II until such reasonable time as may be required for the final supply of equipments.
 - (iii) In the event of the purchase does not terminate the contract as provided in Clause-7 (1) of Section- II supplier shall continue the performance of the contract in which case he shall be liable to the Purchaser for penalty for delay as set out in Clause- 17 of Section –II until the equipment is accepted.
8. **Force Majeure:** - The supplier shall not be liable for any penalty on account of delay or failure to perform the contract for reasons of force majeure such as acts of God acts of the Public, Enemy, acts of Government, Fire, Floods, Epidemics, Guarantee in restriction, Strikes, Freight Embargos and provided that the supplier shall within 10 (ten) days from the beginning of such delay notify the Purchaser in writing of the cause of delay the Purchaser shall verify the facts and grant such extension as facts justify.
9. **Rejection of materials:** - In the event of any of the materials supplied by the supplier is found defective in materials or workmanship or otherwise not in conformity with the requirements of the contract specification the Purchaser shall either reject or request the supplier in writing to rectify the same. The supplier on receipt of such notification shall either rectify or replace defective equipment free of cost to the Purchaser. If the supplier fails to do so, the Purchaser may;
- i. At its option replace or rectify such defective equipment and recover the extra cost to involved from the contractor plus fifteen percent from the contractor and or
 - ii. Terminate the contract for balance supply with enforcement of penalty as per contract.
 - iii. Acquire the defective ones at reduced price considered suitable under the circumstances.

10. **EXTENSION OF TIME:** - If the delivery of equipment is delayed due to reason beyond the control of the supplier, the supplier shall give notice to the Purchaser in writing of his claim for extension of time. The Purchaser on receipt of such notice may agree to extend the delivery date as may be reasonable without prejudice to other terms and conditions of the contract.
11. **DEFECT LIABILITY PERIOD:-** The supplier shall guarantee the materials supplied against any defect or failure, which arise due to faulty materials, workmanship or design for the entire defects liability period.
- (i) The defect liability period for Transformers shall be 30months from the date of receipt of materials (last consignment) at stores/site or 24 months from the date of use/commissioning, which ever is earlier.
 - (ii) The defect liability period for PSC Poles shall be 24months from the date of receipt of materials (last consignment) at stores/site or 18 months from the date of use/commissioning, which ever is earlier.
 - (iii) The defect liability period for AAA Conductor shall be 18months from the date of receipt of materials (last consignment) at stores/site or 12 months from the date of use/commissioning, which ever is earlier.
 - (iv) The defect liability period for Transformer Oil shall be 24months from the date of receipt of materials (last consignment) at stores/site or 18 months from the date of use/commissioning, which ever is earlier.
- If during this period any materials or items are found defective, these shall be promptly replaced or rectified by the supplier at his own cost at buyers place including the installation cost, if any.
12. **GUARANTEE PERIOD:** - The materials should be guaranteed for trouble free service for a period as indicated in clause no.11 above. The above guarantee certificate in triplicate should be furnished to this office for approval at the time of offer for inspection against each consignment and copies should be furnished to the concerned consignee and paying officers for their record.
13. (a) **SECURITY DEPOSIT:** - Within 7(seven) days of receipt of the notification of contract award, the successful bidder will furnish to the purchaser the security deposit for an amount of 5% (five percent) of the contract value for proper fulfillment of the contract, in shape of the Bank Guarantee on a non-judicial stamp paper of worth Rs.50/- (Rupees Fifty) only strictly as per proforma / Demand draft issued by any Nationalized Bank or scheduled Bank in favour of the Chief Executive Officer, NESCO, Balasore for a period of 3months along with the letter of acceptance. The security deposit will be refunded immediately after receipt of materials in good condition & verification.
- (b) **PERFORMANCE GUARANTEE:** - Performance Guarantee to the tune of 5% (five Percent) of value of the purchase order in shape of Bank Guarantee from any Nationalized Bank or scheduled Bank in favour of Chief Executive Officer, NESCO, Balasore on a non-judicial stamp paper of worth Rs. 50/- (Rupees Fifty) only strictly as per the enclosed format, should be furnished to this office immediately after completion of supply. The Bank Guarantee should be valid for the order to cover the guarantee period plus three months towards claim period. (Refer Clause – 12).

14. **Price: -**

- (i) The prices quoted will be firm and free at destination stores, Balasore. This is inclusive of packing & forwarding, Excise Duty, Educational Cess, VAT/Sales Tax, Freight, Entry Tax and other legally permissible duties & levies wherever applicable, handling charges to cover the transport by Road from destination Railway Station to site/ stores, if any unloading at destination & insurance (assumed insurance premium) for comparison.
- (ii) Even though composite price is given the break-up for all duties, taxes, freight, insurance, packing & forwarding etc. will be furnished.
- (iii) It is the responsibility of the bidder to inform himself of the correct rates duties & taxes leviable on the materials at the time of bidding.

15. **TAXES & DUTIES:-**

- (i) A bidder will be entirely responsible for quoting the correct taxes & duties, other local taxes or levies if any, license fees etc, he has to incur until completion of the contract. For the purpose of evaluation the bidder should clearly indicate the Excise duty, Sales tax/ VAT and any other taxes & levies payable in the respective columns.
- (ii) If the rates of statutory levies assumed by the bidder are less than the actual rates prevailing at the time of bidding, the purchaser will not be responsible for such errors. If the rates of statutory levies assumed by the bidder are later proved to be higher than the actual/ correct rates prevailing at the time of bidding, the difference will be passed on to the credit of the purchaser.

16. **PAYMENT:** - (i) 100% payment will be made within 45 days on receipt of materials in good condition and verification thereof subject to inspection of materials and approval of manufacturing Test Certificate and Guarantee Certificate & subject to submission of 5% Performance Bank Guarantee or submission of bills which ever is later.

(ii) **Alternately: -** In case of non-submission of Performance Bank Guarantee, 95% payment will be made within 45 days on receipt of materials in good condition and verification thereof subject to inspection of materials and approval of manufacturing Test Certificate & Guarantee Certificate or submission of bills which ever is later.

The balance 5% payment will be paid after expiry of the Guarantee period.

17. **Penalty For delay in completion of contract:** - If the supplier shall fail to deliver the materials / equipments within the delivery scheduled specified in the Contract or any extension granted thereto the purchase shall recover from the supplier penalty for sum of 0.5% (half percent) of the basic price of the undelivered equipments for calendar week of delay or part thereof. For the purpose the date of date of delivery, the total amount of penalty shall not exceed 5% of the basic price of the

Units so delayed. Undelivered parts/attachments shall not consider as whole. Delay if any making it whole, penalty shall be levied.

18. **Free Replacement**: - Free replacement after loss of materials during the transit shall be made by the Suppliers immediately on receipt of information from the Consignee without waiting for settlement of their claim with Transport agency or Insurance Companies.
19. **Insurance**: - As the prices of the materials are to be quoted for delivery of destination by Road Transport / Railways, the Goods in transit may be insured with the Suppliers own Insurance underwriter at their cost and risk. This office will not any way be responsible for any trouble that may arise on this account with the Insurance underwriter. However necessary Shortage or Breakage Certificate will be made available to the Supplier by the Consignee so on after receipt of the same from the Carriers.
20. **Payment due from the Supplier**: - All costs and damages for which the Supplier is liable to the Purchaser will be deducted by the Purchaser from any money due to the supplier under the contract.
21. **Jurisdiction of the High Court of Orissa**: - Suits if any arising out of this contract shall be filed by either party in a Court of Law to which the jurisdiction of High Court of Orissa extends.
22. **Certificate to Exemption from Excise Duty** :- Offers with exemption from the Excise Duty shall be accompanied with authenticated document for such exemption. Photostat copy of Exemption Certificate has to be attached in support of this clause.
23. **Deviation from Specification**: - It is the interest of the Bidders to study the Specification specified in the Tender Schedule thoroughly before tendering so that if any deviation are made by the Bidders, the same are to be prominently brought out with design/drawing.
24. **Right to Reject / Accept any Tender** :- The purchaser reserves the right either to reject / accept any or all of Tenders. Orders may also split up between different bidders on individual merits of the Tenders. The purchaser has exclusive right to alter the quantities of the materials at the time of placing final purchase order. It may be clearly understood by the Bidder that Purchaser need not assign any reason for the above action.
25. **Supplier Responsibility** :- Notwithstanding any thing mentioned in the specification or subsequent approval or acceptance of the Purchaser, the ultimate responsibility for design materials used and satisfactory performance shall rest with the Bidders.

26. **Validity**: - Prices and conditions of the sale of the offer should be valid for a period of 180 days from the date of opening of the tender failing, which the tenders shall be rejected. A bid valid for a shorter period will be rejected.
27. **Languages and Measures**: - All documents pertaining to the contract including Specification, Schedules, Notices, Correspondences, Drawings or any other Writing shall be written in English Language in **computerized or typing** only. The metric system of measurements shall be used exclusively in this contract.
28. **Correspondence**: - Any notice to the Supplier under the terms of the Contract shall be served by the Registered Mail or by Hand at the suppliers principal place business.
So also notice if any to the Purchaser shall be served at the Purchaser principal office in the same manner.
29. **Instruction** :- The supplier shall treat the details of the specification and other tender documents as Private and Confidential and they shall not be re-produced without written consent from the Purchaser.
30. **Out Right Rejection of Tenders** :- Tenders shall be rejected out right with the following conditions.
- (i) Bidders without NESCO tender document.
 - (ii) Non-submission of tender in person or by Registered Post with A.D.
 - (iii) Telegraphic submission of Tender.
 - (iv) Tenders not accompanied with prescribed earnest money deposit.
 - (v) Offer price of the bidder for less than 180 days.
 - (vi) Non-compliance of our stipulated terms & conditions.
 - (vii) Bids without Type test reports performed at any CPRI/ERDA/any NABL authorised by Govt. Of India for Transformer & Transformer Oil.

General Manager (Works)
NESCO, BALASORE

SECTION – III (TECHNICAL DETAILS)

TENDER NOTICE NO- 1010 dtd.17.01.08

GROUP- A

Sl. No.	Description of Materials / Equipment	Quantity
1.	63KVA 11/0.4KV Al.wound Distribution Transformer as per latest ISS.	50 nos
2.	25KVA 11/0.4KV Al.wound Distribution Transformer as per latest ISS.	100 nos
3.	16KVA 11/0.25KV Al.wound Distribution Transformer as per latest ISS.	150 nos
4.	10KVA 11/0.25KV Al.wound Distribution Transformer as per latest ISS.	40 nos

NOTE :-

1. The manufacturer must submit the Type Test report performed at any CPRI/ERDA/any NABL authorised by Govt. Of India.
2. The material when ordered should be dispatched to the Stores Balasore/ Jajpur by Road Transport.
3. The undersigned reserves the right to reduce or increase the quantity at time of placing orders and the right to reject any or all quotations without assigning any reason thereof.

**General Manager (Works)
NESCO,Balasore.**

Guaranteed Technical Particulars for Completely Self Protected Distribution Transformers

Sl. No.	Description	10KVA 11/0.25KV	16KVA 11/0.25KV	25KVA 11/0.4	63KVA 11/0.4KV
1.	Continuous max.rating as per this specification				
2.	Normal ratio of Transformer				
3.	Method of Connection HV/LV				
4.	Max.Current Density in Windings (a) Higher voltage Amps/sq.cm (b) Lower Voltage Amps/sq.cm				
5.	Max.Hot spot Temp. Deg.C. (Ambient air temp.on which above is based) Deg.C.				
6.	a) Maximum observable oil temp. Deg.C (ambient air temp. on which above is based) Deg.C b) Max.Winding Temperature at an ambient temp.of				
7.	No load loss at Rated voltage (watts)				
8.	Full load losses at 75deg C (Watts)				
9.	Total losses at 100% Load (Watts)				
10.	Total losses at 50% load (Watts)				
11.	Efficiency at normal voltage (i) Unity Power Factor (a) At 50% load (b) At 75% load (c) At full load (ii) 0.8 Power Factor (a) At 50% Load (b) At 75% Load (c) At full load				

12.	Regulation as percentage of normal voltage (a) At unity power factor % (b) At 0.8 Power factor lagging %				
13.	% Impedance voltage at normal ratio between HV & LV winding				
14.	Type of transformers, shell type / core type wound core				
15.	Type of Insulation used in (a) HV Windings (b) LV Windings				
16.	Type of Insulations used in (a) Core bolts (b) Core bolt washers (c) End plates (d) Core laminations				
17.	Impulse Test Voltage level HV Winding LV Winding				
18.	Characteristics of Transformer Oil				
19.	Total content of Oil in liters				
20.	Whether transformer will be transported with oil				
21.	Type of Transformer Tank				
22.	(i) Approx overall dimension (a) Height (mm) (b) Breadth (mm) (c) Width (mm) (ii) Tank Dimensions (a) Diameter (mm) (b) Height (mm)				
23.	Weight of insulated conductor (a) HV (min.) Kg. (b) LV (min) Kg.				

24.	Weight of Core (min) kg (CRGO or Amorphous metal)				
25.	Weight of complete Transformer arranged for transportation (kg)				

SECTION – III (TECHNICAL DETAILS)

TENDER NOTICE NO- 1010 dtd.17.01.08

GROUP- B

Sl. No.	Description of Materials / Equipment	Quantity
1.	8mtr long 200Kg PSC Poles as per the enclosed Technical specification & latest ISS.	1800 nos
2.	9mtr long 300Kg PSC Poles as per the enclosed Technical specification & latest ISS.	500 nos
3.	9mtr long 415Kg PSC Poles as per the enclosed Technical specification & latest ISS.	50 nos
4.	10mtr long 425Kg PSC Poles as per the enclosed Technical specification & latest ISS.	50 nos
5.	11mtr long 300Kg PSC Poles as per the enclosed Technical specification & latest ISS.	30 nos

NOTE :-

1. The material when ordered should be dispatched to the Concerned Divisions (BED, Balasore / CED, Balasore / BED, Basta / JED, Jaleswar/ BNED, Bhadrak/ BSED, Bhadrak/ SED, Soro/ BED, Baripada/ UED, Udala/ RED, Rairangpur/ JRED, Jajpur Road/ JTED, Jajpur Town / AED, Anandapur / KED, Keonjhar.)
2. The undersigned reserves the right to reduce or increase the quantity at time of placing orders and the right to reject any or all quotations without assigning any reason thereof.

**General Manager (Works)
NESCO, Balasore.**

Technical Specification of Pre stressed Concrete Pole

8mtr long 200Kgs. Working load at the point below 600mm from the top.

I) TECHNICAL DATA		
1	Type of Pole	Pre-stressed concrete
2	Factor of Safety	2.5
3	Length of Pole	8.0mtr
4	Working Load	200Kgs
5	Point of application of load	600mm below top
6	Depth of plantation	1500mm
II) DIMENSIONAL DETAILS		
1	Top cross section	145mm x 90mm
2	Bottom cross section	290mm x 90mm
3	Cross section at Ground level	262.8mm x 90mm
4	Concrete covering across the Depth of Pole	20mm
5	Concrete covering across the width of Pole	22mm
6	Length of G.I.Wire	6400mm
7	Size of G.I.Wire	8SWG (4.06mm)
III) REINFORCEMENT DETAIL		
1	Diameter of High-Tension pre stressing wire	4mm
2	Length of H.T.Pre stressing Wire	8000mm
3	No.of wires per pole	14 Nos
4	Ultimate tensile strength	17500 kg/cm ²
5	IS Code reference	IS 6003-1983 (specification for indented wires for pre stressed concrete)

IV)	CONCRETE DETAIL	
1	Cement to Use	Ordinary Portland cement
2	Concrete mix Strength	a) 210 kg/cm ² at the time of transfer of prestress(minimum)
		b) 420 kg/cm ² at the age of 28 days (minimum)
3	Concrete Quantity	0.156 cubic meter
4	Weight of Pole	380Kg (approx)
V)	TOLERANCES DIMENSIONS	a) \pm 15mm on 1000 mm the length of Pole
		b) \pm 4mm on the cross sectional dimension.
		c) 0.5% on the uprightness of Pole

Technical Specification of Pre stressed Concrete Pole

9mtr long 300Kgs. Working load at the point below 600mm from the top.

I)	TECHNICAL DATA	
1	Type of Pole	Pre-stressed concrete
2	Factor of Safety	2.5
3	Length of Pole	9mtr
4	Working Load	300Kgs
5	Point of application of load	600mm below top
6	Depth of plantation	1500mm
II)	DIMENSIONAL DETAILS	
1	Top cross section	185mm x 100mm
2	Bottom cross section	355mm x 100mm
3	Cross section at Ground level	326.6mm x 100mm
4	Concrete covering across the Depth of Pole	20mm
5	Concrete covering across the width of Pole	22mm
6	Length of G.I.Wire	7400mm
7	Size of G.I.Wire	8SWG (4.06mm)
III)	REINFORCEMENT DETAIL	
1	Diameter of High-Tension prestressing wire	4mm
2	Length of H.T.Prestressing Wire	9000mm
3	No.of wires per pole	16 Nos
4	Ultimate tensile strength	17500 kg/cm ²
5	IS Code reference	IS 6003-1983 (specification for indented wires for pre stressed concrete)

IV)	CONCRETE DETAIL	
1	Cement to Use	Ordinary Portland cement
2	Concrete mix Strength	a) 210 kg/cm ² at the time of transfer of prestress(minimum)
		b) 420 kg/cm ² at the age of 28 days (minimum)
3	Concrete Quantity	0.243 cubic meter
4	Weight of Pole	607Kg (approx)
V)	TOLERANCES DIMENSIONS	a) \pm 15mm on 1000 mm the length of Pole
		b) \pm 4mm on the cross sectional dimension.
		c) 0.5% on the uprightness of Pole

Technical Specification of Pre stressed Concrete Pole

9mtr long 415Kgs. Working load at the point below 600mm from the top.

I) TECHNICAL DATA		
1	Type of Pole	Pre-stressed concrete
2	Factor of Safety	2.5
3	Length of Pole	9mtr
4	Working Load	415Kgs
5	Point of application of load	600mm below top
6	Depth of plantation	1500mm
II) DIMENSIONAL DETAILS		
1	Top cross section	200mm x 120mm
2	Bottom cross section	380mm x 120mm
3	Concrete covering across the Depth of Pole	20mm
4	Concrete covering across the width of Pole	22mm
5	Length of G.I.Wire	7600mm
6	Size of G.I.Wire	8SWG (4.06mm)
III) REINFORCEMENT DETAIL		
1	Diameter of High-Tension prestressing wire	4mm
2	No.of wires per pole	24 Nos
3	Ultimate tensile strength	175 kg/cm ²
4	IS Code reference	IS 6003-1983 (specification for indented wires for prestressed concrete)

IV)	CONCRETE DETAIL	
1	Cement to Use	Ordinary Portland cement
2	Concrete mix Strength	a) 210 kg/cm ² at the time of transfer of prestress(minimum)
		b) 420 kg/cm ² at the age of 28 days (minimum)
3	Concrete Quantity	0.314 cubic meter
4	Weight of Pole	783Kg (approx)
V)	TOLERANCES DIMENSIONS	a) ± 15 mm on 9000 mm the length of Pole
		b) ± 4 mm on the cross sectional dimension.
		c) 0.5% on the uprightness of Pole

Technical Specification of Pre stressed Concrete Pole

10mtr long 425Kgs. Working load at the point below 600mm from the top.

I)	TECHNICAL DATA	
1	Type of Pole	Pre-stressed concrete
2	Factor of Safety	2.5
3	Length of Pole	10.0mtr
4	Working Load	425Kgs
5	Point of application of load	600mm below top
6	Depth of plantation	1800mm
II)	DIMENSIONAL DETAILS	
1	Top cross section	200mm x 120mm
2	Bottom cross section	420mm x 120mm
3	Cross section at Ground level	380.5mm x 120mm
4	Concrete covering across the Depth of Pole	20mm
5	Concrete covering across the width of Pole	22mm
6	Length of G.I.Wire	8300mm
7	Size of G.I.Wire	8SWG (4.06mm)
III)	REINFORCEMENT DETAIL	
1	Diameter of High-Tension pre stressing wire	4mm
2	Length of H.T.Pre stressing Wire	10000mm
3	No.of wires per pole	24 Nos
4	Ultimate tensile strength	17500 kg/cm ²

5	IS Code reference	IS 6003-1983 (specification for indented wires for prestressed concrete)
IV)	CONCRETE DETAIL	
1	Cement to Use	Ordinary Portland cement
2	Concrete mix Strength	a) 210 kg/cm ² at the time of transfer of prestress(minimum) b) 420 kg/cm ² at the age of 28 days (minimum)
3	Concrete Quantity	0.372 cubic meter
4	Weight of Pole	930Kgs (approx)
V)	TOLERANCES DIMENSIONS	a) \pm 15mm on 1000 mm the length of Pole
		b) \pm 4mm on the cross sectional dimension.
		c) 0.5% on the uprightness of Pole

Technical Specification of Pre stressed Concrete Pole

11mtr long 300Kgs. Working load at the point below 600mm from the top.

I)	TECHNICAL DATA	
1	Type of Pole	Pre-stressed concrete
2	Factor of Safety	2.5
3	Length of Pole	11.0mtr
4	Working Load	300Kgs
5	Point of application of load	600mm below top
6	Depth of plantation	1800mm
II)	DIMENSIONAL DETAILS	
1	Top cross section	190mm x 105mm
2	Bottom cross section	400mm x 105mm
3	Cross section at Ground level	365.6mm x 105mm
4	Concrete covering across the Depth of Pole	20mm
5	Concrete covering across the width of Pole	22mm
6	Length of G.I.Wire	9100mm
7	Size of G.I.Wire	8SWG (4.06mm)
III)	REINFORCEMENT DETAIL	
1	Diameter of High-Tension prestressing wire	4mm
2	Length of H.T.Prestressing Wire	11000mm
3	No.of wires per pole	24 Nos
4	Ultimate tensile strength	17500 kg/cm ²

5	IS Code reference	IS 6003-1983 (specification for indented wires for prestressed concrete)
IV)	CONCRETE DETAIL	
1	Cement to Use	Ordinary Portland cement
2	Concrete mix Strength	a) 210 kg/cm ² at the time of transfer of prestress(minimum)
		b) 420 kg/cm ² at the age of 28 days (minimum)
3	Concrete Quantity	0.340 cubic meter
4	Weight of Pole	852Kg (approx)
V)	TOLERANCES DIMENSIONS	a) ± 15 mm on 1000 mm the length of Pole
		b) ± 4 mm on the cross sectional dimension.
		c) 0.5% on the uprightness of Pole

SECTION – III (TECHNICAL DETAILS)

TENDER NOTICE NO- 1010 dtd.17.01.08

GROUP- C

Sl. No.	Description of Materials / Equipment	Quantity
1.	34mm ² AAA Conductor as per the enclosed Technical specification & latest ISS.	400 Kms
2.	55mm ² AAA Conductor as per the enclosed Technical specification & latest ISS.	150 Kms
3.	100mm ² AAA Conductor as per the enclosed Technical specification & latest ISS.	150 Kms

NOTE :-

1. The material when ordered should be dispatched to the Stores Balasore/ Jajpur by Road Transport.
2. The undersigned reserves the right to reduce or increase the quantity at time of placing orders and the right to reject any or all quotations without assigning any reason thereof.

**General Manager (Works)
NESCO, Balasore.**

TECHNICAL SPECIFICATION FOR ALL ALUMINIUM ALLOY CONDUCTOR (AAAC)

1. GENERAL

The wires shall be of heat treated Aluminium, magnesium silicon alloy containing approximately 0.5% magnesium and approximately 0.5% silicon 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 120⁰ C.

2. Mechanical and Electrical Characteristics of Aluminium Alloy Wires used in the Construction of Stranded Aluminium Alloy Conductors

Nominal Diameter	Minimum Diameter	Max. Diameter	Cross Sectional Area	Mass	Minimum Breaking Load		Maximum Resistance at 20 ⁰ C
					Before stranding	After stranding	
1	2	3	4	5	6	7	8
Mm	mm	mm	mm ²	Kg/km	KN	KN	ohms/km
2.50	2.47	2.53	4.909	13.25	1.52	1.44	6.845
3.15	3.12	3.18	7.793	21.04	2.41	2.29	4.290
4.26	4.22	4.30	14.25	38.48	4.40	4.18	2.345

Maximum resistance values given in column 8 have been calculated from the maximum values of the resistivity 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.

04.00 PHYSICAL CONSTANTS FOR ALUMINIUM ALLOY WIRES

04.01 Resistivity :

For the purpose of this specification, the standard value of resistivity of aluminium alloy wire which shall be used for calculation is to be taken as 0.0325 ohm mm² /m at 20⁰ C. the maximum value of resistivity of any single wire shall not , however, exceed 0.0328 ohm. mm²/m at 20⁰ C

04.02 Density :

At a temperature of 20⁰ C, the density of aluminium alloy wire is to be taken as 2700 kg/m³.

04.03 Temperature Coefficient of Linear Expansion :

The temperature coefficient of linear expansion of aluminium alloy wire is to be taken as 23 x 10⁻⁶ / ⁰ C

04.04 Constant – Mass Temperature Coefficient

At a Temperature of 20⁰ C, the constant – mass temperature coefficient of resistance of aluminium alloy wires, measured between two potential points

rigidly fixed to the wire, is taken as $0.00360/^\circ\text{C}$

05.00 **STANDARD SIZES**

05.01 **Nominal Sizes of Wires**

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

05.02 **Standard Conductors**

The sizes, resistance and masses (excluding the mass of grease) of stranded alluminium alloy conductors shall be as given in table. The NESCO preferred sizes are highlighted in the table.

05.03 **Mechanical and Electrical Characteristics of Alluminium Alloy Stranded Conductors**

Sl. No.	Actual Area	Stranding and Wire Dia	Approx. Overall Dia	Approx. Mass	Calculated Maximum Resistance at 20°C	Approx Calculate d Breaking Load
1	2	3	4	5	6	7
	Mm^2	mm	mm	kg/km	ohms/km	KN
1	34	7/2.50	7.50	94.00	0.9900	10.11
2	55	7/3.15	9.45	149.20	0.6210	16.03
3	100*	7/4.26	12.78	272.86	0.3390	29.26

SECTION – III (TECHNICAL DETAILS)

TENDER NOTICE NO- 1010 dtd.17.01.08

GROUP- D

Sl. No.	Description of Materials / Equipment	Quantity
1.	EHV Grade Transformer Oil as per the enclosed Technical specification & latest ISS.	100 KL (In tanker) 50KL (In Barrel)

NOTE :-

1. The manufacturer must submit the Type Test report performed at any CPRI/ERDA/any NABL authorised by Govt. Of India
2. The material when ordered should be dispatched to the Stores Balasore/ TRW, Bhadrak by Road Transport.
3. The undersigned reserves the right to reduce or increase the quantity at time of placing orders and the right to reject any or all quotations without assigning any reason thereof.

**General Manager (Works)
NESCO,Balasore.**

Technical Specification of Transformer Oil

Sl. No.	Characteristics	As per IS:335 as ammended	
		Min.	Max
1	Appearance	The oil shall be clear yellow in colour and free from suspended matter or sediments.	
2	Density @ 29.5 ⁰ C, g/cm ³	-	0.89
3	Kinematic Viscosity at 27 ⁰ C, cSt	-	27
4	Interfacial Tension, N/m at 27 ⁰ C	0.04	-
5	Flash Point PMCC, ⁰ C	140	-
6	Pour Point, ⁰ C	-	-6
7	Neutralisation value		
	a) Total acidity, mgKOH/gm(Max)	-	0.03
	b) Inorganic acidity/ alkalinity	-	Nil
8	Corrosive sulphur	Non Corrosive	
9	Electrical Strength (Break Down Voltage) KV (rms)		
	a) New Unfiltered Oil	30	-
	b) After filtration	60	-
10	Dielectric Dissipation factor, (Tan Delta) at 90 ⁰ C	-	0.002
11	Specific Resistance (resistivity) Ohm-cm		
	a) At 90 ⁰ C	35×10^{12}	-
	b) At 27 ⁰ C	1500×10^{12}	-
12	Oxidation stability 164 Hours @ 100 ⁰ c		
	a) Neutralisation value after oxidation , mgKOH/gm	-	0.40
	b) Total sludge, wt% after oxidation	-	0.10

13	Accelerated Ageing test 96 hrs @ 115°C (Open Beaker Method)		
	a) Sp.resistance (Resistivity) ohm-cm @ 27°C	-	2.5x10 ¹²
	b) Sp.resistance (Resistivity) ohm-cm @ 90°C	-	2.5x10 ¹²
	c) Dielectric Dissipation Factor @ 90°C	-	0.2
	d) Total Acidity, mg/KOH/gm	-	0.05
	e) Total sludge value , % Wt.	-	0.05
14	Presence of oxidation inhibitor % wt	The oil shall not contain antioxidant additives	
15	Water content ppm Max	-	50ppm
16	S.K.Value, % (max)	8max	

BID SECURITY FORM

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

KNOW ALL PEOPLE by these presents that WE, [name of bank] having our registered office at[address of bank] (hereinafter called “the Bank”), are bound unto [name of the Distco.] (hereinafter called “the Purchaser”) in the sum of for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successors, and assigns by these presents. Sealed with the Common Seal of the said Bank this day of 20..... .

THE CONDITIONS of this obligation are:

1. If the Bidder

- (a) Withdraws its Bid during the period of bid validity specified by the Bidder on the Bid Form; or
- (b) Does not accept the correction of errors in accordance with the Bid Specification or

1. If the Bidder, having been notified of the acceptance of its Bid by the Purchaser during the period of bid validity;

- (a) fails or refuses to execute the Contract Form, if required; or
- (b) fails or refuses to furnish the performance security, in accordance with the Bid Specification;

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

This guarantee will remain in force up to and including forty five (45) days after (Specification Date) the period of bid validity, and any demand in respect thereof should reach the Bank not later than the above date.

(Signature of the Bank)

Note: This shall be executed on a Rs. 100/- non –judicial stamp paper issued by
a Scheduled Bank.by domestic Bidders only.