CENTRAL ELECTRICITY SUPPLY UTILITY OF ODISHA

OFFICE OF THE SUPERINTENDING ENGINEER (ELECT.)
ELECTRICAL CIRCLE, DHENKANAL, CESU

TENDER SPECIFICATION NO.12/2019-20

CESU/SEEC-DKL/DEPOSIT SCHEME/2019-20

TURNKEY CONTRACT (SUPPLY & ERECTION)

FOR

CONSTRUCTION OF 11KV LINE & SUB-STATION FOR POWER SUPPLY TO M/s TALCHER FERTILIZER LTD. FOR THEIR PUMP HOUSE AT BRAHMANI RIVER, NIZIGARH TOWN (NEAR PHD PUMP HOUSE) FOR 400KW GPS LOAD UNDER TALCHER ELECTRICAL SECTION OF T.E.D, CHAINPAL.

CONTENTS

CENTRAL ELECTRICITY SUPPLY UTILITY OF ODISHA
OFFICE OF THE SUPERINTENDING ENGINEER (ELECT.)
ELECTRICAL CIRCLE: DHENKANAL, COLLEGE BYPASS CHHAK, NH-55, DHENKANAL
☎ 06762 – 243353, Email-sedkl@cescoorissa.com

Tender Call Notice No.12/2019-20

Tender Call Notice for construction of 11KV line & Sub-station for power supply to M/s Talcher Fertilizer Ltd. for their pump house at Brahmani River, Nizigarh Town (near PHD pump house) for 400KW GPS load under Talcher Electrical Section of T.E.D, Chainpal excluding OSM.

For and on behalf of CESU the undersigned invites sealed bids from qualified and eligible bidders, who comply with the terms and conditions for the following works on Turnkey basis excluding OSM.

Brief Description of Work	Total estimated Tender value (Rs.)	EMD (Rs.)	Cost of Tender Paper including GST@18%
Turn key work for construction of 11KV line & Sub-station for power supply to M/s Talcher Fertilizer Ltd. for their pump house at Brahmani River, Nizigarh Town (near PHD pump house) for 400KW GPS load under Talcher electrical section of T.E.D, Chainpal excluding OSM. • Construction of 3Ø3W 11KV OH line using 150X150mm RS Joist 10 mtr. long with 80mm² AAAC=**0.35Ckm.** • Installation of 11/0.4KV, 500KVA plinth mounted Sub-station= **1 No.** • Construction of DP for metering unit =**1 No.** • Erection of 11KV line DP with 10mtr long 150x150mm RSJ Pole = **1No.**	**`10,35,015/-**	EMD @1% of the total estimated Tender value i.e `10,350/- to be deposited in Shape of Demand Draft in favour of **G.M, ELECTRICAL CIRCLE DHENKANAL, CESU** payable at Dhenkanal	**`7,080/** (`6,000+ `1,080/- (GST-18%) (in shape of D.D)

Sale of tender documents starts from	Dt. 28.01.2020 during office hours
Last date for sale Tender documents till	Dt. 05.02.2020 up to 5.00 PM
Last date for receipt of Tender document	Dt. 06.02.2020 up to 12.00 Hrs
Opening of Tender	Dt. 06.02.2020 at 12.30 PM

For details please visit our website **www.cescoorissa.com/www.cesuodisha.com**. The authority reserves the right to accept or reject any or whole of the offers without assigning any reason thereof.

S/d-
Superintending Engineer (Elect.)
Electrical Circle Dhenkanal

SECTION - I

INFORMATION TO BIDDERS (IFB)
Tender Notification:

1.0 CESU invites sealed tenders from reputed Electrical Contractors with required license, either in individual capacity or as part of a joint venture agreement / consortium for construction of 11KV line & Sub-station for power supply to M/s Talcher Fertilizer Ltd. for their pump house at Brahmani River, Nizigarh Town (near PHD pump house) for 400KW GPS load under Talcher electrical section of T.E.D, Chainpal excluding OSM.

The bidder must fulfill all the qualification requirements as specified in clause 2.0 stated below. The sealed envelopes shall be duly super scribed as "**TENDER NOTICE No: 12/2019-20 and Due date of opening Dtd: 06.02.2020.**

Brief Description of Work	Total estimated Tender value (Rs.)	EMD (Rs.)	Cost of Tender Paper including GST@18%
Turn key work for construction of 11KV line & Sub-station for power supply to M/s Talcher Fertilizer Ltd. for their pump house at Brahmani River, Nizigarh Town (near PHD pump house) for 400KW GPS load under Talcher electrical section of T.E.D, Chainpal excluding OSM. • Construction of 3Ø3W 11KV OH line using 150X150mm RS Joist 10 mtr. long with 80mm^2 AAAC=**0.35Ckm.** • Installation of 11/0.4KV, 500KVA plinth mounted Sub-station= **1 No.** • Construction of DP for metering unit =**1 No.** • Erection of 11KV line DP with 10mtr long 150x150mm RSJ Pole = **1No.**	**`10,35,015/-**	EMD @1% of the total estimated Tender value i.e `10,350/- to be deposited in Shape of Demand Draft in favour of **G.M, ELECTRICAL CIRCLE DHENKANAL, CESU** payable at Dhenkanal	**`7,080/** (`6,000+ `1,080/- (GST-18%) (in shape of D.D)

2.00 Bidders are to be considered as eligible for the bid should meet the following qualifications;

a) Bidders must quote for the work.
b) Average Annual Turnover during the last three financial years proceeding to the year of tender notification should be 100% of the estimated cost of the package for which the bidder has submitted his bid.
c) Bidder shall be financially sound and stable having liquid assets as stated in the enclosed format and/or access to credit facility of not less than half of estimated cost of the package(s) for which he has submitted the bid. Bidder shall furnish the documentary evidence to establish the financial soundness.
d) In addition to above the bidder should submit the following documents in Part-I bid as qualifying terms.
   i. Valid electrical (HT) license for electrical works.
   ii. GST Registration Certificate
   iii. PAN No.
   iv. Income tax clearance certificate
   v. EPF/ESI
   vi. Existing Labour License

CESU reserves the right to waive minor deviation, if they do not materially affect the capacity of the bidder to perform the contract.

3.0 Bids specification documents can be obtained from the office of the undersigned on payment of **6,000/-** towards non-refundable cost of bid documents plus 18% GST (Total **`7,080/-**)through Bank D.D drawn in favour of **GENERAL MANAGER (ELECTRICAL),CESU,ELECTRICAL CIRCLE DHENKANAL** payable at Dhenkanal, during office hours from 11.00 Hrs. to 17.00Hrs of dt. **28.01.2020**.

4.0 The Bids shall be submitted in the office of the undersigned on all office working days **up to 12.00 hrs till Date 06.02.2020.** In the event of the date of opening is a holiday, the next working day shall be treated as the date of opening.

5.0 The price bid will be opened on dt. **06.02.2020** at **12.30 hrs** as indicated above, in the presence of the authorized representatives of the Bidders. Bidders shall depute only one representative to attend tender opening if they wish to be represented.

The undersigned reserves the right to reject any or all tenders if the situations so warrants.

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

SUPERINTENDING ENGINEER (ELECT.)
ELECTRICALCIRCLE DHENKANAL, CESU
At: COLLEGE BYPASS CHHAKA,
P.O/DIST – DHENKANAL,
PIN-759001
PHONE – 06762 – 243353
Email-sedkl@cescoorissa.com

Sd/-
Superintending Engineer (Elect.)
Electrical Circle, Dhenkanal

SECTION - II

GENERAL CONDITIONS OF CONTRACT (GCC)

1.0 GENERAL: -

CESU, hereinafter referred to as the "Owner" are desirous for construction of 11KV line & Sub-station for power supply to M/s Talcher Fertilizer Ltd. for their pump house at Brahmani River, Nizigarh Town (near PHD pump house) for 400KW GPS load under Talcher electrical section of T.E.D, Chainpal excluding OSM.

The Bidder shall ensure to follow the instructions given here under failing which the tender shall be liable for rejection.

2.0 SCOPE OF WORK: -

2.1 Construction of 3Ø3W 11KV OH line using 150X150mm RS Joist 10 mtr. long with 80mm^2 AAAC=**0.35Ckm.**

2.2 Installation of 11/0.4KV 500KVA plinth mounted Sub-station= **1 No.**

2.3 Installation of metering unit DP Structure =**1 No.**

2.4 Erection of 11KV line DP with 10mtr long 150x150mm RSJ Pole = **1No.**

The scope covers supply and installation of all materials & equipments to complete the works including the followings,

i. Complete manufacture, including shop testing & supply of materials from the approved vendor (materials which are to be supplied by the bidder) and **supply of OSM from departmental store to site at its own risk**.
ii. Providing Engineering drawing, data, operational manual, etc for the Purchaser's approval.
iii. Packing and transportation from the manufacturer's works to the site.
iv. Receipt, storage, preservation and conservation of equipment at the site.
v. Pre-assembly, if any, erection testing and commissioning of all the equipment;
vi. Reliability tests and performance and guarantee tests on completion of commissioning;
vii. Loading, unloading, dismantling of existing work and transportation as required.
viii. Erection of lines of specified voltage.
ix. Testing, Commissioning of lines / installations
x. Storing before erection
xi. Getting the lines inspected by Electrical Inspector after completion of work.
xii. Transportation and transit insurance of all free issue materials to be supplied from Owner's nearest stores to site and as well as all other required materials (under the scope of supply by bidder) from supplier's premises to work site, construction of new electrical / civil structures, etc.
xiii. **Any other works not mentioned in the paper shall also be included in the scope of works as per the requirement by the work at the site for completion**.

3.0 DEFINITION OF TERMS:

(i) The 'Contract 'means the agreement entered into between the Owner and the Contractor as per the Contract Agreement signed by the parties, including all attachments and appendices there to and all documents incorporated by reference therein.

(ii) 'Owner' shall mean CESU and shall include its legal representatives, successors and assigns.

(iii) Contractor' shall mean the Bidder whose bid will be accepted by the Owner for the award of the Works and shall include such successful Bidder's legal representatives, successors and permitted assigns.

(iv) Sub-Contractor' shall mean the person named in the Contract for any part of the works or any person to whom any part of the Contract has been sublet by the contractor with the consent in writing of the Engineer and will include the legal representatives, successors and permitted assigns of such person.

(v) Engineer in Charge' shall mean the officer appointed in writing by the Purchaser to act as Engineer from time to time for the purpose of the Contract.

(vi) 'Specifications' shall mean the specifications and Bidding Document forming a part of the Contract and such other schedules and drawings as may be mutually agreed upon.

(vii) The term 'OSM' shall mean Owner Supply Material i.e. which are available at the departmental store.

(viii) 'Site' shall mean and include the land and other places on, into or through which the works and the related facilities are to be erected or installed and any adjacent land, paths, street or reservoir which may be allocated or used by the Purchaser or Contractor in the performance of the Contract.

(ix) Inspector' shall mean the Owner or any person nominated by the Owner from time to time, to inspect the equipment; stores or Works under the Contract and/or the duly authorized representative of the Owner.

(x) Notice of Award of Contract'/ 'Letter of Award' shall mean the official notice issued by the Owner notifying the Contractor that his bid has been accepted.

(xi) Date of Contract' shall mean the date on which notice of Award of Contract/ Letter of Award has been issued.

(xii) Performance and Guarantee Tests', shall mean all operational checks and tests required to determine and demonstrate capacity, efficiency, and operating characteristics as specified in the Contract Documents.

(xiii) The term 'Final Acceptance'/ 'Taking Over' shall mean the Purchaser's written acceptance of the works performed under the Contract, after successful commissioning/ completion of Performance and Guarantee Tests, as specified in the accompanying Technical Specifications or otherwise agreed in the contract.

(xiv) Commercial Operation' shall mean the condition of operation in which the complete equipment covered under the Contract is officially declared by the Purchaser to be available for continuous operation at different loads up to and including rated capacity. Such declaration by the Purchaser, however, shall not relieve or prejudice the Contractor of any of his obligations under the Contract.

(xv) Words imparting 'Person' shall include firms, companies, corporations and associations or bodies of individuals, whether incorporated or not.

(xvi) Terms and expressions not herein defined shall have the same meaning as are assigned to them in the Indian Sale of goods Act (1930), failing that in the Indian Contract Act (1872) and failing that in the General Clauses Act (1897) including amendments thereof, if any.

(xvii) In addition to the above the following definition shall also apply

a) All equipment and materials' to be supplied shall also mean 'Goods'
b) Constructed' shall also mean erected and installed.
c) Contract Performance Guarantee' shall also mean 'Contract Performance Security'.

4.0 SUBMISSION OF TENDER: -

4.01 Sealed tenders, complete in all respects in the manner hereinafter specified are to be submitted in the OFFICE OF **SUPERINTENDING ENGINEER (ELECTRICAL)**

ELECTRICAL CIRCLE, DHENKANAL on or before the date and time specified in the notice inviting the tenders.

4.02 The tenders are required to be submitted in Two Parts each in separate double sealed covers.

- Part - I: Super-scribed as "Technical and commercial bid" shall contain EMD, Cost of Bid Documents and Techno commercial documents.
- Part – II: Super-scribed as "Price Bid". The Part - II should contain only Price bid.

4.03 Fax and Telegraphic tenders shall not be accepted.

4.04 Receipt of bids/ revised bids after the cut off time and date as specified in the Tender Notice shall not be permitted and such bids shall be rejected outright. The Owner shall not be responsible for any delay in transit in post / courier etc. in this regard.

5.0 VALIDITY :-

The offer shall be valid for a period not less than 90 days from the date of bid opening.

6.0 PRICE: -

Bidders are required to quote **firm price** as per the prescribed format enclosed in Section – IV. The quoted price shall be firm and inclusive of all taxes, duties, GST, freight & insurance and other levies, if any. CESU shall not be liable to pay anything extra over and above the quoted price.

7.0 RECEIPT AND OPENING OF THE BID: -

7.01 Bids shall be received in the office of the Owner and shall be opened on the scheduled date and time. The Owner's authorized representatives shall open bids in the presence of Bidders' representatives on the date and time for opening of bids as specified in the Invitation to Bid or in case any extension has been given thereto, on the extended bid opening date and time notified.

7.02 Maximum one representative for each bidder shall be allowed to witness the opening of bids. The representative must produce suitable authorization in this regard to be eligible to witness the bid opening on behalf of the bidder. Bidders' representatives who are present shall sign in a register evidencing their attendance.

7.03 The Bidders' names, bid prices, modifications, bid withdrawals and the presence or absence of the requisite bid guarantee and such other details as the Owner, at its discretion, may consider appropriate will be announced at the opening. No electronic recording devices will be permitted during bid opening.

7.04 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 Owner's processing of Bids or award decisions may result in the rejection of the Bidder's Bid.

8.0 EVALUATION OF BIDS & AWARD OF CONTRACT:

8.01 To assist in the examination, evaluation and comparison of Bids, the Owner 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.

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

8.03 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. In case the bidder quoted the unit price as "NIL/BLANK", the same is read as inclusive of total price. Accordingly, the bidder shall execute the said work without any financial burden to CESU.

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

8.05 The Owner'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) Work Schedule

(b) Deviations from Bidding Documents

8.06 The Owner will award the Contract to the successful Bidder whose Bid has been determined to be the lowest - evaluated responsive Bid,, when the lowest bidders is not ready and/or capable to undertake the entire work envisaged, then the Owner may explore the possibility of the execution of works through other bidders if they are willing to execute at L_1 rate. Such exploration shall be carried out in a sequential order starting with L_2 bidder then with L_3 bidder and so on.

9.0 EARNEST MONEY DEPOSIT (EMD):-

9.01 The Tender must be accompanied by Earnest Money Deposit in shape of account payee Bank Draft drawn on any scheduled bank in favour of **"CESU ELECTRICAL CIRCLE DHENKANAL"** payable at **DHENKANAL**. EMD shall be 1% of the total estimated Tender value i.e ` **10,350/-** for this project. Bids without EM deposit will be rejected out rightly. The EMD should be deposited in the manner specified in the detail tender Notice.

9.02 No adjustment of any previous deposit or any amount payable from Owner shall be entertained for EMD. EMD amount so submitted shall not carry any interest payable to the bidder.

9.03 The Earnest Money so deposited shall be forfeited:

(a) if the Bidder:

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

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

(i) to sign the Contract, or

(ii) to furnish the required Contract Performance Bank Guarantee.

9.04 The EMD of unsuccessful bidders shall be returned within 45 days from the date of finalization of the Tender.

10.0 OWNER'S RIGHT TO VARY QUANTITIES AT TIME OF AWARD:

While placing orders and / or during execution of contract, Owner reserves the right to increase or decrease the quantity of goods and services specified in the Schedule of Requirement upto 20% of the tender quantity without any change in price or other terms and condition.

11.0 INSPECTION AND TESTING:-

The Bidder shall offer inspection for all the materials to be supplied by the bidder for this work before the Engineer-in-Charge to inspect, examine and test the materials at the manufacturer premises about workmanship of the materials to be supplied under this contract. If the said materials are being manufactured in other premises, the contractor shall provide unhindered clearance, giving full rights to the owner to inspect, examine and test as if the materials were being manufactured in his premises. The Engineer In charge shall constitute an inspection team consisting of the

concerned distribution Executive Engineer, E&MR Executive Engineer & Distribution SDO they shall offer the report to the Bidder.

1) The materials are to be supplied by the Contractor will be inspected by Concerned SDO electrical Sub-Division after due delivery at site, as per approved GTP & inspection report by inspection team.

The materials may be done thoroughly checked which shall confirm to relevant REC specification before utilizing the materials at the site

11.1 The completed line should be inspected by the Electrical Inspector, Govt. of Odisha before charging and is the responsibility of the Contractor, and the statutory fees for inspection of the lines and sub-stations shall be deposited by the ***bidder****. After obtaining completion certificate from the Competent Authority, the bills shall be submitted to the office of the Executive Engineer (Elect.), TED, Chainpal.*

12.0 COMPLETION AND COMPLETENESS OF THE EQUIPMENT:-

12.01 Time being the essence of the contract; the work shall be completed within **45 days from the date** of issue of work order.

12.02 The work shall be treated as complete item wise when one item shall be complete in all respects with all mountings, fixtures and standard accessories which are normally supplied even though not specifically detailed in the specification. No extra payment shall be payable for such mounting, fittings, fixtures and accessories which are needed for safe operations of the equipment as required by applicable code of the country though this might not have included in the contract.

12.03 All similar components and/or parts of similar equipment supplied shall be inter-changeable with one another. Various equipments supplied under this contract shall subject to Owner's approval.

12.04 Owner however reserves the right to re-schedule the completion period, if required.

13.0 REJECTION OF MATERIALS: -

In the event of the materials supplied by the contractor and/or the installation works are found to be defective in quality and the workmanship is poor or otherwise not in conformity with the requirements of the contract specification as per section-IV (Technical specification), Owner shall reject such materials / services and ask the contractor in writing to replace / rectify the defects. The contractor on receipt of such notification shall rectify or replace the defective materials and/or re-install the work already executed, free of cost to the Purchaser. If the contactor fails to do so the Owner may at his option take the following actions which could be on concurrent basis.

A) Replace or rectify such defective materials and recover the extra cost so involved plus 25% from the Contractor.
B) Terminate the contract for balance supply and erection with enforcement of penalty as per contract.
C) Acquire the defective materials at reduced price considered acceptable under the circumstances.
D) Forfeit the Contract Performance Bank Guarantee.

14.0 EXPERIENCE OF BIDDERS: -

The bidders are required to furnish information regarding their experience on the following aspects:

i. Description of similar type of work executed during the last three years with the name(s) of the party(s) to whom / where supplies / erection were made.
ii. Testing facilities available at manufacturer's works along with the list of testing equipments.

iii. work orders details (W.O No. and date only) executed (construction work) during the last three years along with Electrical inspection report copies and copies of user's performance certificates.

Bids may not be considered if the past performance is found to be un-satisfactory.

15.0 GUARANTEE PERIOD: -

15.01 The materials to be supplied by the contractor shall be guaranteed for satisfactory operation against defects in design and workmanship for a period of 18 months from the date of handing over the completed installations.

15.02 The above guarantee certificate shall be furnished in triplicate to the Owner for his approval. Any defects noticed during the above period should be rectified by the Contractor free of cost to the Utility provided such defects are due to faulty design, bad workmanship or bad materials used on receipt of written notice from the Owner.

16.0 PENALTY FOR DELAY IN COMPLETION OF CONTRACT: -

16.01 If the contractor fails to complete the works by the scheduled period or any extension granted thereby, the contractor shall be liable for payment of penalty amounting to 0.5% (half percent) of the contract price per week of un-finished works subject to the maximum of 5% (five percent) of the total contract price and subject to force majeure conditions.

16.02 Penalty amount can be realized from the proceeds of the Contract Performance Bank Guarantee, if the situation so warrants.

16.03 Extension of delivery period could be with / without levy of penalty with the discretion of purchaser.

17.0 RIGHT OF WAY:

Right of way issues, if any, arising during execution of the works shall have no liability on the Owner. These issues shall be settled at the sole discretion of the Contractor. The Owner shall however extend all possible help to the Contractor including discussion with the local authorities for early resolution of these issues.

18.0 CONTRACTOR'S DEFAULT:

18.01 If the Contractor neglects to execute the works with due diligence and expedition or refuses or neglects to comply with any reasonable order given to him, in writing by the Engineer in connection with the works or contravenes the provisions or the contract, the Owner may give notice in writing to the Contractor to make good the failure, neglect or contravention complained of. Should the Contractor fail to comply with the notice within thirty (30) days from the date of serving the notice, the Owner shall be at liberty to employ other workmen and forthwith execute such part of the works as the contractor may have neglected to do or if the Owner thinks fit, without prejudice to any other right, he may have under the Contract to take the work wholly or in part out of the Contractor's hands and re-contract with any other person or persons to complete the works or any part thereof and in that event the Owner shall have free use of all Contractor's equipment that may have been at the time on the Site in connection with the works without being responsible to the Contractor for fair wear and tear thereof and to the exclusion of any right of the Contractor over the same, and the Owner shall be entitled to retain and apply any balance which may otherwise be due on the Contract by him to the Contractor, or such part thereof as may be necessary, to the payment of the cost of executing the said part of works or of completing the works as the case may be. If the cost of completing of works or executing part thereof as aforesaid shall exceed the balance due to the Contractor, the Contractor shall pay such excess. Such payment of excess amount shall be independent of the liquidated damages for delay which the Contractor shall have to pay if the completion of works is delayed.

18.02 In addition, such action by the Owner as aforesaid shall not relieve the Contractor of his liability to pay liquidated damages for delay in completion of works.
18.03 Such action by the Owner as aforesaid the termination of the Contract under this clause shall neither entitle the Contractor to reduce the value of the Contract Performance Guarantee nor the time thereof. The Contract Performance Guarantee shall be valid for the full value and for the full period of the Contract including guarantee.

19.0 TERMINATION OF CONTRACT ON OWNER'S INITIATIVE:

19.01 Owner reserves the right to terminate the Contract either in part or in full due to reasons other than those mentioned under clause entitled 'Contractor's Default'. The Owner shall in such an event give fifteen (15) days notice in writing to the Contractor of his decision to do so.
19.02 The Contractor upon receipt of such notice shall discontinue the work on the date and to the extent specified in the notice, make all reasonable efforts to obtain cancellation of all orders and Contracts to the extent they related to the work terminated and terms satisfactory or the Purchaser, stop all further sub-contracting or purchasing activity related to the work terminated, and assist Owner in maintenance, protection, and disposition of the works acquired under the Contract by the Owner. In the event of such a termination the Contractor shall be paid compensation, equitable and reasonable, dictated by the circumstance prevalent at the time of termination.
19.03 If the Contractor is an individual or a proprietary concern and the individual or the proprietor dies and if the Contractor is a partnership concern and one of the partners dies then unless the Owner is satisfied that the legal representatives of the individual Contractor or of the proprietor of the propriety concern and in the case of partnership, the surviving partners, are capable of carrying out and completing the Contract the Owner shall be entitled to cancel the Contract as to its in completed part without being in any way liable to payment of any compensation to the estate of deceased Contractor and /or to the surviving partners of the Contractor's firm on account of the cancellation of the contract. The decision of the Purchaser that the legal representatives of the deceased Contractor or surviving partners of the Contractor's firm cannot carry out and complete the contract shall be final and binding on the parties. In the event of such cancellation the Owner shall not hold the estate of the deceased Contractor and/ or the surviving partners of the Contractor's firm liable to damages for not completing the Contract.

20.0 EXTENSION OF TIME: -

If the delivery of the equipments / materials is delayed due to reasons beyond the control of the Contractor, the Contractor shall immediately inform the Owner in writing of his claim for an extension of time. The Owner on receipt of such notice may agree to extend the contract period as may be reasonable but without prejudice to other terms & conditions of the contract.

21.0 STORE:-

Storing of materials from supply to erection shall be arranged by the contractor at his own cost. No compensation shall be made by the Owner for any damage or loss of materials during storing, transit transportation and at the time of erection.

22.0 INSURANCE: -

Contractor shall arrange adequate Transit-cum-storage-cum-erection policy and shall submit the copy of the same to the Owner. The policy shall initially remain valid for a period of sixty days over & above of the contractual guarantee period and shall be extended as required till handing over. Contractor shall be responsible for lodging of claim with the insurer as well as for all required follow up with the insurer for settlement of claim in case of loss / damage / theft of material during transit/

storage/ erection till the completed works is handed over to the Owner and is accepted by the authorized representative of the Owner in writing.

Contractor shall also arrange adequate cover for his employees / labourers engaged in the works as well as arrange third party insurance cover to indemnify any possible damages to public at large not connected with the works process. Any claim(s) pertaining to this shall be the responsibility of the Contractor.

The contractor shall undertake free replacement of the materials damaged or lost during transit, which will be intimated by the Consignee within 30 days of receipt of the materials at purchaser's stores.

23.0 ENGINEER IN CHARGE:-

Executive Engineer (Electrical), Talcher Electrical Division shall be the Engineer-in- charge for the Project.

24.0 TERMS OF PAYMENT:

(i) 90% of bill amount shall be paid within 30 days of successful commissioning of line(s) stretches and made operational. Balance 10% shall be kept reserved towards security and that will be released after guarantee period for the work.

25.0 PAYING OFFICER:

The **Superintending Engineer (Electrical),** Electrical Circle, Dhenkanal shall be the paying officer for the project.

26.0 OWNER'S RIGHTS: -

The Owner reserves the right to accept any bid or reject any or all bids or cancel / withdraw invitation of bid or to vary the quantity for placement of order without assigning any reason to such decision. Such decision by the Owner shall bear no liability.

27.0 DISTINCT MARK ON EQUIPMENT AND MATERIALS:

All the equipments and materials required for the works shall have distinct mark of "CESU" either by way of punching on metal part(s) and / or in built during casting and / or painting as per common practice and / or as mutually agreed. This should be clearly visible in day light in naked eye.

28.0 DISPUTE RESOLUTION AND JURISDICTION: -

(a) Any dispute arising out of this contract shall be referred to CEO, CESU who shall decided the case of sole arbitrator

(b) For the purpose of dispute resolution, this agreement shall be governed by the provision of Arbitration and Conciliation Act, 1996.

(c) All disputes shall be subjected to exclusive jurisdiction of the Courts at Dhenkanal and the writ jurisdiction of Hon'ble High Court of Odisha at Cuttack.

29.0 FREE ISSUE OF MATERIALS:-

29.01 There are some free issue of materials i.e. **OSM** (list attached) available at our Departmental store for this project. These materials should be supplied by the bidder to the site at its own cost.

29.02 Before issue of the free issue materials the Contractor at its own cost shall arrange suitable stores adjacent to the works.

29.03 The contractor shall furnish Indemnity bond for an amount equivalent to the estimated value of the free supply materials / dismantled materials returnable as certified by Engineer in charge. The Contractor shall submit Indemnity Bond in the prescribed format.

29.04 Subject to compliance of above clauses, the Contractor shall be permitted to draw the materials from the designated stores of the Owner. The Contractor shall duly acknowledge the materials along with copies of the notification to the Insurer regarding such transit of material from designated stores of the Owner to the stores of the Contractor.

29.05 After completion of the works all surplus materials shall be returned to the Owner's stores. For any shortage with regard to materials supplied by the Owner, the Owner shall be entitled to recover 125% of the purchase cost of such materials or present market cost, whichever is higher, from the dues of the Contractor.

30.0 LATENT DEFECT WARRANTY:-

30.1 The period of latent defect warranty in terms of this bidding documents, shall be limited to five (05) years from the date of completion of Guarantee period.

31.00: **REGARDING LESS QUOTING OF PRICE BID W.R.T TENDER ESTIMATED COST AS PER AMENDMENT OF OPWD CODE.**

If the rated quoted by the bidder is less than 15% of the tendered amount, then such a bid shall be rejected and the tender shall be finalized basing on merits of rest bids. But if more than one bid is quoted at 14.99 (Decimals upto two numbers will be taken for all practical purposes) less than the estimated cost, the tender accepting authority will finalize the tender through a transparent lottery system, where all bidders / their authorized representative & member of Tender Committee will remain present (as per Office Memorandum No. 12366 Dt. 08.11.2013 of Works Dept. Govt.of Odisha).

The Additional Performance Security shall be obtained from the bidder when the bid amount is less than the estimated cost. In such an event, only the successful bidder who have quoted less bid price / rate than the estimated cost put to tender shall have to furnish the exact amount of differential cost i.e. estimated cost put to tender minus the quoted amount as Additional Performance Security **(APS)** in shape of Demand draft / Term Deposit Receipt pledged in favour of General Manager (Electrical) Electrical Circle Dhenkanal, CESU **within seven days**, otherwise the bid shall be cancelled and the security deposit shall be forfeited. Further, proceeding for blacklisting shall be intimated against order. *Further proceeding for cancellation of bidding shall be initiated against bidder. (Amendment to para-3.5.5 (V) of Note-II of OPWD Code, Vol.-I by modification as per OM No 14299 dated 03.10.2017 of Works Department of Govt. of Odisha).*

This security amount shall be released only after completion of work & after hand over to CESU. The aforesaid amount shall not carry any interest payable to the bidder.

33.00 Any other terms and conditions that are not covered in this specification shall be dealt with relevant OPWD / CPWD / CVC codes / guide lines which are changed from time to time.

SECTION - III

TECHNICAL REQUIREMENTS

TECHNICAL REQUIREMENTS OF FIELD WORK

Sealed tenders in duplicate in the prescribed form and mode are invited from reputed Firms having valid HT Electrical Contractor License issued by ELBO for construction of 11KV line & Sub-station for power supply to M/s Talcher Fertilizer Ltd. for their pump house at Brahmani River, Nizigarh Town (near PHD pump house) for 400kw GPS load under Talcher electrical section of T.E.D, Chainpal **excluding OSM,** for the following scope of works:-

01.00

- Construction of 3Ø3W 11KV OH line using 150X150mm RS Joist 10 mtr. long with 80mm^2 AAAC=**0.35Ckm.**
- Installation of 11/0.4KV 500KVA plinth mounted Sub-station= **1 No.**
- Installation of metering unit DP Structure =**1 No.**
- Erection of 11KV line DP with 10mtr long 150x150mm RSJ Pole = **1No.**

02.00 SURVEY AT THE SITE

02.01 Survey shall be carried out by the contractor before tendering for the proposed work for construction of OH 11 KV line, construction of new sub-station and 11KV line DP.

02.02 Any other work not mentioned in this document specifically but required for accomplishing desired work shall be in the scope of the bidder/contractor.

02.03 For all above activities shut down will be provided for the line by owner. Restoring the disturbance / damage caused by above activities to the existing infrastructure e.g road, water / sewerage pipes, telecommunication lines etc. will be in the scope of the bidder/ contractor.

02.04 While Repairing & Replacing the equipment, if any equipment gets damaged due to negligent handling of the contractor the same shall be replaced by the contractor, at his cost, to the owner / employer's satisfaction.

AS PER SCOPE OF WORK

03.00 SPAN

The span length for construction of 11 KV lines shall be fixed as per site requirement in consultation with the site engineer.

04.00 CONDUCTOR

04.01 Insulated conductor of nominal cross section of sq. mm.80 for construction of 11 KV line.

05.00ROAD CROSSING

At all major road crossings, the poles shall be fitted with strain type insulators but the ground clearance at the roads under maximum temperature and in still air shall be such that even with conductor broken in adjacent span, ground clearance of the conductor from the road surfaces shall not be less than 6.1 meters.

06.00 POWER LINE CROSSINGS

Where the lines cross over another line of the same voltage or lower voltage, provisions to prevent the possibility of its coming into contact with other overhead lines shall be made in accordance with the Indian Electricity Rules, 1956 as amended from time to time. All the works related to the above proposal shall be deemed to be included in the scope of the Contractor.

07.00 TELECOMMUNICATION LINE CROSSINGS

i) The angle of crossing shall be as near to 90 degree as possible. However, deviation to the extent of 30 degree may be permitted under exceptionally difficult situations. The existing line route may be changed where required.

ii) HT line shall be routed with requisite suppression with parallel telecom line to avoid inductance during faults.

08.00 DETAILS ENROUTE

All topographical details, permanent features, such as trees, telecommunication lines, building etc. 5.5 meter on either side of the alignment shall be detailed on the route plan before execution of work. However, any problems arising out of Right of way, shall be taken care of by the Contractor. The owner shall extend all possible Co-operations.

09.00 CLEARANCE FROM GROUND, BUILDING, TREES ETC.

09.01 Clearance from ground, buildings, trees and telephone lines shall be provided in conformity with the Indian Electricity Rules, 1956 as amended upto date. The bidder shall select the height of the poles such that all electrical clearances are maintained. RCC/rail poles shall be used for all road & drain crossings, if required. In case of exceptional terrain, rail pole may be used with the approval of owner.

09.02 Guarding mesh shall be used in all electric line / telecom line / road / drain / canal crossing and at all points as per statutory requirements. The bidder shall provide & install anti climbing devices and danger plates on all poles and DT stations. Where there is no such provision in the existing line.

09.03 Pole accessories like danger plates, phase plates and number plates shall be provided.

10.00POLES

The following types of poles shall be used wherever necessary at respective locations given below.

a) SP (Single Pole support) 0^o - 10^o deviation.
b) DP (Double Pole support) 0^o - 60^o deviation
c) FP (Four Pole support) 60^o - 90^o deviation

10.01ERECTION OF POLE, PCC FOOTING AND COMPACTION OF SOIL

Pits are to be excavated to a size of 0.6 meter X 1.2 meter with its longer axis in the direction of the line. In case bidder employs Earth augers, the Pit size can be considered 0.6 meter dia. with 1.5 meter depth.

Following arrangement shall be adopted for proper erection of poles wherever necessary and properly Compacting of the soil around the base / foot of the poles, under this package.

1. All the poles shall be provided with a RCC block base having dimensions and constitutions as per REC Construction Standard.
2. The poles shall then be lifted to the pit with the help of wooden supports. The pole shall then be kept in the vertical position with the help of 25 mm (min.) manila ropes, which will act as the temporary anchor. The verticality of the pole shall be checked by spirit level in both longitudinal & transverse directions. The temporary anchor shall be removed only when poles set properly in the foundation after compacting the soil.
3. Entire void space above the block is to be filled with uniform pieces of bricks and rigidly compacted by ramming in layers maintaining verticality.
4. Concreting of foundation upto a height of 1.8 mtrs. from the bottom of the pit with a circular cross-section of radius 0.25 mtrs. (volume of 0.3 cu.mtr. per pole) in the ratio of 1:2:4 shall be done at the following locations:
   i) At all the tapping points and dead end poles.
   ii) At all the points as per REC construction dwg. No. A-10 (for the diversion angle of 10-60 degree)
   iii) Both side poles at all the crossing for road, Nallaha railway crossings etc.
   iv) Where Rail poles, Joist poles, double pole and four pole structures.

11.00 EARTHING OF POLES

11.01 Each pole shall be earthed with coil type earthing as per REC Construction Standard J-1.

11.02 All DP & Four pole structures & the poles on both sides of railway, Telecommunication, road, drain & river crossing shall be earthed by pipe earthing as REC Construction Standard.

12.00 EXTENSION POLE

Pole with pole extension arrangement up to *two meters* shall be used at low ground level locations for maintaining ground clearance and for road crossings for HT.

Extension of poles shall be by use of 150×150 mm RS Joist. An overlap of one meter shall be maintained with the pole.

Wherever such extended poles will be used the span on both sides of the extension pole shall be suitably reduced to take care of loading on the pole.

13.00 PROVIDING OF GUYS/STRUT POLES TO SUPPORTS

13.01 The arrangement for guys shall be made whenever necessary**.** Strut poles/flying guys wherever required shall be installed on various pole locations as per REC instruction standards.

13.02 In this work anchor type guy sets are to be used. These guys shall be provided at following locations where damaged or not provided.

(i) Angle locations
(ii) Dead end locations
(iii) T-off points
(iv) Steep gradient locations.
(v)Double Pole & four poles

The stay rod should be placed in a position so that the angle of rod with the vertical face of the pit is 300/450 as the case may be.

13.03 G.I. stay wires of size 7/3.15 mm (10 SWG) with GI turn buckle rod of 16 mm dia. & 16 mm dia. GI stay rods shall be used for 11 KV.

For double pole structure (DP), four stays along the line, two in each direction and two stays along the bisection of the angle of deviation (or more) as required depending on the angle of deviation are to be provided. Hot dip galvanized stay sets are to be used.

13.04 The anchor plate shall be fixed to 200mm X 200mm MS plate of 6mm thickness. M.S. rod with a bolt arrangement at one end and other end is given shape of 40mm dia. circle to bind one end of the stay wire. The anchor plate shall be buried in concrete.

13.05 The turn buckle shall be mounted at the pole end of the stay and guy wire so fixed that the turn buckle is half way in the working position, thus giving the maximum movement for tightening or loosening.

13.06 If the guy wire proves to be hazardous, it should be protected with suitable asbestos pipe filled with concrete of about 2 m length above the ground level, painted with white and black strips so that, it may be visible at night.

14.00 CROSS ARMS

14.01 Cross Arms where necessary to be changed shall be made out of 100x50x6 mm and 75X40X6 mm M.S. channel. Cross Arms made out of M.S. angle shall not be used.

14.02 Fixing of Cross Arms

After the erection of supports and providing guys, the cross-arms are to be mounted on the support with necessary clamps, bolts and nuts. The practice of fixing the cross arms before the pole erection can also be followed. In case, the cross-arm shall be mounted after the pole is erected, the lineman should climb the pole with necessary tools. The cross-arm shall then tie to a hand line and pulled up by the ground man through a pulley, till the cross-arm reaches the line man. The ground man should

station himself on one side, so that if any material drops from the top of the pole, it may not strike him. All the materials should be lifted or lowered through the hand line, and should not be dropped.

15.00 INSTALLATION OF LINE MATERIALS

15.01 Insulator and Bindings

Where change of insulators required, prior to fixing, all insulators shall be cleaned in a manner that will not spoil, injure or scratch surface of the insulator, but in no case shall any oil be used for that purpose.

Pin insulators shall be used on all poles in straight line and disc insulators on angle and dead end poles. Damaged insulators and fittings, if any, shall not be used. The insulator and its pin should be mechanically strong enough to withstand the resultant force due to combined effect of wind pressure and weight of the conductor in the span.

15.02 Strain insulators shall be used at terminal locations or dead end locations and where the angle of deviation of line is more than 100, if not existing in to line. Strain insulators shall be used at major crossings.

15.03 The pins for insulators shall be fixed in the holes provided in the cross-arms and the pole top brackets. The insulators shall be mounted in their places over the pins and tightened. In the case of strain or angle supports, where strain fittings are provided for this purpose, one strap of the strain fittings is placed over the cross-arm before placing the bolt in the hole of cross-arms. The nut of the straps shall be so tightened that the strap can move freely in horizontal direction.

15.04 Handling of Conductor

Running Out of the Conductors: The contractor shall be entirely responsible for any damage to the pole or conductors during stringing. Care shall be taken that the conductors do not touch and rub against the ground or objects, which could scratch or damage the strands.

15.05 The sequence of running out shall be from the top to down i.e. the top conductor shall be run out first, followed in succession by the side conductors. Unbalanced loads on poles shall be avoided as far as possible. When lines being erected run parallel to existing energized power lines, the Contractor shall take adequate safety precautions to protect personnel from the potentially dangerous condition.

15.06 Monitoring of Conductors during Stringing

The conductor shall be continuously observed for loose or broken strands or any other damage during the running out operations. Repair to conductors, if necessary, shall be carried out with repair sleeves. Repairing of the conductor surface shall be carried out only in case of minor damage, scuff marks, etc. The final conductor surface shall be clean, smooth and free from projections, sharp points, cuts, abrasions, etc. The Contractor shall be entirely responsible for any damage to the poles during stringing.

15.07Crossings

As far as possible all existing crossings shall be made at right angles. Derricks or other equivalent methods ensuring that normal services need not be interrupted nor damage caused to property shall be used during stringing operations where roads, channels, telecommunication lines, power lines and railway lines are crossing. The contractor shall coordinate with CESU for obtaining work permit and shut down of the concerned line. The Contractor shall be entirely responsible for the proper handling of the conductor and accessories in the field.

15.08 Guarding shall be provided at major crossings, if not provided. The Guarding shall consist of GI guard cross arm of length 2.5 mtrs made out of 75x40 x6 mm channel & shall be hot dipped galvanized generally conforming to IS:2633/72. The clamps shall also be hot dipped galvanized generally conforming to IS: 2633/72.

Guarding shall be erected with ground & line clearances as per the I.E. rules. The guarding shall be provided with GI wire 8 SWG for 33 KV.

15.09 Painting Materials

All the metal parts except G.I. parts are to be painted with one coat of red oxide and one coat of alluminium paint.

16.00 STRINGING OF CONDUCTOR

16.01 The works include spreading of conductors without any damage and stringing with proper tension without any kinks/ damage including binding of conductor at pin points, jumpering at cut points etc. The ground & line clearances at road crossings along roads other crossings shall be as per the relevant I.E. rules.

16.02 While transporting of conductors drums to site, precautions are to be taken so that the conductor does not get damaged. The drum shall be mounted on cable drum support. The direction of rotation of the drum shall be according to the mark in the drum so that the conductor could be drawn. While drawing the conductor, it shall not rub causing damage. The conductor shall be passed over poles on wooden or alluminium snatch block (pulley) mounted on the poles for this purpose.

16.03 The conductor shall be pulled through come-along clamps to stringing the conductor between the tension locations.

16.04 Conductor splices shall not crack or otherwise be susceptible to damage in the stringing operation. The Contractor shall use only such equipment / methods during conductor stringing which ensures complete compliance in this regard. All the joints including mid span joints on the conductor shall be of the compression type, in accordance with the recommendations of the manufacturer. Each part of the joint shall be cleaned by wire brush till it is free of rust or dirt, etc., and be properly greased with anti-corrosive compound, before the final compression is carried out with the compressors. After completing the jointing, tensioning operation shall be commenced.

16.05 All the joints or splices shall be made at least 15 meters away from the pole. No joints or splices shall be made in spans crossing over main roads, railways and small river spans. Not more than one joint per sub-conductor per span shall be allowed. The compression type fittings shall be of the self centering type. After compressing the joint, the alluminium sleeve shall have all corners rounded; burrs and sharp edges removed and smoothened.

SECTION - IV

TECHNICAL SPECIFICATION

TECHNICAL SPECIFICATION OF RS JOIST POLES (150X150 MM)

1. **Standards**:
The RS Joists shall comply with the requirements of latest issue of IS – 2062 2006, Grade – A, IS: 808 / 1989 / 2001, IS: 1608 / 1995 & IS: 12777 / 1989 & their latest amendments if any.

2. **Climatic Conditions:**
The climatic conditions at site under which the store shall operate satisfactory, are as follows Maximum temperature of air in shade 45 c
Maximum temperature of air in shade 0 c
Maximum temperature of air in shade 50
Maximum rain fall per annum 2000mm
Maximum temperature of air in shade 45 c
Maximum ambient temperature 45 c
Maximum humidity 100%
Av. No. of thunder storm days per annum
70% Av. No. of dust storm per annum 20
Av. Rain fall per annum 150mm

3. Rolled Steel Joists
The Rolled Steel joist (RSJ) support structures shall be fabricated from mild steel, grade A and in lengths dictated by design parameters. The joists, may include, but shall not be limited to the following sizes:

- 150 X 150 mm;

4. Dimensions and Properties

PARTICULARS	150 x 150 mm ISHB	Manufacturer's Data
Length of Joist in Mtr. with +100mm/-0% Tolerance	13mtr	
Weight kg/m with±2.5% Tolerance	30.6	
Sectional Area (cm2)	39.00	
Depth(D) of Section (mm) with +3.0mm/ -2.0mm Tolerance as per IS 1852-1985	150.00	
Width (B)of Flange (mm) with ±2.5mm Tolerance for116 x 100 mm ISMB & ±4.0mm Tolerance for 150 x 150 mm ISHB IS 1852-1985	150.00	
Thickness of Flange (Tf) (mm) with±1.5mm Tolerance	9.00	
Thickness of Web(Tw) (mm) with±1.0mm Tolerance	8.40	
Corner Radius of fillet or root (R1) (mm)	8.00	
Corner Radius of Tow (R2) (mm)	4.00	
Moment of Inertia Ixx (cm4) Iyy (cm4)	 1540.00 460.00	
Radius of Gyration (cm) Rxx Ryy	 6.29 3.44	
Modulus of Section Zxx(cm3) Zyy(cm3)	 205 60.2	
Flange Slope(α) in Degree	94.0	
Tolerance in Dimension	As per IS:1852	

Distinct Non-Erasable Embossings to be made on each R.S. Joist	a) Name & Logo of the Manufacturer. b) B.I.S Logo(ISI Mark) if applicable. c) Size	

5. **Chemical Properties:**

Tensile Test :	Requirement as per IS:2062/ 1999 Grade-A	Manufacturer's Data
Yeild Stress(MPa)	Min250	
Tensile Strength(MPa)	Min410	
Lo=(5.65√So)Elongation%	Min23	
Bend Test	Shall not Crack	

6. However, In case of any discrepancy between the above data & the relevant ISS, the values indicated in the IS shall prevail.
7. The Acceptance Tests shall be carried out as per Relevant IS.

8. **150x150mm RS Joists:**
RS Joists of Specific Weight 34.6kg/mtr with length of each type of pole being 11 mtr long and each pole weighing 380 Kg respectively for specified number of poles with specified weight in MT as given in the NIT table given above shall have to be supplied as per IS:2062;2006 Grade"A", IS:808;1989/2001, IS1608:1995 & IS:12779-1989 and their latest amendment if any complying the required Dimension, Weight, Chemical & Mechanical properties confirming to the relevant IS, as per the Tolerance given Below.

9. **APPLICABLE TOLERANCES:**
Length of each pole = + 100mm / - 0 % As per relevant IS: 12779-1989
(with proportionate change in no of Poles)
Specific Weight of RS Joists = ±2.5% As per relevant IS: 1852/1985
Weight for whole lot of supply for all categories = ±3.0% As per relevant IS: 12779-1989 for both type of RS Joists.

10. EMBOSSING ON EACH R.S JOIST:
Following distinct non-erasable embossing is to be made on each R.S Joists to be supplied to CESU under this Tender.
Name & Logo of the Manufacturer - CESU
B.I.S Logo (ISI Mark) if applicable.
Size of the R.S Joist

TECHNICAL SPECIFICATION FOR STEEL MATERIALS

100X50x6 MM MS CHANNEL
75X40x6 MM MS CHANNEL
50X50X6 MM MS ANGLE

01.00 **Scope:**

This specification covers the manufacturing, testing before dispatch and delivery at destination at site stores.

100X50x6 MM MS CHANNEL
75X40x6 MM MS CHANNEL
50X50X6 MM MS ANGLE

As per I.S:2062 and its latest amendments for grade A

02.00 **Standards:**

The steel materials shall comply with the requirements of latest issue of IS – 2062 Grade – A except where specified otherwise.

03.00 **Climatic Conditions:**

The climatic conditions at site under which the store shall operate satisfactory, are as follows:

Maximum temperature of air in shade	45 c
Maximum temperature of air in shade	0 c
Maximum temperature of air in shade	50 c
Maximum rain fall per annum	2000mm
Maximum temperature of air in shade	45 c
Maximum ambient temperature	45 c
Maximum humidity	100%
Av. No. of thunder storm days per annum	70%
Av. No. of dust storm per annum	20
Av. Rain fall per annum	150mm

04.00 **'V' CROSSARMS**

The cross-arm shall normally be constructed of steel and it will be the contractor's responsibility to ensure that the conductor spacing at the cross-arms is adequate to prevent phase clash while supporting the loads generated, as per the Contractor's line design, by conductor weight, by wind, and by conductor tension for maximum winds-pan and worst design conditions, for all pole duties and for all permitted line deviations. Cross-arms shall be fixed to the pole in a manner which prevents rotations in any plane even if the bolts are not fully tightened.

The cross-arm dimensions and characteristics given in this specification are intended to describe typical distribution structures and to maintain the general look of the existing network and take advantage of the familiarity of the Employer's staff with these kind of arrangements.

04.01 **Cross-arm Design Calculations**

The contractor shall design the cross-arm length and section configuration. He shall provide calculations to satisfy the Divisional Manager (Elect.), A.E.D, Angul that the choice of length complies with the requirements of 11KV lines in respect of conductor phase spacing and to avoid conductor clashing for the span lengths and tension limitations specified or designed.

The cross-arm sections shall be determined by taking cognizance of the design wind and weight spans, cross-arm length, as well as calculated conductor tension limits under worst design conditions and wind pressure.

04.02 **Fabrication**

Cross-arms for 11KV construction at intermediate and light angle poles shall be fabricated from grade 43A mild steel of channel section and for heavy angle poles, end poles and section poles fabricated from grade 43 A mild steel of angle section. The grades of structural steel shall conform to ISO/R/630/1967 or IS – 226 : 1975 . they shall be hot dip galvanized as per specification.

The cross-arm shall be drilled to accommodate pole bolts and any insulator fittings included in the Contractor's design.

Except where otherwise indicated all dimensions are subject to the following tolerances:

- Dimensions up to and including 50mm : + 1 mm ; and
- Dimensions greater than 50 mm : + 2%

All steel members and other parts of fabricated material, as delivered, shall be free of warps, local deformations, unauthorized splices, or unauthorized bends. Bending of flat strap shall be carried out cold. Straightening shall be carried out by pressure and not by hammering. Straightness is of particular importance if the alignment of bolt holes along a member is referred to its edges.

Holes and other provisions for field assembly shall be properly marked and cross referenced. Where required, either by notations on the drawings or by the necessity of proper identification and fitting for field assembly, the connections shall be match marked.

A tolerance of not more than 1 mm shall be permitted in the distance between the center lines of bolt holes. The holes may be either drilled or punched and, unless otherwise stated, shall be not more than 2 mm greater in diameter than the bolts. When assembling the components, force may be used to bring the bolt holes together (provided neither members nor holes are thereby distorted) but all force must be removed before the bolt is inserted. Otherwise strain shall be deemed to be present and the structure may be rejected even though it may be, in all other respects, in conformity with the specification.

The backs of the inner angle irons of lap joints shall be chamfered and the ends of the members cut where necessary and such other measures taken as will ensure that all members can be bolted together without strain or distortion. In particular, steps shall be taken to relieve stress in cold worked steel so as to prevent the onset of embrittlement during galvanizing .

Similar parts shall be interchangeable.

Shapes and plates shall be fabricated and assembled in the shop to the greatest extent practicable. Shearing, flame cutting, and chipping shall be done carefully, neatly, and accurately. Holes shall be cut, drilled, or punched at right angles to the surface and shall not be made or enlarged by burning. Holes shall be clean-cut without torn or ragged edges, and burrs resulting from drilling or reaming operations shall be removed with the proper tool.

Shapes and plates shall be fabricated to tolerances that will permit field erection within tolerances, except as otherwise specified. All fabrication shall be carried out in a neat and workmanlike manner so as to facilitate cleaning, painting, galvanizing and inspection and to avoid areas in which water and other matter can lodge.

The Contact surfaces at all connections shall be free of loose scale, dirt, burrs, oil and other foreign materials that might prevent solid seating of the parts.

04.03 **Cross-arm Replacement**

Where rehabilitation of existing networks requires the replacement of a 'V' or horizontal cross-arm or replacement of a pole with a 'V' or horizontal cross-arm then

the replacement unit shall be matched to the original so as not to change the general look of the line.

Only in instances, where large sections of the line may require replacement or the original design is no longer available or desirable, shall be contractor, with the permission the, replace the original cross-arm configuration with a new design.

The replacement cross-arm shall conform to the requirements of the fabrication section of this specification.

04.04 **Other Associated Steelwork**

Other steelwork may be required for mounting line equipment such as AB Switch, surge arresters and Insulators.

The contractor is expected to design the steelwork and to accompany the bid with the relevant drawing and substantiating design calculations.

The steel work shall be fabricated from grade 43 A mild steel as per ISO/R/630/1967 or IS-226:1975 and it shall be hot dip galvanized as per the Surface Treatment section of this specification.

PIN INSULATORS

Nominal Voltage	**11 KV**
Visible discharge voltage	9 KV rms.
Wet power frequency one minute withstand voltage	35 KV rms.
Power frequency puncture voltage	105 KV rms.
Impulse withstand voltage peak	75 KV peak
Creepage distance	320 mm
Protected creepage distance	--
Minimum failing load up to conductor size 100 mm^2	

Performance Characteristics

The insulators shall be suitable for use on the CESU distribution system with conditions as shown in the sections on Service Conditions and System Conditions.

They shall conform to IEC 720 or IS 731 and shall meet the following performance criteria

05.00 **Materials**

The insulators used by the Employer at present are of the brown glazed porcelain type.

Porcelain in the line pin insulators shall be sound, free from cavities and other defect, thoroughly verified with uniform brown glaze and have a high quality smooth finish. The glaze shall cover all the external parts of the insulator. The cement used shall not give rise to chemical reaction with metal fittings.

05.01 Design and Construction

The relevant vertical dimension shall be such that when combined with pin insulator spindle describe in technical specification for line fittings, the design requirements are the specified voltage level for conductor clearance from the cross arm shall be met.

The design shall be such that stresses due to expansion and contraction in any part of the insulator shall not lead to deterioration. Precautions shall be taken to avoid chemical reaction between cement and metal fittings by the choice of suitable materials or by the manufacturing method. Single piece insulator construction is preferred.

The insulating material shall not engage directly with hard metal. Pin insulators shall be provided with a thimble of suitable material. Cement used in

the insulator shall not cause fracture by expansion or loosening by contraction and proper care shall be taken to locate the individual parts correctly during cementing. The insulators shall have a center conductor groove.

05.02 **Dimensions**
The Bidder shall guarantee that the dimensions and tolerances of the insulator offered are in accordance with the technical drawing submitted with the bid documents.
05.03 **Markings**
All insulators shall be clearly marked with the name or trademark of the manufacturer, the minimum failing load in KN and the month and year of manufacture. They shall also be marked with the name of the Employer. These marking shall be legible and indelible. The markings may be printed or impressed, provided such impressions do not impair the performance of the insulator. Markings shall be applied before firing.
05.04 **Tests**
Type, acceptance and routine tests shall be carried out and results given alongwith certification as appropriate in the Technical Schedule and Test Certificates Schedule of this specification. The insulators shall comply with the following tests as per IS-731
05.05 **Type tests**
The following type tests are required :

- Visible discharge test;
- Impulse voltage withstand test;
- Wet power frequency voltage withstand test
- Mechanical failing load test
- 24 hour mechanical strength test;

05.06 Acceptance Test
The test samples having withstood the routine tests shall be subjected to the following tests according to the sampling procedure if IEC 383 clause 23;

- Verification of dimensions
- Electro-mechanical failing load test;
- Puncture test;
- Porosity test;
- Test for galvanization of ferrous parts

05.07 **Routine Tests**
The following routine tests shall be conducted on each set and results are to be furnished for consideration:

- Visual examination
- Tensile load test;
- Power frequency voltage test

SECTION - V

PRICE SCHEDULED

PART-A CONSTRUCTION OF 3P3W 11KV LINE WITH 80MM2 AAAC OVER 10 MTR. LONG 150X150MM RS JOIST POLE=0.35 CKM.

Sl. No.	Description of Items	Unit	Quantity	Unit supply Rate (Rs.)	Amount (Rs.)	Unit Erection Rate (Rs.)	Amount (Rs.)	Total (Rs.)
			1	2	3 = (1×2)	4	5 = (4×1)	6 = (3+5)
1	10Mtr long 150X150mm RS Joist Pole (34.6Kg Per Meter)	No.	7					
2	11KV "V" Cross-arm (10.2Kg each)	No.	6					
3	11KV Top Bracket	No.	6					
4	Back Clamp for V cross Arm	Pair	6					
5	100X50X6 MM MS Channel	Kg.	60					
8	H/W Fitting (B&S) 70KN (3Bolted)	Set	6	**OSM**				
9	11KV Disc Insulator (B&S) 70KN Polymer	No.	12					
10	11KV GI Pin	No.	21					
11	11KV Pin Insulator Porcelain	No.	21					
12	11 KV Stay set (Complete)	Set	2	**OSM**				
13	H.T stay insulator	No.	2					
14	H.T stay clamp	Pair	2					
15	SWG G.I stay wire (7/10)	Kg.	20					
16	Concreting of stay anchor plate	No.	2					
17	Padding & Concreting of Support	No.	7					
18	Couping of support	No.	7					
19	Red Oxide Paint	Ltr.	10.5					
20	Aluminium Paint	Ltr.	14					
21	Black Paint	Ltr.	3.5					
22	80mm2 AAA Conductor	Km	1.0815	**OSM**				
23	M.S Nut & Bolt 5/8"	Kg.	20					
24	GI barbed wire anticlimbing device 2Kg. Per support	Kg.	14					

25	Earthing of Support (Coil Type)	No.	7	**OSM**				
27	Sundries	LS						

Total Rupees in words ……

Note: 1) Rates quoted are “FIRM”
2) Unit rates is inclusive of all taxes and duties
3) Any discrepancy in unit rate and amount, unit rate stands.
4) Any items not quoted/nil shall be treated as inclusive of

(Signature of the Bidder with Company Seal)

PART-B (INSTALLATION OF 11/0.4KV 500KVA SUB-STATION = 1 NO.)

Sl. No.	Description of Items	Unit	Quantity	Unit supply Rate (Rs.)	Amount (Rs.)	Unit Erection Rate (Rs.)	Amount (Rs.)	Total (Rs.)
			1	2	3 = (1×2)	4	5 = (4×1)	6 = (3+5)
1	150X150mm RS Joist 10 mtr long	No.	2					
2	Pressure Channel 100 x 50 x 6mm MS channel each 2.8 mtr. Long(9.2 K.g. per mtr.)x2 Nos	K.g.	51.52					
3	S/S DP bressing chhanel 75X40X6mm MS channel each 2.8mtr. Long (6.8K.g. per mtr.)x2Nos.	K.g.	40					
4	AB Swith & HG Fuse, Mounting Channel 75x40x6 -2.8 mtr.long, 4 nos.(6.8K.g. per mtr.)	K.g.	76.16					
5	Cantilever chhanel for supporting AB Switch arm, 75x40x6-1 mtr. Long, 2 nos.(6.8 K.g. per mtr.)	K.g.	13.6					
6	Contilever chhanel for supporting HG Fuse 50 x 50 x 6 mm MS Angel (1.0 mtrs. Long 2 nos.)4.5K.g. per mtr.	K.g.	9					
7	Angle for Cantilever arrrangement for AB Switch & HG Fuse 50 x 50 x 6 -2 mtr .each 2 nos.(4.5 K.g. per mtr.)	K.g.	18					
8	S/S DP bressing Angle 50 x 50 x 6 mm - 2.8 mtr. Long 2 nos.(4.5 K.g. per mtr.) with side angel (Total 9mtr.)	K.g.	41					
9	Angle for mounting LT distribution Box 50 x 50 x 6 mm MS Angel -2.5 mtrs.each Long 2 nos.(4.5 K.g. per mtr.)	K.g.	22.5					
10	AB Switch (11KV 200A 3pole 50Hz)	Set	1	**OSM**				
11	HG Fuse (11KV 400A. 3Pole) with PI	No.	1	**OSM**				
12	11 KV L.A. 12KV-10KA	No.	3	**OSM**				
13	H.T Stay set (Complete)	Set	2	**OSM**				

14	H.T Stay Insulator	No.	2					
15	H.T Stay clamp (1.95 K.g./ Pair)	Pair	2					
16	7/10 SWG Stay Wire	K.g.	20					
17	GI Pipe Earthing 40 Dia. Medium gage 3 mtrs. Long	No.	5					
18	No.6 GI Wire	K.g.	20					
19	40x6mm GI Flat for neutral	K.g.	20					
20	Fixing of stay set with 0.5Cum cement concrete foundation 1:3:6 size (900mmx600mmx900mm) using 40mm BHG metal with all labour and material except stay set , stay wire , stay insulator .	No.	2					
21	Concreting of support C.C - 1:4:8 using 40mm BHG metal size - 5'x2'x2' = 20CFT = 0.570Cum Padding 900x600x150mm = 0.081 0.651Cum @ 3071.25= 1999.38 each	NO	2					
22	Couping of support section 15"x15" (3.9Cft) height 2'-6' (1' - 6" above G.L & 1' - 0' below G.L) in C.C 1:2:4 using 12mm BHG metal & curing for 5 days	Nos	2					
23	Materials for Machinery work for Earth Pit,Charcoal, Salt etc including construction of earthing chamber (Size: 2"x2") and RCC slab cover	No.	5					
24	80mm2 AAAC	Km	0.04	**OSM**				
25	50x6mm copper Z clamp for TFR LT 4nosx0.8Kg each for connection of LT cable	Kg	3.2					
26	Red Oxide paint	Ltr	3					
27	All. Paint	Ltr	4					
28	Black Paint	Ltr	0.5					
29	Ms Nut , Bolt & Washer	K.g.	36					

30	500KVA, 11/0.4KV (Cu) Transformer with tap changer, BIS Energy level-II	No	1	**OSM**				
31	L.T. Distribution Box with MCCB, Aluminium Bus bar for 6 Bay with Kit Kat fuse for 500KVA S/S	No.	1					
32	3.5 C x 300mm2 LT PVC Cable for I/C (2nos) for 500KVA TFR	Mtr.	24	**OSM**				
33	3.5 C x 300mm2 LT PVC Cable for O/G (2nos) for 500KVA TFR	Mtr.	60	**OSM**				
34	100X116mm RS Joist 4mtr longx23kg for resting of LT cable	Kg	92					
35	Plinth for TFR 6ft hight (below Gl 2ft)x5ftx5ft	No	1					
36	Barbed Fencing (size 15'x15')with constn. of retaining wall ,erection of RCC fencing post, Sand filling and metal spreading, Fixing of Iron gril gate etc as per CESU specification	No	1					
37	Sundries for survey , PVC tape, Ampire tape,Danger Board, small size nut & Bolt preparation of drawing cable socket etc	LS	1					
Total PART-B								

Total Rupees in words .....

Note: 1) Rates quoted are "FIRM"
2) Unit rates is inclusive of all taxes and duties
3) Any discrepancy in unit rate and amount, unit rate stands.
4) Any items not quoted/nil shall be treated as inclusive of

(Signature of the Bidder with Company Seal)

PART-C (CONSTRUCTION OF DP STRUCTURE FOR METERING UNIT = 1 NO.)

Sl. No.	Description of Items	Unit	Quantity	Unit supply Rate (Rs.)	Amount (Rs.)	Unit Erection Rate (Rs.)	Amount (Rs.)	Total (Rs.)
			1	2	3 = (1×2)	4	5 = (4×1)	6 = (3+5)
1	10Mtr long 150x150mm RS Joist Pole (34.6Kg/Mtr)	No.	2					
2	100x50x6mm MS Channel	Kg.	60					
3	75x40x6mm MS Channel	Kg.	76					
4	50x50x6mm MS Angle	Kg.	40					
5	11KV GI Pin	No.	3					
6	11KV Pin Insulator	No.	3					
7	11KV Disc Insulator (B&S) 70KN Polymer	No.	12					
8	H/W Fitting (B&S) 70KN (3bolted)	Set	6	**OSM**				
9	Padding & Concreting of Support	No.	2					
10	M.S Nut & Bolt 5/8"	Kg.	50					
11	55mm2 AAAC	Km	0.08					
12	11 KV L.A. 12KV-10KA	No.	3	**OSM**				
13	10core 2.5mm2 copper Control Cable armoured	Mtr	15					
14	SMC make enclosure for covering HT bushing of 11KV metering units	No.	6					
15	3P4W 11KV Metering unit class of accuracy 0.5with CTR 30/5A with burden 15VA, PT with burden 50VA	No.	1					
16	Red oxide paint	Ltrs	3					
17	Alluminium paint	Ltrs	4					
18	Black paint	Ltrs	0.5					
19	Sundries	LS						
Total PART-C								

Total Rupees in words ……

Note: 1) Rates quoted are “FIRM”
2) Unit rates is inclusive of all taxes and duties
3) Any discrepancy in unit rate and amount, unit rate stands.
4) Any items not quoted/nil shall be treated as inclusive of

(Signature of the Bidder with Company Seal)

PART-D (CONSTRUCTION OF LINE DP WITH 400 AMP (H TYPE) AB SWITCH =1 No.)

Sl. No.	Description of Items	Unit	Quantity	Unit supply Rate (Rs.)	Amount (Rs.)	Unit Erection Rate (Rs.)	Amount (Rs.)	Total (Rs.)
			1	2	3 = (1×2)	4	5 = (4×1)	6 = (3+5)
1	10Mtr long 150X150mm RS Joist Pole (34.6Kg Per Meter)	No.	2					
2	100x50x6mm MS Channel	Kg.	103					
3	75x40x6mm MS Channel	Kg.	76					
4	50x50x6mm MS Angle	Kg.	40					
5	11KV GI Pin	No.	3					
6	11KV Pin Insulator	No.	3					
7	H/W Fitting (B&S) 70KN (3bolted)	Set	6	**OSM**				
8	11KV Disc Insulator (B&S) 70KN Porcelain	No.	12					
9	11 KV Stay set (Complete)	Set	3	**OSM**				
10	H.T stay insulator	No.	3					
11	H.T stay clamp	Pair	3					
12	SWG G.I stay wire (7/10)	Kg.	30					
13	Concreting of stay anchor plate	No.	3					
14	Padding & Concreting of Support	No.	2					
15	Couping of support	No.	2					
16	Earthing for support coil Type	No.	3	**OSM**				
17	Red Oxide Paint	Ltr.	3					

18	Aluminium Paint	Ltr.	4					
19	Black Paint	Ltr.	0.5					
20	M.S Nut & Bolt 5/8"	Kg.	30					
21	Sundries	LS						
Total PART-D								

Total Rupees in words ……

Note: 1) Rates quoted are "FIRM"
2) Unit rates is inclusive of all taxes and duties
3) Any discrepancy in unit rate and amount, unit rate stands.
4) Any items not quoted/nil shall be treated as inclusive of **TOTAL PRICE "A"+"B"+"C"+"D"=**

Total Rupees in words ……

N.B: The unit rate quoted for a particular material in all parts of the BOQ shall remain same; otherwise the least rate shall be taken into account for evaluation of the bid.

(Signature of the Bidder with Company Seal)

SECTION - VI

ANNEXURES

ANNEXURE – I

BID PROPOSAL LETTER

Electrical Installation of Works under CESU

Bidder's Name and Address :

(in case of JV/Consortium, Name of JV/Consortium)

Bid Proposal Reference :

Person to be contacted :

Designation :

Telephone No. : E-mail : Fax No. :

To,

The Superintending Engineer (Elect)
Electrical Circle Dhenkanal, CESU
Dhenkanal

Dear Sir,

We the undersigned bidder have read and examined the detailed specification and bidding documents for execution of various electrical installation works and do herewith submit our bid for the project and We declare the following:

1.0 PRICES AND VALIDITY:

1.01 All the prices and price components stated in our bid proposal are firm and not subject to any price adjustment, in line with the bidding documents. All the prices and other terms and conditions of this proposal are valid for a period of 180 days from the date of opening of the bids. We further declare that prices stated in our proposal are in accordance with "Instructions to Bidders" of bidding documents.

1.02 We do hereby confirm that our bid prices as quoted in attached Schedules include all import duties and levies including license fees lawfully payable by us on imported items and other taxes, duties and levies applicable on bought – out components, materials, equipment and other items and confirm that any such taxes, duties and levies additionally payable shall be to our account.

1.03 We confirm that the Sales tax on Works Contract, Turnover Tax or any other similar taxes under the Sales Tax Act, as applicable, are included in our quoted bid price and there shall not be any liability on this account to the Purchasers. We understand that Purchasers shall, deduct such taxes at source as per the rules and issue TDS Certificate to us.

1.04 We confirm that, in our Bid Price, we have considered service tax in line with lawful prevalent practice.

1.05 Price components of various items are indicated in the B.O.Q. for the respective works.

1.06 We further declare that while quoting the price, the due credit under MODVAT scheme, re-christened as CENVAT scheme, as per relevant Government policies wherever applicable, have been taken into account.

1.07 We, having studied the bidding document in three volumes relating to taxes & duties and hereby, declare that if any income tax, charge on income tax or any other corporate tax is attracted under the law, we agree to pay the same.

1.08 We are aware that the Price schedules do not generally give a full description of the supplies to be made and work to be performed under each item and we shall be deemed to have read the Technical Specifications and other bidding documents and drawings to ascertain the full scope of work included in each item while filling in the related and prices. We agree that the entered rates and prices shall be deemed to include the full scope as aforesaid, including overheads and profits.

1.09 We understand that in the price schedule, if there is discrepancy between the unit price and total price, the same shall be corrected as per relevant provisions.

1.10 We declare that prices for items left blank in the schedules will be deemed to have been included in other items. The TOTAL for each schedule and the TOTAL of Grand summary

shall be deemed to e the total price for executing the facilities and sections thereof in complete accordance with the contract, whether or not each item has been priced

2.0 CONSTRUCTION OF THE CONTRACT

2.01 We declare that we are making the offer on the basis of indivisible supply-cum-Erection contract on a single source responsibility basis.

3.0 BID SECURITY(EMD)

We are enclosing DD no. dtd. Amounting to Rs. (Rupees only) issued by bank branch, payable on Dhenkanal towards Bid Security against our above Bid. The Bid Security amount has been computed by adding the Estimated Cost of the project for which we are submitting our bid.

4.0 EQUIPMENT PERFORMANCE GURANTEE

We declare that the ratings and performance figures of the equipment to be furnished and erected by us are guaranteed. The Guaranteed particulars of different equipments are enclosed along with our bid.

5.0 BID PRICING

We further declare that the prices stated in our proposal are in accordance with your Instruction of Bidders of Conditions of Contract, Volume-1 of the bid documents.

6.0 PRICE ADJUSTMENT

We declare that all the prices and price components stated in our offer are on FIRM price basis.

7.0 QUALIFICATION

We confirm having submitted the Qualification Data in original plus one copy, as required by you under clause 6.0 'Invitation for Bids'. Further we have filled in the information for qualification requirements. In case you require any further information in this regard, we agree to furnished the same in time

8.0 DEVIATIONS

8.01 We declare that the contract shall be executed strictly in a accordance with the specifications and documents except for the variations and deviations all of which have been detailed out exhaustively in the following schedules, irrespective of whatever has been stated to the contrary anywhere else in our proposal.

a) Commercial Deviations Schedule
b) Cost of withdrawal of Deviations on Critical
c) Technical Deviation Schedule

8.02 We confirm that specified stipulation of following critical clauses are acceptable to us and no deviations/exceptions are taken on any account whatsoever in the following clauses :

(a) Payment Terms :
(b) Bid Guarantee :
(c) Contract Performance Guarantee :
(d) Liquidated Damages for delay :
(e) Prices and Price Adjustment :
(f) Guarantee / Warrantees :

8.03 Further, we agree that the additional conditions, deviations, if any, found in our bid proposal documents other than those stated in attached Deviation Schedules, save that pertaining to any rebates offered, shall not be given effect to.

9.0 ADDITIONAL INFORMATION

We have included with this proposal additional information listed. We further confirm that such additional information does not imply any additional deviation beyond those covered in appropriate schedules and in case of any contradiction between these additional information and other provisions of Bid, the latter prevail.

10.0 GURANTEE DECLARATION

We guarantee that the equipment offered shall meet the rating and performance requirements stipulated in this specification. The Guarantee Declaration which shall attract levy of liquidated damages for non-performance are indicated in the relevant schedule.

11.0 BOUGHT-OUT AND SUB-CONTRACTED ITEM

We are furnishing herewith at appropriate Schedule, the detail of all major item of supply amounting to more than 10% of our Bid Price, which were propose subletting giving detail of the name of sub-contractor/sub-vendor and quantity for each item.

12.0 WORK SCHEDULE

If this proposal is accepted by you, we agree to submit engineering data, provide services and complete the entire work from time to time, in accordance with schedule indicated in the proposal. We fully understand that the time schedule stipulated in this proposal is the essence of the contract, if awarded. The completion schedule of the various major key phases of the work is indicated in the designated schedule.

13.0 CONTRACT PERFORMANCE GUARANTEE

We further agree that if our Bid is accepted we shall provide an irrevocable Bank guarantee towards Contract Performance Guarantee, of value equivalent to ten percent (10%) of the Contract Price initially valid up to the end of ninety (90) days after the end of the contract warranty period in the form of Bank Guarantee in your favour within 15 (fifteen) days from the date of 'Notice of Award of Contract' and enter into a formal agreement with you immediately thereafter.

14.0 CHECK LIST

We have included a check list duly filled in Schedule. We understand that only this check list, commercial and technical deviation will be read out during the part-I bid opening before the bidders present.

(For Joint Venture/consortium only) We, the Partners of joint venture/ consortium submitting their Bid, do agree and confirm that in case of Award of the Contract on the joint venture, we shall be jointly and severally responsible for the execution of the contract in accordance with contract terms and conditions.

We, hereby declare that only the persons or firms interested in this proposal as principals are named herein and that no other persons or firms other that those mentioned herein have any interest in this proposal or in the contract to be entered into if we are awarded the contract, and that this proposal is made without any connection with any other person, firm or party likewise submitting a proposal and that this proposal is in all respect for and in good faith, without collusion or fraud.

Dated this …….day of ……20…..

Thanking you,
Yours faithfully,

(Signature of the Authorised Signatory)
Printed Name ……
Designation ……
Common Seal off the company……

(To be signed by lead partner case of Joint Venture) Signature of other partner (s) in case of Joint Venture)
Printed Name ……
Designation ……
Date : ……
Place :

(Written power of Attorney of all signatories of the bid to commit the Bidder must be enclosed with the Bid. In case of joint venture, the written Power of Attorney of all signatories from respective partners must be enclosed with the Bid. .

ANNEXURE – II

FORM OF JOINT VENTURE/ CONSORTIUM AGREEMENT
(To be executed on non-judicial stamp paper of appropriate value to be purchased in the name of joint venture)

PROFORMA OF JOINT VENTURE AGREEMENT BETWEEN ..... AND ..... FOR BID SPECIFICATION NO. ..... OF (Purchaser).

THIS Joint Venture Agreement executed on this ..... day of ..... Two thousand and ..... between M/s. .....a company incorporated under the laws of ..... and having its Registered Office at .... (hereinafter called the "Lead Partner" which expression shall include its successors, executors and permitted assigns), M/s. ..... a company incorporated under the laws of ..... and having its Registered Office at .... (hereinafter called the "Partner" which expression shall include its successors, executors and permitted assigns) and M/s. ..... a company incorporated under the laws of .....and having its Registered Office at (hereinafter called the "Partner" which expression shall include its successors, executors and permitted assigns) for the purpose of making a bid and entering into a contract (in case of award) against the Specification No.: ..... for Construction of ..... of (Purchaser)., a company incorporated under the ..... having its. Registered Office at ..... (here in after called the "Purchaser). '

WHEREAS the Purchaser invited bids as per the above mentioned Specification for the design manufacture, supply and erection, testing and commissioning of Equipment Materials stipulated in the bidding documents under subject Package for

AND WHEREAS Annexure -A (Qualification Requirement of the Bidder), Section-SCC, Vol.-IA, forming part of the bidding documents, stipulates that a Joint Venture of two or more qualified firms as partners, meeting the requirement of Annexure-A, Section SCC as applicable may bid, provided the Joint Venture fulfills all other requirements of Annexure-A, Section SCC and in such a case, the BID shall be signed by all the partners so as to legally bind all the Partners of the Joint Venture, who will be jointly and severally liable to perform the Contract and all obligations hereunder.

The above clause further states that the Joint Venture agreement shall be attached to the bid and the contract performance guarantee will be as per the format enclosed with the bidding document without any restriction or liability for either party.

AND WHEREAS the bid has been submitted to the Purchaser vide proposal No dated by Lead Partner based on the Joint Venture agreement between all the Partners under these presents and the bid in accordance with the requirements of Annexure-A (Qualification Requirements of the Bidders), Section -SCC has been signed by all the partners.

NOW THIS INDENTURE WITNESSETH AS UNDER:

In consideration of the above premises and agreements all the Partners to this Joint Venture do hereby now agree as follows:

1. In consideration of the award of the Contract by the Purchaser to the Joint Venture partners, we, the Partners to the Joint Venture agreement do hereby agree that M/s ..... shall act as Lead Partner and further declare and confirm that we shall jointly and severally be bound unto the Purchaser for the successful performance of the Contract and shall be fully responsible for the design, manufacture, supply, and successful performance of the equipment in accordance with the Contract.

2. In case of any breach of the said Contract by the Lead Partner or other Partner(s) of the Joint Venture agreement, the Partner(s) do hereby agree to be fully responsible for the successful performance of the Contract .and to carry out all the obligations and responsibilities under the Contract in accordance with the requirements of the Contract.

3. Further, if the Purchaser suffers any loss or damage on account of any breach in the Contract or any shortfall in the performance of the equipment in meeting the performance guaranteed as per the specification in terms of the Contract, the Partner(s) of these presents undertake to promptly make good such loss or damages caused to the Purchaser, on its demand without any demur. It. shall not be necessary or obligatory for the Purchaser to proceed against Lead Partner to these presents before proceeding against or dealing with the other Partner(s).

4. The financial liability of the Partners of this Joint Venture agreement to the Purchaser, with respect to any of the claims arising out of the performance of non-performance of the obligations set forth in the said Joint Venture agreement, read in conjunction with the relevant conditions of the Contract shall, however, not be limited in any way so as to restrict or limit the liabilities of any of the Partners of the Joint Venture agreement.

5. It is expressly understood and agreed between the Partners to this Joint Venture agreement that the responsibilities and obligations of each of the Partners shall be as delineated in Appendix-I (*To be incorporated suitably by the Partners) to this agreement. It is further agreed by the Partners that the above sharing of responsibilities and obligations shall not in any way be a limitation of joint and several responsibilities of the Partners under this Contract.

6. This Joint Venture agreement shall be construed and interpreted in accordance with the laws of India and the courts of Dhenkanal under the Jurisdiction of Honorable High Court Of Orissa shall have the exclusive jurisdiction in all matters arising there under.

7. In case of an award of a Contract, We the Partners to the Joint Venture agreement do hereby agree that we shall be jointly and severally responsible for furnishing a contract performance security from a bank in favour of the Purchaser in the forms acceptable to purchaser for value of 10% of the Contract Price in the currency/currencies of the Contract.

8. It is further agreed that the Joint Venture agreement shall be irrevocable and shall form an integral part of the Contract, and shall continue to be enforceable till the Purchaser discharges the same. It shall be effective from the date first mentioned above for all purposes and intents.

IN WITNESS WHEREOF. the Partners to the Joint Venture agreement have through their authorised representatives executed these presents and affixed Common Seals of their companies, on the day, month and year first mentioned above.

1.Common Seal ..... of has been affixed in my/our presence pursuant to the Board of Director's dated .....
Name... .....
Signature.. .....
Name .....
Designation.....

For Lead Partner

(Signature of authorised resolution representative)

Designation .....

Common Seal of the company

.....

2.Common Seal of ..... has been affixed in my/our presence pursuant to the Board of Director's resolution dated
Name... .....

Name .....
Designation.....

For other Partners

(Signature of authorised representative)
Signature.. .....
Designation .....

Common Seal of the company

.....

WITNESSES :

1.....
(Signature)
Name .....
.....
(official address)

2. .....
(Signature)
Name .....
.....
(Official address)

ANNEXURE – III

DECLARATION FORM

To,
The Superintending Engineer (Elect)
Electrical Circle Dhenkanal, CESU
Dhenkanal

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 there on 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 under take 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 purchased 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 CESU& for the sum as applicable to me / us as per clause No.13 of Annexure -V 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……20…

Yours faithfully

(Signature of Bidder with Seal of Company)

(This form should be duly filled up by the Bidder & submitted along with the original copy of the Tender)

ANNEXURE –IV

DETAILS OF COMMERCIAL DEVIATIONS

Bidder's Name & Address

To,
The Superintending Engineer (Elect)
Electrical Circle Dhenkanal, CESU
Dhenkanal

Dear Sirs,

Sub: Commercial Deviation for Construction of Name of the project.

The following are the Commercial Deviations and variations from and exceptions to the specifications and documents for the subject Project. These deviations and variations are exhaustive. Except for these deviations, the entire work shall be performed as per your specifications and documents

Volume/Clause	Brief Description	As specified in the Specification	Commercial deviation and variation to the specification

Date: (Signature) …….

Place: (Printed Name) …….

(Designation) …….
(Common Seal) …….

Note: 1.Continuation sheets, of like size and format, may be used as per Bidder's requirements and annexed to this Schedule.

2. This will be read out during opening of Part-I Bid.

ANNEXURE – V

DETAILS TECHNICAL DEVIATIONS

Bidder's Name & Address

To,
The Superintending Engineer (Elect)
Electrical Circle Dhenkanal, CESU
Dhenkanal

Sub: Technical Deviation for Construction of ..... Name of the Project.

The following are the Technical Deviations and variations from and exceptions to the specifications and documents for the subject package. These deviations and variations are exhaustive. Except for these deviations, the entire work shall be performed as per your specifications and documents

Volume/Clause	Ref./Page No.	As specified in the Specification / Relevant ISS	Technical deviation and variation to the specification

Date:
Place:

(Signature) .....
(Printed Name) .....
(Designation) .....
(Common Seal) .....

Note: 1**.** Continuation sheets, of like size and format, may be used as per Bidder's requirements and annexed to this Schedule.

2. The deviations and variations, if any, shall be brought out separately for each of the equipment.

3. This will be read out during opening of Part – I bid.

ANNEXURE – VI

WORK COMPLETION SCHEDULE

Bidder's Name & Address

To,
The Superintending Engineer (Elect)
Electrical Circle Dhenkanal, CESU
Dhenkanal

Dear Sirs,

We hereby declare that the following Work Completion Schedule shall be followed by us for the purpose of subject package

Sl.No	Description of Work	Period in Months(from the date of LOA)
1	Completion of detailed engineering	
2	Procurement of raw materials	
3	Establishment of site office	
4	Erection (a) Commencement (b) Completion	
5	Testing & Pre-commissioning (a) Commencement (b) Completion	
6	Commissioning	

Date:
Place:

(Signature) ……
(Printed Name) ……
(Designation) ……
(Common Seal) ……