



TP CENTRAL ODISHA DISTRIBUTION LIMITED
(A Tata Power & Odisha Govt. joint venture)
2nd Floor, IDCO Tower, Janpath Bhubaneswar, Odisha 751022

NIT No.: TPCODL/P&S/100000151/2021-22

Open Tender Notification

for

Procurement of various size of LT XLPE AB Cable

**Tender Enquiry No.: TPCODL/P&S/1000000151/21-22,
Due Date for Bid Submission: 30th December 2021 [18:00
Hrs.]**

**TP Central Odisha Distribution Limited
(A TATA Power and Odisha Government Joint Venture)
Procurement & Stores Department,
2nd Floor, IDCO Towers, Janpath, Bhubaneswar – 751022**



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Tender Enquiry No - TPCODL/P&S/100000151/2021-22

Tender Enquiry No.	Work Description	EMD (Rs.) *	Tender Fee (Rs.) **	Last Date and Time for payment of Tender Fee
TPCODL/P&S/1000000151/2021-22	Procurement of various size of LT XLPE AB Cable.	5,00,000	5,000	22.12.2021, 17:00Hrs

* EMD is exempted for MSMEs registered in the State of Odisha.

** MSMEs registered in the State of Odisha shall pay tender fee of Rs. 1,000/- including GST. For details of MSME norms, pls refer "Annexure A" below.

INFORMATION TO THE BIDDERS TO PARTICIPATE IN E-OPEN TENDER SYSTEM OF TPCODL

-: Steps for E-tender submission:-

Bids are to be submitted only through online e-procurement platform, ARIBA. Any other form of bid submission will not be accepted. Online Link for submission of bid through ARIBA will be sent only after confirmation of payment of tender fee from bidder.

Step 1: The bidder can get primary information about the tender from the Newspaper advertisement / TPCODL website <www.tpcentralodisha.com> and can download the tender document from the above website.

Step 2: Non-Refundable Tender Participation Fee, as indicated in tender document, to be submitted before last date of tender fee payment, in the form of direct deposit/NEFT/RTGS in the following bank account.

Account Name: TP Central Odisha Distribution Limited
Bank Name: State Bank of India,
IDCO Towers, Bhubaneswar
Bank Account No. : 10835304915
IFSC Code : SBIN0007891

Step 3: Eligible and Interested bidder to send an email to TPCODL attaching duly signed and stamped letter on Bidder's letterhead, with following details, expressing their intend to bid against above tender:



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SI No	Description	Bidder's Response
i)	Tender Enquiry No.	
ii)	Description of materials / Works Tendered	
iii)	Name and address of the bidding company	
iv)	Name of the authorized contact person	
v)	Contact No. authorized person	
vi)	E-mail Id of the where online ARIBA link to be	
vii)	Tender Fee details (Amount / NEFT-RTGS UTR No	
viii)	GST No.of bidder	
ix)	MSME Certificate, wherever applicable	
x)	Postal address of bidder for return of EMD BG	

E-mail has to be sent to <prashant.gupta@tpcentralodisha.com> with copy to <sudhakar.behera@tpcentralodisha.com> before "Last date and time for payment of Tender Participation Fee".

Step 4: On receipt of the document as mentioned in Step 3 above and after due verification of the same, ARIBA link for participation in the tender will be sent to bidder's mail address from ARIBA system.

Step 5: In this mail there will be an online link as **Click Here** to participate in the tender.

Step 6: Click "**Click Here**" to access this event.

Step 7: If bidder is bidding first time for TPCODL through ARIBA site then please "Sign UP" by creating User Name and password as mentioned in Sign Up page. Please follow the process, as mentioned in the Sign Up page, during creation of User Name and password. Also a simple one-page registration screen will open for first time user. All * mark mandatory field to be filled in.

Those who are already having User Name and password for accessing TPCODL events, they can LOGIN using same User Name and password.

If bidder has got User name and password for their other customer, same will not be applicable for TPCODL.

Step 8: You will be able to see the RFQ

Step 9: After review and downloading of all documents click on "**Review Pre-requisites**"

Step 10: Review and accept "**Bidder Agreement**".

Step 11: You can see attached pdf tender document against clause no 1.1.1 (Introduction).

Step 12: Vendor has to attach pdf version of technical bid in clause no. 2.1 and 2.2. In this field do not attach any price document.



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Price schedule is attached in clause no.3.2. Same has to be downloaded and price and tax details to be filled in as per the format given, print to be taken in vendor's letter head and signature and seal to be made by authorised person. PDF version of this price bid to be attached in clause 3.2 For Price Bid put all the unit price and taxes and duties in provided field. Put "0" (ZERO) in not applicable field.

Step 13: After successfully putting Techno commercial offer and price part then click on **"Submit Entire Response"**

Note: Once user ID and password created, bidder can also login to ARIBA site through the following URL:

<https://service.ariba.com/Sourcing.aw/124997008/aw?awh=r&awssk=oxt0s1BN&dard=1>

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Annexure-A

Preferential norms for procurement from MSMEs registered in the State of Odisha

1) Tender Fees

To participate in the tender, MSMEs registered in the State of Odisha shall pay Rs.1,000/- including GST towards cost of tender paper.

2) Earnest Money Deposit (EMD)

EMD shall be exempted for MSME registered in the State of Odisha. However, Bidder shall be barred to participate in the tendering process for a period of 2 years in case it backs out post award of the contract.

3) Qualification Requirement for Open Tenders

Qualification Requirement of Financial Turnover for MSME registered in the State of Odisha shall be reduced to 20% of the existing criteria.

For past experience, instead of relying on the volumes / value of earlier Supplies / Projects, assessment of the Bidder shall be done on the basis of feedback from Customers. Past performance experience at Tata Power and its Group Companies shall supersede feedback from other Customers.

4) Reservation for MSME

It shall be mandatory to procure at least 20% of the total volume of the procurement from MSME registered in the State of Odisha (however, it shall not apply where goods/services are not available with the MSME), subject to matching L1 discovered prices and meeting technical specifications including quality requirements.

5) Performance Bank Guarantees

Performance Bank Guarantee for MSME registered in the State of Odisha shall be 25% of the value normally prescribed.



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1.0 Event Information

1.1. Scope of work

Bids are invited from interested Bidders to award Procurement of various size of LT XLPE AB Cable the following items:

S. No.	Description	UOM	Quantity
1.	L.T ABC CABLE 1 x 35 + 1 x 25 SQMM	Meter	7,07,250
2	LT CABLE ABC 3X35+1X25 SQMM	Meter	56,810
3.	L.T ABC CABLE 3 x 50 + 1 x 25 SQ MM	Meter	1,10,440
4.	LT CABLE ABC 3X50+1X35X1X16 SQMM	Meter	870

1.2. Availability of Tender Documents

Please refer "Procedure to participate in the e-tender".

1.3. Calendar of Events

(a)	Date of availability of tender documents from TPCODL Website	15.12.2021
(b)	Last date and time of Payment of Tender Fee	22.12.2021, 17:00 Hours
(c)	Last Date of receipt of pre-bid queries, if any	24.12.2021, 17:00 Hours
(d)	Last Date of Posting Consolidated replies to all the pre-bid queries as received	26.12.2021, 17:00 Hours
(e)	Last date and time of receipt of Bids	30.12.2021, 18:00 Hours

Note: In the event of last date specified for submission of bids and date of opening of bids is declared as a closed holiday for TPCODL's office, the last date of submission of bids and date of opening of bids will be the day following working day at appointed times.

1.4 Mandatory documents required along with the Bid

- 1.4.1 EMD of requisite value and validity
- 1.4.2 Tender Fee.
- 1.4.3 Requisite Documents for compliance to Qualification Criteria mentioned in Clause 1.7.
- 1.4.4 Acceptance of Specification, drawing with filled in GTP as per Annexure II.
- 1.4.5 Duly signed and stamped 'Schedule of Deviations' as per Annexure III on bidder's letter head.



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- 1.4.6 Duly signed and stamped 'Schedule of Commercial Specifications' as per Annexure IV on bidder's letter head.
- 1.4.7 Duly filled in Annexure V and VI.
- 1.4.8 Proper authorization letter/ Power of Attorney to sign the tender on the behalf of bidder.
- 1.4.9 Copy of PAN, GST registration (In case any of these documents is not available with the bidder, same to be explicitly mentioned in the 'Schedule of Deviations')

Please note that in absence of any of the above documents, the bid submitted by a bidder shall be liable for rejection.

1.5. Deviation from Tender

Normally, the deviations to tender terms are not admissible and the bids with deviation are liable for rejection. Hence, the bidders are advised to refrain from taking any deviations on this Tender. Still in case of any deviations, all such deviations shall be set out by the Bidders, clause by clause in the 'Annexure III - Schedule of Deviations' and same shall be submitted as a part of the Technical Bid.

1.6. Right of Acceptance/Rejection

Bids are liable for rejection in absence of following documents:

- i. EMD of requisite value and validity.
- ii. Tender fee of requisite value.
- iii. Price Bid as per the Price Schedule mentioned in Annexure I (BOQ)
- iv. Necessary documents against compliance to Qualification Requirements mentioned at Clause 1.7 of this Tender Document.
- v. Filled in Schedule of Deviations as per Annexure III.
- vi. Filled in Schedule of Commercial Specifications as per Annexure IV.
- vii. Signed and filled in Specification and GTP as per Annexure II.
- viii. Duly filled and signed Annexure V and VI.
- ix. Receipt of Bid within the due date and time.

TPCODL reserves the right to accept/reject any or all the bids without assigning any reason thereof.

1.7 Qualification Criteria

- a) The bidder should have an average annual turnover of Rs.5 crores in last three financial years (FY 18-19, FY 19-20 and FY 20-21). Copy of audited Balance Sheet and P&L Account to be submitted in this regard.
- b) Qualification Requirement of Financial Turnover for MSME registered in the State of Odisha shall be reduced to 20% of the existing criteria.
- c) For past experience, instead of relying on the volumes / value of earlier Supplies / Projects, assessment of the Bidder shall be done on the basis of feedback from Customers. Past performance experience at Tata Power and its Group Companies shall supersede feedback from other Customers.
- d) Bidder should have at least the Purchase order single / Multiple copy of experience in supply of similar item Lightning Arrester (in Govt. Org/Discoms/Utilities/Industries/PSU) with performance certificate.



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- e) Bidder should have a valid Manufacturing license /MSME issued by concerned state/India Govt. for carrying out these works in Copy of license required. In case of supplier, bidders have authorization from original manufacturer.
- f) Bidder must have successfully executed the supply of

Quantities in Meter

Items	Single Order
L.T ABC CABLE 1 x 35 + 1 x 25 SQMM	7,07,250
LT CABLE ABC 3X35+1X25 SQMM	56,810
L.T ABC CABLE 3 x 50 + 1 x 25 SQ MM	1,10,440
LT CABLE ABC 3X50+1X35X1X16 SQMM	870

within last 5 Year. Copy of completion certificates to be submitted in this regard.

- g) Bidder shall arrange for factory evaluation/ pre-dispatch inspection/ routine and acceptance tests at their works, as per requirement
- h) The bidder must have all statutory compliance like valid PAN no, GSTN etc. The bidder must submit the copy of all these registrations.

1.8. Marketing Integrity

We have a fair and competitive marketplace. The rules for bidders are outlined in the General Condition of Contracts. Bidders must agree to these rules prior to participating. In addition to other remedies available, TPCODL reserves the right to exclude a bidder from participating in future markets due to the bidder's violation of any of the rules or obligations contained in the General Condition of Contracts. A bidder who violates the market place rules or engages in behavior that disrupts the fair execution of the marketplace, may result in restriction of a bidder from further participation in the marketplace for a length of time, depending upon the seriousness of the violation. Examples of violations include, but are not limited to:

- Failure to honor prices submitted to the marketplace
- Breach of terms as published in TENDER/NIT

1.9. Supplier Confidentiality

All information contained in this tender is confidential and shall not be disclosed, published or advertised in any manner without written authorization from TPCODL. This includes all bidding information submitted to TPCODL. All tender documents remain the property of TPCODL and all suppliers are required to return these documents to TPCODL upon request. Suppliers who do not honor these confidentiality provisions will be excluded from participating in future bidding events.

2.0 Evaluation Criteria

- The bids will be evaluated technically and on qualifying criteria of tender terms and conditions.



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- The bids will be evaluated commercially on individual item basis (all-inclusive lowest cost at item level) for the complete tender as calculated in Schedule of Items [Annexure I].
- Bidder has to mandatorily quote against each item of Schedule of Items [Annexure I]. Failing to do so, TPCODL may reject the bids.

NOTE: In case a new bidder is not registered with TPCODL, factory inspection and evaluation shall be carried out to ascertain bidder's manufacturing capability and quality procedures. However, TPCODL reserves the right to carry out factory inspection and evaluation for any bidder prior to technical qualification.

In case a bidder is found as Disqualified in the factory evaluation, their bid shall not be evaluated any further and shall be summarily rejected. The decision of TPCODL shall be final and binding on the bidder in this regard.

2.1 Price Basis: Price will be fixed and firm during the contractual period.

3.0 Submission of Bid Documents

3.1 Bid Submission

Bidders are requested to submit their offer in line with this Tender document through e-tendering process.

Please note all future correspondence regarding the tender, bid submission, bid submission date extension, Pre-bid query etc. will happen only through TPCODL E-Tender system (Ariba).

No e-mail or verbal correspondence will be responded. All communication will be done strictly with the bidder who have done the above step to participate in the Tender.

Bids shall be submitted in 3(Three) parts:

FIRST PART: "EMD" as applicable shall be submitted. The EMD shall be valid for 210 days from the due date of bid submission in the form of Bank Guarantee / Bank Draft / Bankers Pay Order (issued from a Scheduled Bank) online NEFT/ RTGS transfer favoring 'TP Central Odisha Distribution Limited' payable at Bhubaneswar. The EMD BG has to be strictly in the format as mentioned in General Condition of Contract, failing which it shall not be accepted by TPCODL and the bid as submitted shall be liable for rejection. A separate non-refundable tender fee of stipulated amount also needs to be transferred online through NEFT/ RTGS in case the tender document is downloaded from our website.

TPCODL Bank Details for transferring Tender Fee and EMD is as below:

Account Name: TP CENTRAL ODISHA DISTRIBUTION LIMITED

Bank Name: SBI, IDCO Towers, Bhubaneswar

Bank Account No.: 10835304915

IFSC Code: SBIN0007891

Note- EMD is preferred in form of Bank Guarantee and to be delivered at the following address. However, in view of present situation if Bidder is finding it difficult to make and submit BG for EMD amount, they can do online transfer of EMD amount in the above mentioned Account and submit proof of the same as part of Bid Submission.

Please note that in such case, Tender Fee and EMD should be strictly 2 separate transactions.

Please note as return of EMD from Bank Account is non-standard practice and the same may take more time than return of EMD BG.

EMD Original Hard Copy shall be delivered at the following address in Envelope clearly indicating Tender Reference/ Enquiry Number, Name of Tender and Bidder Name

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Chief (Procurement & Stores)
TP Central Odisha Distribution Limited
2nd Floor, IDCO Towers, Janpath, Bhubaneswar- 751022

EMD shall be exempted for MSME registered in the State of Odisha. However, Bidder shall be barred to participate in the tendering process for a period of 2 years in case it backs out post award of the contract.

SECOND PART: “TECHNICAL BID” shall contain the following documents:

- i) Requisite Documents for compliance to Qualification Criteria mentioned in Clause 1.7 and clause no. 1.4.
- ii) Type Test Certificate of Lightning Arrester of same or higher rating.
- iii) Acceptance of Specification as per Annexure II.
- iv) Duly signed and stamped ‘Schedule of Deviations’ as per Annexure III on bidder’s letter head.
- iv) Duly signed and stamped ‘Schedule of Commercial Specifications’ as per Annexure IV on bidder’s letter head.
- v) Duly filled in Annexure V and VI.
- vi) Proper authorization letter/ Power of Attorney to sign the tender on the behalf of bidder.
- vii) Copy of PAN, GST registration (In case any of these documents is not available with the bidder, same to be explicitly mentioned in the ‘Schedule of Deviations’)

The technical bid shall be properly indexed and is to be submitted through TPCODL E-tender System (Ariba) only. Hard Copy of Technical Bids need not be submitted

THIRD PART: “PRICE BID” shall contain only the price details and strictly in format as mentioned in Annexure I along with explicit break up of basic prices and Taxes & duties etc. In case any discrepancy is observed between the item description stated in Schedule of Items mentioned in the tender and the price bid submitted by the bidder, the item description as mentioned in the tender document (to the extent modified through Corrigendum issued if any) shall prevail.

Price Bid is to be submitted in soft copy through TPCODL E-Tendering system (Ariba) only. Hard copy of Price Bid not be submitted

The EMD in the form of Bank Draft / BG / Bankers Pay Order shall be submitted in original hard copy and then placed in sealed envelope which shall be clearly marked as below:

EMD

“Procurement of various size of LT XLPE AB Cable”

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

SIGNING OF BID DOCUMENTS:

The bid must contain the name, residence and place of business of the person or persons making the bid and must be signed and sealed by the Bidder with his usual signature. The names of all persons signing should also be typed or printed below the signature.

The Bid being submitted must be signed by a person holding a Power of Attorney authorizing him to do so, certified copies of which shall be enclosed.



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The Bid submitted on behalf of companies registered with the Indian Companies Act, for the time being in force, shall be signed by persons duly authorized to submit the Bid on behalf of the Company and shall be accompanied by certified true copies of the resolutions, extracts of Articles of Association, special or general Power of Attorney etc. to show clearly the title, authority and designation of persons signing the Bid on behalf of the Company. Satisfactory evidence of authority of the person signing on behalf of the Bidder shall be furnished with bid.

A bid by a person who affixes to his signature the word 'President', 'Managing Director', 'Secretary', 'Agent' or other designation without disclosing his principal will be rejected.

The Bidder's name stated on the Proposal shall be the exact legal name of the firm.

3.2 Contact Information

All the bidders are requested to send their pre-bid queries (if any) against this tender through e-mail within the stipulated timelines. The consolidated reply to all the queries received shall be posted on TPCODL website by the stipulated timelines as detailed in calendar of events.

Communication Details:

Handling Executive for this Tender:

Name: Prashant Gupta
Contact No.: 9634077589
E-Mail ID: prashant.gupta@tpcentralodisha.com

Escalation: General Manager (Material Procurement):

Name: Mr. Sudhakar Behera,
Contact No.: 9437282663
E-Mail ID: sudhakar.behera@tpcentralodisha.com

3.3 Bid Prices

Bidders need to quote for all items as per the Price schedule attached in Annexure I. The bidder shall complete the appropriate Price Schedules included herein, stating the Unit Price for each item & total price with taxes, duties & freight up to destination at various sites of TPCODL. The all-inclusive prices offered shall be inclusive of all costs as well as Duties, Taxes and Levies paid or payable during the execution of the supply work, breakup of price constituents.

Applicable GST to be specified clearly.

The quantity break up shown else-where other than Price Schedule is tentative. The bidder shall ascertain himself regarding material required for completeness of the entire work. Any items not indicated in the price schedule but which are required to complete the job as per the Technical Specifications/ Scope of Work/ SLA mentioned in the tender, shall be deemed to be included in prices quoted.

3.4 Bid Currencies

Prices shall be quoted in Indian Rupees Only.

3.5 Period of Validity of Bids

Bids shall remain valid for 180 days from the due date of submission of the bid.

Notwithstanding clause above, the TPCODL may solicit the Bidder's consent to an extension of the Period of Bid Validity. The request and responses thereto shall be made in writing.



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3.6 Alternative Bids

Bidders shall submit Bids, which comply with the Bidding documents. Alternative bids will not be considered. The attention of Bidders is drawn to the provisions regarding the rejection of Bids in the terms and conditions, which are not substantially responsive to the requirements of the bidding documents.

3.7 Modifications and Withdrawal of Bids

The bidder is not allowed to modify or withdraw its bid after the Bid's submission. The EMD as submitted along with the bid shall be liable for forfeiture in such event.

3.8 Earnest Money Deposit (EMD)

The bidder shall furnish, as part of its bid, an EMD amounting as specified in the tender. The EMD is required to protect TPCODL against the risk of bidder's conduct which would warrant forfeiture.

The EMD shall be denominated in any of the following form:

- Banker's Cheque/ Demand Draft/ Pay order drawn in favor of TP Central Odisha Distribution Limited payable at Bhubaneswar.
- Online transfer of requisite amount through NEFT/ RTGS.
- Bank Guarantee valid for 210 days after due date of submission.

The EMD shall be forfeited in case:

a) The bidder withdraws its bid during the period of specified bid validity.

Or

- b) The successful Bidder does not
- a) accept the Purchase Order, or
 - b) furnish the required Performance Security Bank Guarantee

3.9 Type Tests (if applicable)

The type tests specified in TPCODL specifications should have been carried out within five years prior to the date of opening of technical bids and test reports are to be submitted along with the bids. If type tests carried out are not within the five years prior to the date of bidding, the bidder will arrange to carry out type tests specified, at his cost. The decision to accept/ reject such bids rests with TPCODL

4 Bid Opening & Evaluation process

4.1. Process to be confidential

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

4.2. Technical Bid Opening

Bids will be opened at TPCODL Office, Bhubaneswar. All tender bids shall be opened internally by TPCODL. Presence of any bidder will not be allowed during bid opening process. Technical bid must not contain any cost information whatsoever.

First the envelope marked "EMD" will be opened. Bids without EMD/cost of tender (if applicable) of required amount/ validity in prescribed format, shall be rejected.



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Next, the technical bid of the bidders who have furnished the requisite EMD will be opened, one by one.

4.3. Preliminary Examination of Bids/Responsiveness

TPCODL 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. TPCODL may ask for submission of original documents in order to verify the documents submitted in support of qualification criteria.

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.

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

Bid determined as not substantially responsive will be rejected by the TPCODL and may not subsequently be made responsive by the Bidder by correction of the non-conformity.

4.4. Techno Commercial Clarifications

Bidders need to ensure that the bids submitted by them are complete in all respects. To assist in the examination, evaluation and comparison of Bids, TPCODL may, at its discretion, ask the Bidder for a clarification on its Bid for any deviations with respect to the TPCODL specifications and attempt will be made to bring all bids on a common footing. 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 owing to any clarifications sought by TPCODL.

4.5. Price Bid Opening

Price bids will be opened internally without the presence of any bidder representative. The EMD of the bidder withdrawing or substantially altering his offer at any stage after the technical bid opening will be forfeited at the sole discretion of TPCODL without any further correspondence in this regard.

4.6. Reverse Auctions

TPCODL reserves the right to conduct the reverse auction (instead of public opening of price bids) for the products/ services being asked for in the tender. The terms and conditions for such reverse auction events shall be as per the Acceptance Form attached as Annexure VI of this document. The bidders along with the tender document shall mandatorily submit a duly signed copy of the Acceptance Form attached as Annexure VI as a token of acceptance for the same.

5 Award Decision

TPCODL will award the contract to the successful bidder whose bid has been determined to be the lowest-evaluated responsive bid as per the Evaluation Criterion mentioned at Clause 2.0. The Cost for the said calculation shall be taken as the all-inclusive cost quoted by bidder in Annexure I (Schedule of Items) subject to any corrections required in line with Clause 3.1 above. The decision to place purchase order/LOI solely depends on TPCODL on the cost competitiveness across multiple lots, quality, delivery and bidder's capacity, in addition to other factors that TPCODL may deem relevant.

TPCODL reserves the rights to award contract to one or more bidders so as to meet the delivery requirement or nullify award decision without assigning any reason thereof.



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In case any supplier is found unsatisfactory during delivery process, the award will be cancelled and TPCODL reserves right to award contract to other suppliers who are found fit.

6 Order of Preference/Contradiction

In case of contradiction in any part of various documents in tender, following shall prevail in order of preference:

1. Schedule of Items (Annexure I)
2. Technical Specifications (Annexure II)
3. Special Conditions of Contract (Clause 7.0)
4. Submission of Bid Documents (Clause 3.0)
5. Acceptance Form for Participation in Reverse Auction (Annexure VI)
6. General Conditions of Contract (Annexure VIII)

7 Post Award Contract Administration

7.1. Special Conditions of Contract

- PO shall be valid for a period of 1 year from the placement of Contract. PO shall be placed as per the requirement of TPCODL. Rate shall be firm and fixed during the validity of the contract.
- Business Associate (BA) shall submit applicable Performance Bank Guarantee as per GCC within 30 days of issuance of purchase order. PBG applicable shall be @ 5% of Rate Contract Value or 10% of PO Value. Validity of BG shall be till expiry date of PO plus delivery period plus warranty period in case of 5% value BG. Validity will be till delivery period plus warranty period for 10% value BG. Claim period will be additional one month for both cases.
Performance Bank Guarantee for MSME registered in the State of Odisha shall be 25% of the value normally prescribed
- Any change in statutory taxes, duties and levies during the contract period shall be borne by TPCODL. However, in case of delay in work execution owing to reasons not attributable to TPCODL, any increase in total liability shall be passed on the Bidder, whereas any benefits arising owing to such statutory variation in taxes and duties shall be passed on TPCODL.
- Statutory Variations: Any changes in existing taxes/ Duties and levies, Introduction of new taxes and duties etc. during the period of the contract shall be paid at actuals to BA subject to BA shall submit the tax break up in details, however, where BA has quoted the all-inclusive prices and not shown the tax break-up, this clause will not be applicable. The date of issue of MDCC shall be used for this purpose.
- Quotation in all BOQ items is mandatory, and bid shall be rejected if any line of found blank in price bid.
- Delivery period shall be 30 days from date of receipt of release order / CAT-A issuance, whichever is later
- Warranty period: As mentioned in technical specification, Annexure-II enclosed.
- Delivery location: TPCODL Store at Cuttack or at Bhubaneswar, Odisha.
- Late delivery(LD) clause will be applicable as per GCC.
- All other terms and conditions of TPCODL General Conditions of Contract shall be applicable.
- TPCODL shall short close the issued Purchase Order/ Release Order / Rate contract, in case of any quality issues
- Terms of Payment:



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On delivery of the materials in good condition and certification of acceptance by certified official, Associate shall submit the Bills/ Invoices in original in the name of TP Central Odisha Distribution Limited to Invoice Desk. The payment shall be released within 45 days from the date of submission of certified bills/ invoices.

7.2 Drawing Submission and Approval

The relevant drawings need to be submitted within two weeks of receipt of firm purchase order by the successful bidder to TPCODL for approval. In case, re-submission of drawings is required on request of TPCODL, same needs to be submitted back to TPCODL within 5 days of such request.

7.3 Payment Terms

As per SCC, Clause number 7.1.

7.4 Climate Change

Significant quantities of waste are generated during the execution of project and an integrated approach for effective handling, storage, transportation and disposal of the same shall be adopted. This would ensure the minimization of environmental and social impact in order to combat the climate change. Please refer attached Environment Policy and Sustainability Policy, enclosed for more details.

7.5 Ethics

TPCODL is an ethical organization and as a policy TPCODL lays emphasis on ethical practices across its entire domain. Bidder should ensure that they should abide by all the ethical norms and in no form either directly or indirectly be involved in unethical practice.

TPCODL work practices are governed by the Tata Code of Conduct which emphasizes on the following:

- We shall select our suppliers and service providers fairly and transparently.
- We seek to work with suppliers and service providers who can demonstrate that they share similar values. We expect them to adopt ethical standards comparable to our own.
- Our suppliers and service providers shall represent our company only with duly authorized written permission from our company. They are expected to abide by the Code in their interactions with, and on behalf of us, including respecting the confidentiality of information shared with them.
- We shall ensure that any gifts or hospitality received from, or given to, our suppliers or service providers comply with our company's gifts and hospitality policy.
- We respect our obligations on the use of third party intellectual property and data.

Bidder is advised to refer Tata Code of Conduct (TCOC) attached for more information.

Any ethical concerns with respect to this tender can be reported to the following e-mail ID:

pravin.jain@tpcentralodisha.com

8 Specification and standards

As per Annexure II

9 General Condition of Contract

Any condition not mentioned above shall be applicable as per GCC attached along with this tender.



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Annexure-I, Price Schedule

Sl No	Item Description	UOM	Qty	Rate (Rs)	Amount (Rs)	GST Amount(Rs)	Total with GST (Rs)
1.	L.T ABC CABLE 1 x 35 + 1 x 25 SQMM	Meter	7,07,250				
2	LT CABLE ABC 3X35+1X25 SQMM	Meter	56,810				
3.	L.T ABC CABLE 3 x 50 + 1 x 25 SQ MM	Meter	1,10,440				
4.	LT CABLE ABC 3X50+1X35X1X16 SQMM	Meter	870				

NOTE:

- ii) All rates are to be quoted on delivered basis at TPCODL Store -Cuttack or Bhubaneswar, Odisha, and should be inclusive of freight, insurance, loading & unloading, handling charges and any other charges which may be applicable.
- iii) The overall period of the rate contract/PO shall be for a period of 1 year. PO/ Release order shall be issued as per requirement of TPCODL. Rates will remain firm and fixed during the rate contract/PO validity of 1 year.
- iv)The bids will be evaluated commercially on itemwise lowest cost.
- v) The bidders are advised to quote prices strictly in the above format. Failing to do so, bids are liable for rejection.
- vi) The bidder must fill each and every column of the above format. Mentioning "extra/inclusive" in any of the column may lead for rejection of the price bid.
- vii) No cutting/ overwriting in the prices is permissible.
- viii) Quantities mentioned above is for evaluation purpose only and not guaranteed. Quantities may change as per actual requirements.



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CONFIDENTIAL



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ANNEXURE III

Schedule of Deviations

*Bidders are advised to refrain from taking any deviations on this TENDER. Still in case of any deviations, all such deviations from this tender document shall be set out by the Bidders, Clause by Clause in this schedule and submit the same as a part of the **Technical Bid**.*

*Unless **specifically** mentioned in this schedule, the tender shall be deemed to confirm the TPCODL's specifications:*

S. No.	Clause No.	Tender Clause Details	Details of deviation with justifications

By signing this document we hereby withdraw all the deviations whatsoever taken anywhere in this bid document and comply to all the terms and conditions, technical specifications, scope of work etc. as mentioned in the standard document except those as mentioned above.

Seal of the Bidder:

Signature:

Name:



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ANNEXURE IV

Schedule of Commercial Specifications

(The bidders shall mandatorily fill in this schedule and enclose it with the offer Part I: Technical Bid. In the absence of all these details, the offer may not be acceptable.)

S. No.	Particulars	Remarks
1.	Prices firm or subject to variation (If variable indicate the price variation clause with the ceiling if applicable)	Firm / Variable
1a.	If variable price variation on clause given	Yes / No
1b.	Ceiling	----- %
1c.	Inclusive of GST	Yes / No (If Yes, indicate % rate)
1d.	Inclusive of transit insurance	Yes / No
2.	Delivery	Weeks / months
3.	Guarantee clause acceptable	Yes / No
4.	Terms of payment acceptable	Yes / No
5.	Performance Bank Guarantee acceptable	Yes / No
6.	Liquidated damages clause acceptable	Yes / No
7.	Validity (180 days) (From the date of opening of bid)	Yes / No
8.	Inspection during stage of manufacture	Yes / No
9.	Rebate for increased quantity	Yes / No (If Yes, indicate value)
10.	Change in price for reduced quantity	Yes / No (If Yes, indicate value)
11.	Covered under Small Scale and Ancillary Industrial Undertaking Act 1992	Yes / No (If Yes, indicate, SSI Reg'n No.)

Seal of the Bidder:

Signature:

Name:



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ANNEXURE V

Checklist of all the documents to be submitted with the Bid

Bidder has to mandatorily fill in the checklist mentioned below:

S. No.	Documents attached	Yes / No / Not Applicable
1	EMD of required value	
2	Tender Fee as mentioned in this tender	
3	Signed copy of this tender as an unconditional acceptance	
5	Duly filled schedule of commercial specifications (Annexure IV)	
6	Sheet of commercial/technical deviation if any (Annexure III)	
7	Balance sheet for the last completed three financial years; mandatorily enclosing Profit & loss account statement	
8	Acknowledgement for Testing facilities if available (duly mentioned on bidder letter head)	
9	List of Machine/tools with updated calibration certificates if applicable	
10	Details of order copy (duly mentioned on bidder letter head)	
11	Order copies as a proof of quantity executed	
12	Details of Type Tests if applicable (duly mentioned on bidder letter head)	
13	All the relevant Type test certificates as per relevant IS/IEC (CPRI/ERDA/other certified agency) if applicable	
14	Project/supply Completion certificates	
15	Performance certificates	
16	Client Testimonial/Performance Certificates	
17	Credit rating/solvency certificate	
18	Undertaking regarding non blacklisting (On company letter head)	
19	List of trained/untrained Manpower	

Seal of the Bidder:

Signature:

Name



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ANNEXURE VI

ACCEPTANCE FORM FOR PARTICIPATION IN REVERSE AUCTION EVENT

(To be signed and stamped by the bidder)

In a bid to make our entire procurement process more fair and transparent, TPCODL intends to use the reverse auctions as an integral part of the entire tendering process. All the bidders who are found as technically qualified based on the tender requirements shall be eligible to participate in the reverse auction event.

The following terms and conditions are deemed as accepted by the bidder on participation in the bid event:

1. TPCODL shall provide the user id and password to the authorized representative of the bidder. *(Authorization Letter in lieu of the same shall be submitted along with the signed and stamped Acceptance Form).*
2. TPCODL will make every effort to make the bid process transparent. However, the award decision by TPCODL would be final and binding on the supplier.
3. The bidder agrees to non-disclosure of trade information regarding the purchase, identity of TPCODL, bid process, bid technology, bid documentation and bid details.
4. The bidder is advised to understand the auto bid process to safeguard themselves against any possibility of non-participation in the auction event.
5. In case of bidding through Internet medium, bidders are further advised to ensure availability of the entire infrastructure as required at their end to participate in the auction event. Inability to bid due to telephone line glitch, internet response issues, software or hardware hangs, power failure or any other reason shall not be the responsibility of TPCODL.
6. In case of intranet medium, TPCODL shall provide the infrastructure to bidders. Further, TPCODL has sole discretion to extend or restart the auction event in case of any glitches in infrastructure observed which has restricted the bidders to submit the bids to ensure fair & transparent competitive bidding. In case of an auction event is restarted, the best bid as already available in the system shall become the start price for the new auction.
7. In case the bidder fails to participate in the auction event due any reason whatsoever, it shall be presumed that the bidder has no further discounts to offer and the initial bid as submitted by the bidder as a part of the tender shall be considered as the bidder's final no regret offer. Any offline price bids received from a bidder in lieu of non-participation in the auction event shall be out-rightly rejected by TPCODL.
8. The bidder shall be prepared with competitive price quotes on the day of the bidding event.
9. The prices as quoted by the bidder during the auction event shall be inclusive of all the applicable taxes, duties and levies and shall be FOR at TPCODL site.
10. The prices submitted by a bidder during the auction event shall be binding on the bidder.
11. No requests for time extension of auction event shall be considered by TPCODL.
12. The original price bids of the bidders shall be reduced on pro-rata basis against each line item based on the final all-inclusive prices offered during conclusion of the auction event for arriving at Contract amount.

TECHNICAL SPECIFICATION
FOR
LT XLPE AB CABLE

TECHNICAL SPECIFICATION

(For supply of LT XLPE AB Cables)

Part-1:

1. SCOPE:

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

2. STANDARDS:

Except where modified by this specification, the Aerial Bunched Cable shall be designed, manufactured and tested in accordance with the latest editions of the following standards.

<u>IES/ISO</u>	<u>Indian Standard</u>	<u>Material</u>
IEC: 1089	IS:398/1994	Round wire concentric lay Overhead electrical Stranded Conductors.
	IS:398(Part-4)/1994	All Aluminum Alloy Conductors, Quality Management Systems.
ISO:9000	IS:8130/1984	Conductors for insulated Electric cables.
	IS:10810/1984	Method of Tests for cables.
IEC:502	IS:7098/1998	XLPE Insulated PVC. Sheathed power cables.
	IS:14255/1995	Aerial Bunched Cables for working voltage up to and

including 1100 volts.

The Bidder may propose alternative standards, provided it is demonstrated that they give a degree of quality and performance equivalent to or better than the referenced standards. The purchaser shall adjudge whether to accept or reject any standards.

The Bidder shall furnish a copy of the alternative standard proposed along with his bid. If the alternative standard is in a language other than English, an English translation shall be submitted with the standard.

In case of conflict the order of the precedence shall be (1) IEC or ISO standards, (2) Indian Standards, (3) Other alternative standards. This list is not to be considered exhaustive and reference to a particular standard or recommendation in this specification does not relieve the Contractor of the necessity of providing the goods complying with other relevant standards or recommendation.

3.0 SERVICE CONDITIONS:

The service conditions shall be as follows:

- Maximum altitude above sea level 500m
- Maximum ambient air temperature 50°C
- Maximum daily average ambient air temperature 35°C
- Maximum ambient air temperature 5°C
- Maximum temperature attainable by an object exposed to sun 60°C
- Maximum yearly weighted average ambient temperature 32°C
- Maximum relative humidity 100%
- Average number of thunderstorm days per annum 70
- Average number of rainy days per annum 120

- Average annual rainfall
150cm
- Wind pressure as per IS:5613(Part-I/Sec.I) 1985

Wind Zones IS:5613 Part-I/Sec-I	Light	Medium	Heavy
Terrain Category	100 Kg/m ²	150 Kg/m ²	200 Kg/m ²

Environmentally, the region where the work will take place includes coastal areas, subject to high relative humidity, which can give rise to condensation. Onshore winds will frequently be salt laden. On occasions, the combination of salt and condensation may create pollution conditions for outdoor insulators.

Therefore, outdoor material shall be designed and protected for use in exposed, heavily polluted salty corrosive and humid coastal atmosphere.

4. SYSTEM CONDITIONS:

The materials shall be suitable for installation in supply systems of the following characteristics.

- Frequency 50Hz
- Nominal System Voltage 400/230V
- Maximum System Voltage LV System 440/250 V
- Minimum LV Voltage 370 V
- Power frequency one minute withstand (set & dry) 2KV
- Neutral Earthing arrangement LV System Solidly earthed

Part-2: TECHNICAL

5.0 GENERAL/ TECHNICAL

The design of Aerial Bunched Cable offered shall comprise a compacted, standard, hard drawn H4 grade aluminum phase conductor as applicable under IS-8130 / 84 with dry cured cross linked polyethylene (XLPE) insulation 0.65 to 1.1. KV class, having not less than 3% of carbon black.

The sizes and number of cores required are:

- $3 \times 95 \text{mm}^2 + 1 \times 70 \text{mm}^2 + 1 \times 16 \text{mm}^2$ (catenaries type, will be called $3 \times 95 \text{mm}^2 + 1 \times 70 \text{mm}^2$)
- $3 \times 50 \text{mm}^2 + 1 \times 35 \text{mm}^2 + 1 \times 16 \text{mm}^2$ (catenaries type, will be called $3 \times 50 \text{mm}^2 + 1 \times 35 \text{mm}^2$)
- $3 \times 50 \text{mm}^2 + 1 \times 35 \text{mm}^2$
- $3 \times 35 \text{mm}^2 + 1 \times 25 \text{mm}^2$

The type of Bunched Cables shall be three phase and street lighting insulated bundled. All Aluminum Conductors combined with a neutral and catenaries which shall be of heat treated aluminum magnesium silicon alloy wires containing approximately 0.5% each of magnesium and silicon respectively. Alternatively an insulated neutral of 70mm^2 for $3 \times 95 \text{mm}^2$, 35mm^2 for $3 \times 50 \text{mm}^2$ ABC may be offered with a separate AAAC catenaries. The catenaries must have an ultimate tensile stress of not less than that specified in the table of technical requirements.

6.0 CONDUCTORS:

(a) The phase & street light conductors shall be of multi-stranded aluminum of compacted circular cross section. The aluminum shall comply with IS 8130:1984. The messenger conductor shall be of multi-stranded Aluminum Alloy conforming to IS 398 (Part 4) – 1994. In addition to meeting all requirement of relevant IS the LT XLPE ABCables supplied shall satisfy following general requirements.

FOR PHASE AND STREET LIGHT CONDUCTORS

Sl. No.	Specified Cross Sectional Area (mm ²)	No. of Strands	Minimum Dia Of each strand in mm	Minimum. Over all dia. Of conducting part of the compacted conductor. (mm)	Maxm. D.C Resistance at 20 degree centigrade.(Ohm / Km)	Nominal Insulation thickness (mm)
1	16	7	1.7	5.2	AS PER IS	1.2
2	25	7	2.14	6.42		1.2
3	35	7	2.54	7.6		1.2
4	50	7	3.05	9.15		1.5
5	70	7	3.6	10.8		1.5
6	95	19	2.54	12.7		1.5

FOR MESSANGER CONDUCTORS

Sl. No.	Phase Conductor Size of the LT AB Cable in mm ²	Specified Cros Sectional Area of the Messanger Conductor (mm ²)	No. of Strands	Nominal dia Of each strand	Appx. Over all dia. Of conducting part of the compacted conductor. (mm)	Maxm. D.C Resistance of the messenger at 20 degree centigrade.(Ohm / Km)	Appx. Mass (Kg / Km.) for the messenger
1	16	25	7	2.14	5.2	AS PER IS	65
2	25	25	7	2.14	5.2		65
3	35	25	7	2.14	5.2		65
4	50	35	7	2.54	7.6		95
5	70	50	7	3.05	9.15		136
7	95	70	7	3.6	10.8		191.8

6.0 (b) The bidder must take required precaution to ensure that the average diameter of each strand of conductor shall be ascertained through physical measurement of dimensions of finished cables at ambient temperature during pre-dispatch inspection or / and verification at <DISCOMS> Store by consignee and the value so obtained shall have a tolerance limit with reference to the nominal diameter of each strand of conductor as stated in the tables above.

7.0 TOLERANCES:

The measurement of strand diameter of the finished AB Cable shall not be less 0.03mm for strands up to and including 3.00mm diameter. For strands above that size, measurement of strand diameter shall not be less than 1% of the nominal strand diameter .

For the purpose of checking compliance with the above requirement, the diameter shall be determined by two measurements at right angles taken at the same cross section. The physical measurement of strands shall be conducted after opening the strands of a finished AB Cable offered for inspection.

8.0 SPLICES IN WIRES:

Splices in Wires shall generally comply with requirements of IEC 1089.

The aluminum alloy rods may be spliced by cold pressure but welding before drawing provided the manufacturer can guarantee that the splice can develop 90% of the tensile strength of the un sliced rod. Wires which break during stranding, may be sliced by cold pressure butt-welding provided that:

No two splices in the completed conductor occur within 15m of each other and no two splices in any individual wire are less than 150m apart.

The splice shall be done with high skilled workmanship. The finished splice shall be smooth and at no point shall the cross sectional area be less than that of the un sliced wire.

Splicing of the alloy wires on the stranding machine in order to utilize lengths of wires on reels shall not be permitted.

9.0 STRANDING AND CORE LAY:

The conductor cores shall be stranded and the direction of lay must be as defined in IEC:1089.

10.0 INSULATION:

The insulation shall be of the dry cured cross-linked polyethylene type (XLPE) and shall comply with IEC:502:1994 and Table-1 (Clause-5.1) of IS:14255/1995.

The Aerial Bunched Cables shall be insulated for a voltage class of 0.65/1.1 KV and shall be capable of operating permanently at 1.2KV.

The insulation wall thickness shall be determined in accordance with Table-4 (Clause-7.2 and Clause 7.3) of IS:14255/1995.

The insulating material shall be black and suitable to resist ultra violet radiation, salt laden sprays, chemical pollution, ageing effects, abrasion and mechanical shocks and mechanical and electrical stress at temperature up to 90°C in normal operation and 250°C under short circuit conditions per IEC:502/1994.

The carbon black content in the XLPE insulation shall be 2.5% \pm 0.5%

11.0 PHASE IDENTIFICATION:

The individual insulated conductors within a bundle shall be identified by means of longitudinal projections.

The three phase conductors shall be marked by one, two or three longitudinal projections, indicating the red, yellow and blue phases.

The projections shall have the following dimensions.

- The distance between the tips of two adjacent projections, where there is more than one, shall be between 1.0 and 1.5.
- The width of the projection at the base shall be 1.0mm; and
- The height of the projections shall be 0.5mm.

12.0 INSULATION MARKINGS:

Each individual conductor comprising a bundle shall have the range of non-erasable distinct markings listed below legibly printed on the insulation surface at one meter intervals.

- ISI Mark legibly embossed on the insulation.

- Employer's name or logo.
- Manufacturer's trademark identification for example "UCXLPE50"
- Year of manufacture: last two digits are sufficient:
- Designation of conductor type
- Size: for example "3x50"
- Shape of conductor.
- Rated voltage class: 0.65/1.1KV .
- Back up conductor identification: conductors with one, two and three projections shall be marked R, Y and B respectively. The conductor with no projection shall be marked N and
- The height of the printed lettering shall be not less than 20% of the overall diameter of the conductor

The markings shall be made in the sequence indicated above. Thus if the manufacturer were XY, the aerial bunched cable had been manufactured in 1994, size $3 \times 50 \text{mm}^2 + 1 \times 35 \text{mm}^2 + 1 \times 16 \text{mm}^2$ with conductors of circular cross section and with a bundle of the self supporting type, manufactured to a recognized international standard then the core with two projections would be marked as follows:

XY-04-NFA4X50+1X16-r-m-0.65/1.1KV-Y

Where, N is the international standard, F indicates overhead cable, A is aluminum alloy conductor and 2X refers to XLPE insulation, 'r' means round core, 'm' self-supporting and 'y' the phase identification.

13.0 TWIST:

The direction of lay of the conductors comprising the bundle shall be left-handed and the lay ration shall comply with IEC:1089.

With a bare catenaries configuration the insulated phase cables together with the street lighting cores shall be twisted round the neutral catenaries to form the ABC. This cable bundle is then strung directly

onto the distribution poles supported by the catenaries with standard approved hardware.

14.0 CABLE DRUM LENGTH:

The cable shall be supplied in 250m or 500m or 1000m Drum Lengths as the case may be for different sizes of LT XLPE AB Cable.

15.0 TESTS:

15.1 General

Where not specified, all tests and test results shall conform to the requirements of IEC 502/1994 or IS 7098 (Part-I) 1998, IS 10810/1984, IS: 398(Part-IV) and IS:14255/1955.

Unless expressly stated otherwise, the ambient temperature for routine tests as well as voltage tests shall be $20 \pm 15^{\circ}\text{C}$ and for all other tests be $20 \pm 15^{\circ}\text{C}$.

The frequency of the alternating test voltage shall be 49 Hz to 51 Hz. The voltage wave form should be sinusoidal.

15.2 Type Tests:

Bidder shall furnish the type test report of **LT XLPE AB** cable for the tests as mentioned below and as per reference standards. Complete set of Type Tests shall be conducted at certified test laboratories, which are CPRI / ERDA only. **Type test should have been conducted in certified test laboratories during the period not exceeding 5 years from the date of Permission.**

1. Tests on phase/street light Conductor
 - a. Tensile Test
 - b. Wrapping Test.
 - c. Resistance Test
2. Tests on Messenger Conductor
 - a. Breaking Load Test

- b. Elongation Test
- c. Resistance Test
- 3. Physical Test For XLPE Insulation
 - a. Tensile strength and elongation at break
 - b. Ageing in air oven
 - c. Hot test
 - d. Shrinkage Test
 - e. Water absorption (gravimetric)
 - f. Carbon black
 - Content
 - Dispersion
- 4. Insulation resistance (Volume resistivity) test
- 5. Test for thickness insulation
- 6. High Voltage Test

15.3 Routine Tests:

The following shall constitute routine tests:

- a) Conductor resistance test.
- b) High voltage test, and
- c) Resistance test for armour (for mine cable only).

15.4 Acceptance Tests:

The following shall constitute acceptance tests:

- a) Annealing test (for copper),
- b) Tensile test (for aluminium),
- c) Wrapping test (for aluminium).
- d) Conductor resistance test,
- e) Test for thickness of insulation and sheath,
- f) Hot set test for insulation.
- g) Tensile Strength and elongation at break test for insulation and sheath.
- h) High voltage test, and
- i) Insulation resistance (volume resistivity) test.

15.5 Rejection and Retests

Should any one of the test pieces first selected fail to pass the tests, two further samples from the same batch shall be selected for testing, one of which shall be from the length from which the original test sample was taken unless the length has been withdrawn by the supplier.

Should the test pieces from both of these additional samples satisfy the requirements of the tests, the batch represented by these samples shall be deemed to comply with the standard. Should the test pieces from either of the two additional samples fail, the batch represented shall be deemed to have failed.

16.0 COMPLIANCE WITH SPECIFICATION:

The Aerial Bunched Cable shall comply in all respects with the requirements of this specification. However, any minor departure from the provisions of the specification shall be disclosed at the time of bidding in the Non-compliance Schedule of this document.

17.0 COMPLIANCE WITH REGULATIONS:

All the cables shall comply in all respects with the Indian Regulations and Acts in force. The cables and connections shall be designed and arranged to minimize the risk of fire and any damage, which might be caused in the event of fire.

18.0 Non-conforming Product

The TPCODL shall retain responsibility for decisions regarding acceptance, modification or rejection of non-conforming items.

19.0 Inspection and Testing

The cables shall successfully pass all the type tests, routine tests & acceptance tests referred to in the section on tests and those listed in the most recent edition of the standards given in the specification.

The TPCODL reserves the right to reject any of the cables if the test results do not comply with the values specified or with the date given in the Technical data schedule.

Type tests shall be carried out at an independent testing laboratory or at the manufacturer's works if such facilities are available and to be witnessed by the purchaser. The contractor, at no extra cost at the manufacturer's work shall carry out routine and Acceptance tests in presence of the Purchaser's representatives.

Type Test Certificates for the tests conducted earlier shall be submitted with the bid for evaluation. The requirements of additional type tests will be at the discretion of the TPCODL

The TPCODL may witness routine and type tests. In order to facilitate this, the contractor shall give the TPCODL of 15days notice that the material is ready for inspection & testing. The supplier shall extend all assistance to the representative of the Purchaser during his inspection & testing of samples at his works. The materials shall be dispatched only after approval of such Test Reports and issue of Despatch clearance by the Purchaser. However the Purchaser reserves the right to retest the materials after delivery at any National / Accrediated Testing Laboratory in case of any disputes regarding size & quality of supplied materials at a later date during guarantee period. The cost of such retesting shall be borne by the supplier.

All costs in connection with the testing, including any necessary retesting shall be borne by the contractor, who shall provide the TPCODL

with all the test shall have the right to select the samples for test and shall also have the right to ensure that the testing apparatus is correct. Measuring apparatus for routine tests shall be calibrated at the expense of the contractor at an approved laboratory and shall be approved by the TPCODL before testing.

The Contractor shall be responsible for the proper testing of the materials supplied by sub-contractors to the same extent as if the materials were completed or supplied by the contractor.

Any cost incurred by the TPCODL in connection with inspection or retesting as a result of failure of the equipment under test or damaged during transport or off loading shall be to the account of the contractor.

The Contractor shall submit to the TPCODL three signed copies of the test Certificates, giving the results of the tests as required. No materials shall be dispatched until the TPCODL has received the test certificate and the contractor has been informed that they are acceptable.

The test certificate must show the actual values obtained from the tests, in the units used in this specification, and must merely confirm that the requirements have been met.

In the case of components for which specific type tests or routine tests are not given in this specification, the Contractor shall include a list of the tests normally required for these components. All materials used in the Contract shall withstand and shall be certified to have satisfactorily passed such tests.

No inspection or lack of inspection or passing by the <Project Head>'s representative of equipment or materials whether supplied by the Contractor or sub-contractor, shall relieve the contractor from his liability to complete the contract works in accordance with contract or exonerate him from any of his guarantees.

20.0 GUARANTEE:

The contractor shall guarantee the following:

- Quality and strength of materials used.
- Satisfactory operation during the guarantee period of 24 months from the date of commissioning or 30 months from the date of receipt of the cables at TPCODL Stores whichever is earlier.
- Performance figures as supplied by the bidder in the technical data sheet.

21.0 PACKING AND SHIPPING:

The cable shall be wound on strong drums or reels capable of withstanding all normal transportation and handling.

Each length of cable shall be durably sealed before shipment to prevent ingress of moisture. The drums reels or coils shall be lagged or covered with suitable material to provide physical protection for the cable during transit or during storage and handling operations.

In the case of steel drums adequate precautions shall be taken to prevent damage being caused by direct contact between the cable sheath and the steel. These precautions shall be subject to the approval of the <Project Head>.

If wooden drums are used then the wood shall be treated to prevent deterioration from attack by termites and fungi.

Each drum or reel shall carry or be marked with following information:

- Individual serial name
- Employer's name
- Destination
- Contact Number
- Manufacturer's name

- Year of manufacture
- Cable size and type
- Length of conductor (meters)
- Net and Gross mass of conductor (Kg)
- All necessary slinging and stacking instructions
- Destination
- Contractor's name
- Name and address of contractor's agent in Orissa
- Country of origin

The direction of rolling as indicated by an arrow shall be marked on a flange.

22.0 STORAGE:

The site selected for the storage of cable drums shall be well drained and preferably have a concrete/ firm surface which will prevent the drums sinking into the ground or being subjected to excess water thus causing flange rot.

All drums shall stand on battens, in the upright position and in such a manner to allow sufficient space between them for adequate air circulation. During storage the drums shall be rotated 90° every three months. In no instances shall be the drums be stored "flat" on their flanges or one on top of each other.

23.0 SHIPPING:

The Contractor shall be responsible for the shipping of all cables, drums and reels supplied from abroad to the ports of entry and for the transport of all goods to various specified destinations including customs clearance, offloading, warehousing and insurance.

The Contractor shall inform himself fully as to all relevant transport facilities and requirements and loading gauges and ensure that the equipment as packed for transport shall conform to these limitations. The contractor shall also be responsible for verifying the access facilities specified.

The contractor shall be responsible for transportation of all the loads associated with the contract and shall take all reasonable steps to prevent damage of any highway or bridges by his vehicles by selecting routes, choosing proper vehicles for use and restricting and distributing loads to avoid the risk of damage. The Contractor shall immediately report to the TPCODL any claims made against the contractor arising out of alleged damage to a highway or bridge.

All items of equipments shall be securely clamped against movement to ensure safe transit from the manufacturer's facilities to the specified destinations.

24.0 HAZARDOUS SUBSTANCES:

The Contractor shall submit safety data sheets for all hazardous substance used with the equipment. The contractor shall give an assurance that there are no other substances classified as hazardous in the equipment supplied. He shall also take responsibility for the disposal of such hazardous substances, that may be found for any injuries resulting from those substance.

25.0 SUBMITTALS:

The following shall be required in duplicate along with the bid:

- Completed technical data sheets;
- Descriptive literature giving full technical details of equipment offered.
- Outline dimension drawing for each type of conductor, for each bundle showing the conductor strand, composition and the bundle twist;

- Type test certificates, where available, and sample routine test reports;
- Detailed reference list of customers already using equipment offered during the last five years with particular emphasis on units of similar design and rating;
- Performance reports from the customers for the supplied LT XLPE AB Cables.
- Details of manufacturer's quality assurance standards and programme and ISO 9000 series or equivalent national certificates;
- Deviations from this specification to be submitted as per Non-Compliance. Only deviations approved in writing before award of contract shall be accepted;
- List of recommended spare parts for five years of operation with prices and spare parts catalogue with price list for future requirements.
- Any other documents to establish qualifying & credibility requirements as specified in this Tender Document.

26.0 PERMANENT EMBOSSING :

Embossing on phase insulation of the cable: manufacturer name
 1100 V, size of cable , ISI, month & year of manufacturing, Property of
 TPCODL, PO number & date.

27.0 Marking on Drum

The cable shall carry the following information either stenciled on the drum or contained in a label attached to it:

- a) Reference to the Standards.
- b) Manufacturer's name.
- c) Type of cable.
- d) Voltage grade.

- e) Number of cores.
- f) Nominal cross-section area of the conductor.
- g) Length of the cable on the drum.
- h) Length of the cable per m.
- i) Marking of PO
- j) Direction of rotation of the drum.
- k) Gross mass.
- l) Country of manufacture.
- m) Year of manufacture.
- n) ISI Certification mark.

GUARANTEED TECHNICAL PARTICULARS FOR LT XLPE AB CABLES.

Sl No	Description	3X95 + 1X70 + 1X16mm ²	3X 50 + 1X35 + 1X16mm ²	3X 50 + 1X35mm ²	3X35 + 1X25 mm ²
		Requirement	Requirement	Requirement	Requirement
1	Ref. ISS / IEC followed	IS 14255/95, IS 398 Part IV	IS 14255/95, IS 398 Part IV	IS 14255/95, IS 398 Part IV	IS 14255/95, IS 398 Part IV
2	Phase Conductor material/ Insulation type	H2 / H4 E.C grade aluminium as per IS 8130/84 / XLPE insulation (IS 14255/95)	H2 / H4 E.C grade aluminium as per IS 8130/84 / XLPE insulation (IS 14255/95)	H2 / H4 E.C grade aluminium as per IS 8130/84 / XLPE insulation (IS 14255/95)	H2 / H4 E.C grade aluminium as per IS 8130/84 / XLPE insulation (IS 14255/95)
3	Material of Neutral Catenary	Aluminium alloy as per IS 398 Pt - IV	Aluminium alloy as per IS 398 Pt - IV	Aluminium alloy as per IS 398 Pt - IV	Aluminium alloy as per IS 398 Pt - IV
4	Voltage Class	0.65/1.1 KV	0.65/1.1 KV	0.65/1.1 KV	0.65/1.1 KV
	No. of Strands of Phase Conductor	19	7	7	7
5	No. of strands/ Average /Minimum Strand Dia. In mm. (Finished Phase conductor.)	19/2.54	7/3.05	7/3.05	7/2.54
6	Approximate Overall Dia. Of compacted phase conductor after removal of insulation.(in mm.)	12.7	9.15	9.15	7.6
6(a)	Minimum specific mass for conducting part of each phase in Kg/ Km	256.8	135.2	135.2	94.6
7	No. Of Strands/ Average Strand Dia. In mm. (Neutral Catenary.)	7 / 3.6	7/2.54	7/2.54	7/2.14
8	Minimum Overall Dia. Of compacted Bare Neutral Catenary .(in mm.)	10.8	7.6	7.6	6.5
8(a)	Minimum specific mass for Bare Neutral Catenary in Kg/Km	189	94.6	94.6	67.6
9	No. Of Strands/ Average strand dia. / Nomunal cross sectional area of conducting part In No/ mm ² . (St. Light Conductor)	7 / 1.75 / 16mm ²	7 / 1.75 / 16mm ²	N.A	N.A
9(a)	Minimum specific mass for Conducting part of the Street Light Conductor in Kg/Km	43.2	43.2	43.2	N.A
			Contd. Page-2		

Sl No	Description	3X95 + 1X70 + 1X16mm ²	3X 50 + 1X35 + 1X16mm ²	3X 50 + 1X35mm ²	3X 35 + 1X25mm ²
		Requirement	Requirement	Requirement	Requirement
10	Minimum average thickness of insulation of phase Cond. (mm)	1.5	1.5	1.5	1.5
11	Minimum thickness of insulation of Phase Cond. (mm)	1.25	1.25	1.25	0.98
12	Minimum thickness of insulation at any point in street light conductor (mm)	0.98	0.98	0.98	N.A
13	Maximum DC resistance of Phase conductor at 20 °C ohm/ KM	0.32	0.64	0.64	0.87
14	Maximum DC resistance of street light conductor Ω/ Km	1.91	1.91	N.A	N.A
15	Maximum DC resistance of neutral cond. Ω/ Km	0.492	0.986	0.986	1.38
16	Ultimate tensile strength of neutral conductor (KN)	19.7	9.8	9.8	7
17	Maximum temperature (Continuous)	90°C for phase and 75 °C for neutral	90°C for phase and 75 °C for neutral	90°C for phase and 75 °C for neutral	90°C for phase and 75 °C for neutral
18	Embossing on insulation at each one meter interval	Distinct Non-erasable ISI Mark, <DISCOMS>, Name of the manufacturer, Size of cable, voltage Grade along with sequential marking of length.	Distinct Non-erasable ISI Mark, <DISCOMS>, Name of the manufacturer, Size of cable, voltage Grade along with sequential marking of length.	Distinct Non-erasable ISI Mark, <DISCOMS>, Name of the manufacturer, Size of cable, voltage Grade along with sequential marking of length.	Distinct Non-erasable ISI Mark, <DISCOMS>, Name of the manufacturer, Size of cable, voltage Grade along with sequential marking of length.
19	Cable drum length	250 / 500 / 1000m	250 / 500 / 1000m	250 / 500 / 1000m	250 / 500 / 1000m
20	Volume Resistivity of insulation at 27°C	1X10 ¹³ Ω - cm min.	1X10 ¹³ Ω - cm min.	1X10 ¹³ Ω - cm min.	1X10 ¹³ Ω - cm min.
21	Volume Resistivity of insulation at 70°C	1X10 ¹¹ Ω - cm min.	1X10 ¹¹ Ω - cm min.	1X10 ¹¹ Ω - cm min.	1X10 ¹¹ Ω - cm min.
22	Short Circuit current rating of conductor for 1 sec	8.93KA	4.7KA	4.7KA	3.29KA

N.B : 1) For values not available in relevant ISS, values indicated in our GTP / Tender Specification shall be valid.

2) In case of discrepancies between values of ISS & GTP, better will prevail.

3) Average diameters of strands of each cable shall be ascertained by physical measurement after opening the strands of each phase of a finished AB Cable offered for inspection.

