

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

Open Tender Notification**For****Rate Contract for Supply of Lightning Arresters of various ratings for 1 Year.****Tender Enquiry No.:****TPCODL / CCG / 23-24 / 1000001764****Due Date for Bid Submission: 21/02/2025 [17:00 Hrs.]****Centralized Contracts Group****Tata Power Odisha DISCOMs****1st Floor, Anuj Building, Plot No. 29, Satya Nagar,
Bhubaneswar – 751007.****TPCODL TPNODL TPSODL TPWODL****(TATA Power and Odisha Government Joint Venture)**

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

Contents

1.0	Event Information.....	4
1.1	Scope of work	4
1.2	Availability of Tender Documents	5
1.3	Calendar of Events.....	7
2.0	Pre- Qualification Criteria.....	8
3.0	Evaluation Criteria	9
3.1	Price Basis	10
4.0	Contact Information	10
5.0	Submission of Bid Documents.....	11
5.1	Bid Submission.....	11
5.1.1	First Part : EMD	11
5.1.2	Second Part : Techno-Commercial Bid	12
5.1.3	Third Part : Price Bid	13
5.2	Signing of Bid Documents.....	14
5.3	Mandatory documents required along with the Bid	14
5.4	Deviation from Tender	15
6.0	Bid Related Details	15
6.1	Bid Prices.....	15
6.2	Bid Currencies	15
6.3	Period of Validity of Bids.....	15
6.4	Alternative Bids	15
6.5	Modifications and Withdrawal of Bids	16
7.0	Bid Opening & Evaluation	16
7.1	Bid Confidentiality	16
7.2	Technical Bid Opening	16
7.2.1	Preliminary Examination of Bids/Responsiveness	16
7.2.2	Techno Commercial Clarifications.....	17
7.2.3	Right of Acceptance/Rejection.....	17
7.3	Price Bid Opening	18
8.0	Market Integrity.....	18
9.0	Supplier Confidentiality.....	18
10.0	Reverse Auctions	18
11.0	Award Decision	19

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

12.0	Order of Preference / Contradiction	20
13.0	Post Award Contract Administration	20
13.1	Special Conditions of Contract	20
13.2	Drawing Submission and Approval	21
13.3	Payment Terms	21
14.0	Climate Change	21
15.0	Ethics	22
16.0	Specification and standards	22
17.0	General Condition of Contract	22
18.0	Safety Policy and Safety Terms & Conditions	22
19.0	Tata Code of Conduct	22
20.0	Environment & Sustainability Policy	23
ANNEXURE-I	: Price Schedule	23
ANNEXURE-II	: Technical Specification	24
ANNEXURE III	: Schedule of Deviations	25
ANNEXURE IV	: Schedule of Commercial Specifications	26
ANNEXURE V	: Checklist of all the documents to be submitted with the Bid	27
ANNEXURE VI	: Acceptance form for Participation in Reverse Auction Event	28
ANNEXURE VII	: General Conditions of Contract	30
ANNEXURE VIII	: Safety Policy and Safety Terms & Conditions	31
ANNEXURE IX	: Tata Code of Conduct	32
ANNEXURE X	: Environment & Sustainability Policy	33
ANNEXURE XI	: Authorization Letter Format	34
ANNEXURE XII	: Instructions to Bidder for participation in ARIBA System	36

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

Centralized Contracts Group (CCG):

The Centralized Contracts Group (CCG) is a shared service group of four Tata Power Odisha Distribution Companies (DISCOMs) - TPCODL, TPNODL, TPSODL & TPWODL. CCG is responsible for carrying out tendering activities to cater to the purchasing needs of all four DISCOMs.

1.0 Event Information

Bids are invited in Two-part Bid system from interested Bidders to establish a Rate Contract as below:

Tender Enquiry No.	Work Description	EMD (Rs.) *	Tender Fee inclusive of GST (Rs.) **	Last Date and Time for payment of Tender Fee
TPCODL / CCG / 23-24 / 1000001764	Rate Contract for Supply of Lightning Arresters of various ratings for 1 Year.	500,000/-	5,000/-	10/02/2025 17:00 Hrs.

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

** Tender fee – Rs. 1,000/- including GST. for MSMEs registered in the State of Odisha (Ref. Odisha MSME Preferential Norms for details on Odisha MSME support)

1.1 Scope of work

Bids are invited from interested Bidders to award Rate Contract (RC)/Purchase Order (PO) for Procurement of Lightning Arrester (LA) of various ratings as per details mentioned below:

Sl. No.	Material Description	UOM	TPCODL	TPNODL	TPSODL	TPWODL	Total Requirement
1	Lightning Arrester 30 KV, 10 KA Station Class, Class 2.	EA	823	300	615	600	2,338
2	Lightning Arrester 30 KV, 10 KA Station Class, Class 3 with Surge Counter	EA	255	-	108	-	363
3	Lightning Arrester 12 KV, 10 KA Station Class, Class 2	EA	9043	10000	604	5760	25,407
4	Lightning Arrester 9 KV, 10 KA DH Class	EA	-	-	27,413	-	27,413

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

Odisha MSME Preferential Norms

- **Tender Fees Relaxation:** To participate in the tender, MSMEs registered in the State of Odisha shall pay Rs.1,000/- including GST towards cost of tender paper.
- **Earnest Money Deposit (EMD) Exemption:** 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.
- **Qualification Requirement Relaxation:** Qualification Requirement of Financial Turnover for MSME registered in the State of Odisha shall be reduced to 20% of the existing criteria.
- **Past-Experience Relaxation:** 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.
- **Reservation for MSME:** TP DISCOM shall 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.
- **Performance Bank Guarantee (PBG) Relaxation:** Performance Bank Guarantee for MSME registered in the State of Odisha shall be 25% of the value normally prescribed.

1.2 Availability of Tender Documents

The bidder can get primary information about the tender from the Newspaper advertisement. Tender documents can be downloaded from TP Odisha DISCOM's websites:

www.tpcentralodisha.com,www.tpnodl.com,www.tpwesternodisha.com,www.tpsouthernodisha.com

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**

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

To receive online bidding link, eligible and Interested bidder shall send an email to PackAge Owner (Ref. Clause 4.0 for details) attaching duly signed and stamped letter on Bidder's letterhead, with following details, expressing their intent to bid against above tender in following format:

Sr 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. of authorized person	
vi)	E-mail Id to which online ARIBA link to be sent	
vii)	Tender Fee details (Amount / NEFT-RTGS UTR No / Date) (Ref sec 1.2)	
viii)	GST No. of bidder	
ix)	MSME Certificate (if applicable)	
x)	Postal address of bidder for return of EMD BG	

E-mail must be sent to saurabh.kumar@tpwesternodisha.com with copy to umesh.bhardwaj7@tpcentralodisha.com on or before last date and time for payment of tender participation fee (Clause 1.3).

On receipt of the above letter, after due verification, ARIBA link for participation in the tender will be sent to bidder's e-mail address from ARIBA system. Bids shall be submitted only through the online e-procurement platform, ARIBA. Any other form of bid submission shall not be accepted. **(Ref. Annexure XII for detailed instructions on bid submission in ARIBA)**

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

1.3 Calendar of Events

(a)	Date of sale/ availability of tender documents from Website	31-01-2025
(b)	Date by which Interested and Eligible Bidder to pay Tender Fee and confirm participation as mentioned in "Procedure to Participate in Tender"	10-02-2025; 17:00 Hrs.
(c)	Date & Time of Pre-Bid Meeting (If any)	It shall be intimated later, if required.
(d)	Due Date of receipt of pre-bid queries by e-mail if any	12-02-2025; 15:00 Hrs.
(e)	Due Date of Posting Consolidated replies to all the pre-bid queries as received	14-02-2025
(f)	Due date and time of receipt of Bids	21-02-2025; 17:00 Hrs.
(g)	Date & Time of opening technical bids	Shall be intimated later
(h)	Date & Time of opening of Price of qualified bids	Shall be notified to the successful bidders later.

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 TP Discom'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.

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

2.0 Pre- Qualification Criteria

Sr No	Parameter	Owner Requirement	Documents to be submitted by Bidder
A	Technical Pre-Qualification Requirements		
1	Technical Experience / Performance	The bidder should have their own manufacturing facility to Lightning Arresters of same or higher rating and should have in-house facilities for routine & acceptance tests as per technical specifications. Bidder must submit a self-undertaking in this regard.	Factory License Certificate / MoA mentioning nature of Business /Self-undertaking letter.
		One Performance Certificate by any Discoms / PSUs / Reputed companies is to be submitted. The work against these issued certificates should be completed in the last 07 years from the date of bid submission. In case the bidder has got previous association with Tata Power / TPCODL / TPNODL / TPWODL for supply of similar product, performance feedback of the same will be solely considered irrespective of the performance certificate issued by bidder's other customers	The performance certificate and contact details of the client need to be submitted
3	In-house Testing Facility	The bidder should have had an in-house Testing Facility.	Self-undertaking to be submitted in this regard.
B	Financial Pre-Qualification Requirements		
1	Commercial Capability	The bidder should have an Average Annual Turnover of at least Rs. 15 Cr. for last 3 Financial Year (FY) out of FY 21-22, FY 22-23 & FY 23-24.	Copy of audited Balance sheet with UDIN no. to be submitted in

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

		Qualification Requirement of Financial Turnover for MSME registered in the State of Odisha shall be reduced to 20% of the existing criteria.	this regard.
2	Experience	Bidder should have Experience of having successfully executed supply orders for at least 50% of tender quantity (cumulative) or single order of 25% of tender quantity or 2 orders of 10% each of same or higher rating during last 5 years. Copy of work order / completion certificate to be submitted in this regard. Last day of previous month prior to date of bid submission shall be counted for purpose of years calculation.	Order copy with corresponding invoices to be submitted in this regard.
3	Statutory Compliances	The prospective Bidder(s) should be have following certificates: a. Valid GST Registration Certificate. b. Valid PAN No.	PAN & GST Certificates to be submitted.

3.0 Evaluation Criteria

- The bids will be evaluated technically and on qualifying criteria of tender terms and conditions.
- The bids will be evaluated commercially on an individual line-item basis for all-inclusive lowest cost as calculated in Schedule of Items [Annexure I]).
- Bidder must mandatorily quote against each item of Schedule of Items [Annexure I]. Failing to do so, CCG may reject the bids.

NOTE: In case a new bidder is not registered with DISCOM, factory inspection and evaluation shall be carried out to ascertain bidder's manufacturing capability and quality procedures. However, DISCOM 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 DISCOM shall be final and binding on the bidder in this regard.

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

3.1 Price Basis

-Price will be fixed and firm during the contractual period.

4.0 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 website by the stipulated timelines as detailed in calendar of events.

Communication Details:Package Owner:

Name: Saurabh Kumar

Contact No.: 7004418500

E-Mail ID: saurabh.kumar@tpwesternodisha.com

Escalation Level I:

Name: Umesh Bhardwaj, HoD- CCG

Contact No.: 9871552975

E-Mail ID: umesh.bhardwaj7@tpcentralodisha.com

Escalation Level II:

Name: Mr. Vipin Chauhan, Head -CCG

Contact No.: 9717393121

E-Mail ID: vipin.chauhan@tpnodl.com

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764**5.0 Submission of Bid Documents****5.1 Bid Submission:**

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

All future correspondence regarding the tender, bid submission, bid submission date extension, Pre-bid query etc. shall be through TPCODL E-Tender system (Ariba).

Bids shall be submitted in 3 (Three) parts:

5.1.1 First Part: EMD

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 the General Condition of Contract, failing which it shall not be accepted by CCG and the bid as submitted shall be liable for rejection. A separate **non-refundable tender fee** of the 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 the form of Bank Guarantee and to be delivered to the following address. However, in view of the present situation if Bidder is finding it difficult to 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.

-In such case, Tender Fee and EMD should be strictly 2 separate transactions else bids shall be rejected.

-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 to the following address in Envelope clearly indicating Tender Reference/ Enquiry Number, Name of Tender and Bidder Name.

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

“EMD (Earnest Money Deposit)”**“Rate Contract for the supply of Lightning Arresters of various ratings”****Chief –Centralized Contracts Group****TP Central Odisha Distribution Limited****1st Floor, Anuj Building, Plot No. 29, Satya Nagar, Bhubaneswar- 751007**

Kind Attn.: Package Owner Name, Mob No.: 7004418500.

**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.*

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

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

- Bank Guarantee 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 the due date of submission.
- Ref. GCC for Format of Bank Guarantee*

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

- i. accept the Purchase Order, or
- ii. furnish the required Performance Security Bank Guarantee

5.1.2 Second Part: Techno-Commercial Bid.

Techno-Commercial bid shall contain the following documents. Absence of any of these may attract bid rejection:

1. Index Stating Document name & Page No./Document No. in bid. As illustrated below:

Sr No	Document	Page No/Document No
1	Type test Reports	3
2	Schedule of Deviations	8
3	...	...

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

2. Requisite Documents for compliance with Qualification Criteria mentioned in Clause 2.0 and clause no. 1.5.
3. Type Test Certificate* of same or higher rating.
4. Acceptance of Specification as per Annexure II.
5. Duly signed and stamped 'Schedule of Deviations' as per Annexure III on bidder's letter head.
6. Duly signed and stamped 'Schedule of Commercial Specifications' as per Annexure IV on bidder's letter head.
7. Duly filled in Annexure V and VI.
8. Proper authorization letter / Power of Attorney to sign the tender on behalf of bidder.
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')

The type tests specified in technical specifications should have been carried out **within five years (unless otherwise explicitly stated) 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 DISCOM.*

The technical bid shall be submitted through CCG / TPCODL E-tender System (Ariba) only. Hard Copy of Technical Bids need not be submitted unless specifically asked for.

5.1.3 Third Part: Price Bid

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. The price bids containing any deviations/conditions shall be liable to be rejected.

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

The Bid prepared by the Bidder, and all correspondence and documents relating to the Bid exchanged by the Bidder and CCG, 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.

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

5.2 Signing of Bid Documents

The bid must contain the name, residence, and place of business of the person or person making the bid and must be signed and sealed by the Bidder with his usual signature. The names of all the people 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.

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.

5.3 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.
- 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 the absence of any of the above documents (as applicable), the bid submitted by a bidder shall be liable for rejection.

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCDDL / CCG / 24-25 / 1000001764**5.4 Deviation from Tender**

Normally, 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.

6.0 Bid Related Details**6.1 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 DISCOMs' sites. The all-inclusive prices offered shall be inclusive of all costs –Insurance, Transport, duties, taxes, levies paid or payable etc. during the execution of the supply work. Applicable GST to be specified clearly.

The quantity break-up shown elsewhere other than Price Schedule may 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.

6.2 Bid Currencies

Prices shall be quoted in Indian Rupees Only unless otherwise stated explicitly.

6.3 Period of Validity of Bids

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

Notwithstanding clause above, CCG 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.

6.4 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 terms and conditions, which are not substantially responsive to the requirements of the bidding documents.

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Nothern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764**6.5 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.

7.0 Bid Opening & Evaluation**7.1 Bid Confidentiality**

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 people not officially concerned with such process. Any effort by a Bidder to influence CCG in processing of Bids or award decisions may result in rejection of the Bidder's Bid.

7.2 Technical Bid Opening

Technical Bids shall be opened online as per schedule mentioned in section 1.3, in CCG Office (1st Floor Conference room, Plot -29, Anuj Building Satya Nagar, Bhubaneshwar). Bidders having authorization letter (format Annexed- XI) for attending bid opening from competent authority of respective Organizations, who may choose to be present physically / online at the time of tender opening. If the office is closed on the specified date of opening of the bids, the opening shall be done on the next working day at the same time. Technical bid must not contain any cost information whatsoever, else bids shall be liable to be rejected.

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.

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

7.2.1 Preliminary Examination of Bids/Responsiveness

CCG 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 in order & format as detailed elsewhere in this document. CCG may ask for submission of original documents 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

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

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, CCG 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. CCG reserves the right to reject non-responsive bids.

7.2.2 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, CCG/Engineering may at its discretion, ask the Bidder for a clarification on its Bid for any deviations with respect to specifications and attempt will be made to bring all bids on a common footing. Any such clarification as sought shall have to be responded to by the bidder within two working days, post which the bids shall be liable to be rejected. 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.

7.2.3 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 with Qualification Requirements mentioned in Clause 2.0 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.

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

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Nothern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764**7.3 Price Bid Opening**

Price Bids will be opened online for all technically qualified bidders on the dates as shall be informed to qualified bidders in CCG Office (First Floor Conference room, Plot -29, Anuj Building Satya Nagar, and Bhubaneshwar). Bidders having authorization letter (format annexed) for attending bid opening from competent authority of respective Organizations shall be allowed to be present physically/online at the time of bid opening. If the office is closed on the specified date of opening of the bids, the opening shall be done on the next working day at the same time. 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 DISCOM without any further correspondence in this regard.

8.0 Market 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, CCG 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

9.0 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 CCG. This includes all bidding information submitted to the DISCOM. All tender documents remain the property of DISCOM, and all suppliers are required to return these documents to DISCOM upon request. Suppliers who do not honor these confidentiality provisions will be excluded from participating in future bidding events.

10.0 Reverse Auctions

CCG reserves the right to conduct the reverse auction 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

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

mandatorily submit a duly signed copy of the Acceptance Form attached as Annexure VI as a token of acceptance for the same.

Bidders shall be allowed to participate in Reverse auction as per following criteria hence bidders are advised to quote their most competitive rates while submitting the bids to avoid disqualification from participation in Reverse Auction.

Reverse Auction shall be as per the below approach:

No. of bidders allowed to participate in RA process shall be: Total No. of bidders on whom tender would be split PLUS 2 more bidders.

Illustrative example: Total no. of qualified bidders is 10 & tender needs to split amongst 4 bidders.

PLUS 2 means ($04 + 02 = 06$) means lowest 6 bidders i.e., L1 to L6 bidders would be allowed in the RA process. Balance, H1 to H4 bidders would not be allowed in the RA process.

In case – Total no of qualified bidders is equal to or less than the **PLUS 2** number, all qualified bidders shall be allowed in the RA process.

Illustrative example: Total no. of qualified bidders is 4 & tender needs to split amongst 2 bidders. PLUS 2 means ($02 + 02 = 04$), so all 4 qualified bidders would be allowed in the RA process.

Illustrative example: Total no. of qualified bidders is 3 & if the tender is to be awarded to a single party only, PLUS 2 means ($01 + 02 = 03$), so all 3 qualified bidders would be allowed in the RA process.

11.0 Award Decision

DISCOM 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 in Clause 3.0. 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 7.2.1. The decision to place purchase order/LOI solely depends on CCG on bidder qualification & cost competitiveness across multiple lots, quality, delivery, and bidder's capacity, in addition to other factors that CCG may deem relevant.

CCG reserves the right to split the order quantity wise/Line item wise among two number of Bidders. All bidders are advised to quote their most competitive rates against each line item. However, CCG reserves the right to adjust the splitting as per bidders' participation/qualification/any other unforeseen condition in tender.

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

DISCOM reserves the right to award the contract to one or more number of bidders to meet the delivery requirement or nullify award decision without assigning any reason thereof.

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

12.0 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 – Price Bid (Annexure I)
2. Technical Specifications (Annexure II)
3. Special Conditions of Contract (Clause 13.1)
4. Submission of Bid Documents (Clause 5.0)
5. Acceptance Form for Participation in Reverse Auction (Annexure VI)
6. General Conditions of Contract (Annexure VII)

13.0 Post Award Contract Administration**13.1 Special Conditions of Contract**

- i. The Rate Contract shall be valid for a period of 12 months from the placement of the Contract. Release Order (RO) shall be placed as per the requirement of respective TP Odisha Discom. Rates shall remain firm throughout the RC period.
- ii. Prices shall be inclusive of Transit Insurance/ Packing & Forwarding charges and shall be inclusive of unloading & stacking at Discom site / store locations.
- iii. BA shall submit applicable PBG as per GCC within 15 days of issuance of RC. PBG applicable shall be 5% of contract value. PBG submitted shall be released after completion of applicable guarantee period plus one month. Performance Bank Guarantee for MSME registered in the State of Odisha shall be 25% of the value normally prescribed.
- iv. The guarantee period shall be 18 months from the date of commissioning or 24 months from the date of supply, whichever is earlier.
- v. BA shall submit GTP/ Drawing within 15 days from issuance of rate contract. If drawings are not approved by competent authorities due to document shortfall or any changes are suggested, vendor must resubmit new drawing/GTP/documents within 05 days of such intimation. BA shall offer prototype inspection within 15 days of issuance of approved

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPC^{ODL} / CCG / 24-25 / 1000001764

Drawings/GTP (if applicable). In case BA does not get necessary approvals for issuance of manufacturing clearances /CAT-A within mentioned / mutually agreed timelines, then CCG/TP Odisha Discoms reserve the right to cancel issued rate contract / release order and reserve the right to forfeit EMD/PBG.

- vi. **Delivery Period** shall be 60 Days from date of receipt of release order / CAT-A GTP approval, whichever is later.
- vii. **Payment Terms:** As per GCC.
- viii. **Liquidated Damages (LD):** Applicable as per GCC.
- ix. Any request of LD waiver shall be submitted within thirty (30) days of deducting LD. Request submitted beyond the timeline shall not be entertained.
- x. Pre-dispatch inspection, MDCC and LD shall be applicable as per GCC.
- xi. TP Odisha Discom reserves the right to short-close the issued Release Order / Rate contract, in case of any quality issues.
- xii. Any change in statutory taxes, duties and levies during the contract period shall be borne by respective TP Odisha Discom. However, in case of delay in supply owing to reasons not attributable to TP Odisha Discom, 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 TP Odisha Discom.
- xiii. All other terms of GCC – Supply shall be applicable.

14.0 Drawing Submission and Approval

As per SCC, Clause number 13.1

15.0 Payment Terms

As per SCC, Clause number 13.1

16.0 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.

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

This would ensure the minimization of environmental and social impact to combat climate change. Please refer to the attached Environment Policy and Sustainability Policy (Annexure–X).

17.0 Ethics

TP DISCOMs are ethical organizations bound by Tata Code of Conduct. As a policy we lay 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.

DISCOM 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. For details, refer link: <https://www.tata.com/about-us/tata-code-of-conduct>

Any ethical concerns with respect to this tender can be reported to the following:

Mr. Pradip Sil (Chief Central Contracts Group): pradip.sil@tpcentralodisha.com

18.0 Specification and standards

As per Annexure II

19.0 General Condition of Contract

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

20.0 Safety Policy and Safety Terms & Conditions

Annexure VIII attached along with this tender.

21.0 Tata Code of Conduct

Annexure IX attached along with this tender.

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

22.0 Environment & Sustainability Policy

Annexure X attached along with this tender.

ANNEXURE-I: Price Schedule

Sl. No.	Item Description	Qty.	UoM	HSN Code	Unit Ex-Work Price (Rs./ Unit)	GST (Rs/ Unit)	All Inclusive Unit Rate (Rs.)	Total All Inclusive Value (Rs.)
A	B	C	D	E	F	G	H=(F+G)	I=(H x I)
1	Lightning Arrester 30KV, 10KA Station Class, Class 2.	2,338						
2	Lightning Arrester 30KV, 10KA Station Class, Class 3 with Surge Counter	363						
3	Lightning Arrester 11KV,10KA Station Class, Class 2	25,407						
4	Lightning Arrester 9KV,10KA DH Class	27,413						

Mandatory to quote in all line items (If Applicable)*NOTE:**

- Prices shall be firm till the validity of the contract (As applicable).
- The bids will be evaluated commercially on a Line-item basis.
- The unit price to be entered in column "F" of above table is exclusive of GST.
- The prices mentioned above shall be on F.O.R basis for all the TPCODL, TPNODL & TPSODL designated locations.
- The bidders are advised to quote prices strictly in the above format. Failing to do so, bids shall be liable for rejection.
- The bidder must fill every column of the above format. **Mentioning "extra/inclusive"/other conditions in any of the column may lead to rejection of the price bid.**
- No cutting/ overwriting in the prices is permissible.
- The quantity mentioned above is for evaluation purposes only and may vary as per actual site requirement.

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

ANNEXURE-II: Technical Specification

Attached with Tender documents.

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

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 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:***

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

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
a.	If variable price variation on clause given	Yes / No
b.	Ceiling	----- %
c.	Inclusive of GST	Yes / No (If Yes, indicate % rate)
d.	Inclusive of transit insurance	Yes / No
2.	Delivery Clause acceptable	Yes / No
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.	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:***

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

ANNEXURE V: Checklist of all the documents to be submitted with the Bid

Bidder must 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 three completed 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:***

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

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 fairer and more transparent, CCG 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 accepted by the bidder on participation in the bid event:

1. CCG 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. CCG will make every effort to make the bid process transparent. However, the award decision by CCG would be final and binding on the supplier.
3. The bidder agrees to non-disclosure of trade information regarding the purchase, identity of CCG, 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 CCG.
6. In case of intranet medium, CCG shall provide the infrastructure to bidders. Further, CCG 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 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 outrightly rejected.
8. The bidder shall be prepared with competitive price quotes on the day of the bidding event.

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP**NIT No.:****TPCODL / CCG / 24-25 / 1000001764**

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 Discom site / store.
10. The prices submitted by a bidder during the auction event shall be binding on the bidder.
11. No requests for event time extension of auction event shall be considered by CCG.
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.

[Signature & Stamp of Bidder]

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

ANNEXURE VII: General Conditions of Contract

Attached Separately

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

ANNEXURE VIII: Safety Policy and Safety Terms & Conditions

Attached Separately with Tender

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

ANNEXURE IX: Tata Code of Conduct

Attached Separately with Tender

Also Refer: <https://www.tata.com/about-us/tata-code-of-conduct>

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

ANNEXURE X: Environment & Sustainability Policy

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

ANNEXURE XI: Authorization Letter Format**CORPORATE ENVIRONMENT POLICY**

Tata Power is committed to a clean, safe and healthy environment, and we shall operate our facilities in an environmentally sensitive and responsible manner. Our commitment to environmental protection and stewardship will be achieved by:

- Complying with the requirements and spirit of applicable environmental laws and striving to exceed required levels of compliance wherever feasible
- Ensuring that our employees are trained to acquire the necessary skills to meet environmental standards
- Conserving natural resources by improving efficiency and reducing wastage
- Making business decisions that aim towards sustainable development
- Engaging with stakeholders to create awareness on sustainability

(Praveer Sinha)
CEO & Managing Director

Date: 15th June, 2018

TATA POWER
Lighting up Lives!



TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

(To be presented by the authorized person at the time of opening of Bid on the letter head of Bidder and should be signed by an Authorized Signatory with Name and Seal of the Company)

Chief - Central Contracts Group

Tata Power Odisha DISCOMs

Plot-29 Anuj Building

Satya Nagar Bhubaneswar

SUB: Tender for**Ref: Tender No.**..... **dated.**

Dear Sir,

This has reference to your above Tender. Mr. / Miss / Mrs. _____

is hereby authorized to attend the bid opening of the above Tender on _____ on behalf of our organization.

The specimen signature is attested below:

Specimen Signature of Representative

Signature of Authorizing Authority

Name & Designation of Authorizing Authority

NOTE: This Authorization letter is to be carried at the time of Bid Opening

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Nothern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

ANNEXURE XII: Instructions to Bidder for participation in ARIBA System

Step 1: Eligible and Interested bidder shall send an email to Package Owner (Ref. Clause 4.0 for details) attaching duly signed and stamped letter on Bidder's letterhead, with following details, expressing their intent to bid against above tender:

Sr 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. of authorized person	
vi)	E-mail Id to which online ARIBA link to be sent	
vii)	Tender Fee details (Amount / NEFT-RTGS UTR No / Date) (Ref sec 1.2)	
viii)	GST No. of bidder	
ix)	MSME Certificate (if applicable)	
x)	Postal address of bidder for return of EMD BG	

E-mail must be sent to saurabh.kumar@tpwesternodisha.com with copy to umesh.bhardwaj7@tpcentralodisha.com on or 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 e-mail address from ARIBA system.

Step 5: In this e-mail online link as "[Click Here](#)" shall be there to access the event & participate in the tender.

Step 6: First time bidders need to **Sign Up** for accessing the event. Create User Name and password as mentioned in Sign Up page. A one-page registration screen will open for first time user. All * mark mandatory field to be filled in.

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

Those who already have User Name and password for accessing events may LOGIN by using same User Name and password. (Bidder's user name and password for their other customers shall not be applicable for TPCODL / TPWODL / TPNODL / TPSODL).

Step 7: Post login, access the RFQ.

Step 8: After review and downloading of all documents click on **"Review Pre-requisites."**

Step 9: Review and accept **"Bidder Agreement"**.

Step 10: Tender document (PDF) can be downloaded from relevant section in Ariba Portal

Step 11: Technical Bid Submission: Bidder must attach pdf version of technical bid in section relevant to technical bid submission. Uploading any price-related information in this section shall lead to bidder rejection.

Step 12: Price Bid Submission: Price schedule as attached in relevant section must be downloaded. Price and tax details to be filled in as per the format. PDF version of duly filled price bid to be uploaded in relevant section. Price bid to be mandatorily signature & sealed by authorized person on Company letter head. For Price Bid put all the unit prices and taxes and duties in the provided field. Put "NA" in the not applicable field.

Step 13: After successfully uploading Techno commercial offer and price part, click - **"Submit Entire Response."**

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

To
The Chief - CCG & Engineering
Centralized Contract Group - TP Odisha DISCOMS
1st Floor, Anuj Building, Plot no. 29, Satyanagar,
Bhubaneswar- 751007

UNDERTAKINGRef. Tender Doc: **TPCODL / CCG / 24-25 / 1000001764**

Tender Description:

Dear Sir

This is to certify that:

1. Apart from our bid in the name of M/s we have not participated in this tender through any other name who is/are related firm (where owner, Partner, Director are same or holding stake in such firm).
2. In case such relation is found out between our firm and any other firm who has participated in this tender, TP Odisha DISCOMS reserves right to disqualify bids from all such related firms or cancel Purchase Order placed on such firm/firms.

[Signature & Stamp of Bidder]

TPCODL

TP Central Odisha Distribution Limited

TPNODL

TP Northern Odisha Distribution Limited

TPSODL

TP Southern Odisha Distribution Limited

TPWODL

TP Western Odisha Distribution Limited

CENTRALIZED CONTRACTS GROUP

NIT No.:

TPCODL / CCG / 24-25 / 1000001764

**Format for unconditional acceptance of Clauses, Terms and Conditions of Tender Document,
Technical Specification and applicable GCC**

To
The Chief - CCG & Engineering
Centralized Contract Group- TP Odisha DISCOMS
1st Floor, Anuj Building, Plot no. 29, Satyanagar,
Bhubaneswar, Odisha - 751007

Sub: Declaration on Tender Terms and Conditions

Ref. Tender Doc:

Tender Details:

Dear Sir

This is to inform that I, the undersigned (Proprietor / Partner /Director/ Authorized Signatory of M/s_____) am authorized to sign this declaration and execute the tender bid submission process on behalf of our Organization.

I have carefully read and understood all the terms and conditions of the entire Tender Document, applicable GCC along with the Technical Specification and hereby convey my acceptance of the same unless specifically mentioned in Annexure IV of this tender document.

It is also understood that furnishing of any false information/fabricated documents would lead to rejection of my tender at any stage.

With warm regards,

[Signature & Stamp of Bidder]



SUPPLIER MANUAL ANSWERING TO E-BIDDING

	Version 1.2
Company Confidential	DEC - 2020

INDEX

1 ACCESSING Ariba SOURCING	3
2 VENDOR SCREEN.....	4
<i>2.1.1 Review and Approve “Prerequisites”</i>	<i>5</i>
<i>2.1.2 Select Items or Lots</i>	<i>6</i>
<i>2.1.3 Entering Your Prebid</i>	<i>6</i>
2.1.4.1 How to submit a price.....	9
3 COMMUNICATING WITH TATA POWER BUYER DURING E-BIDDING.....	7
4 Ariba TRAINING AND Ariba SUPPORT	8
5 SUPPLIER FREQUENTLY ASKED QUESTION	11

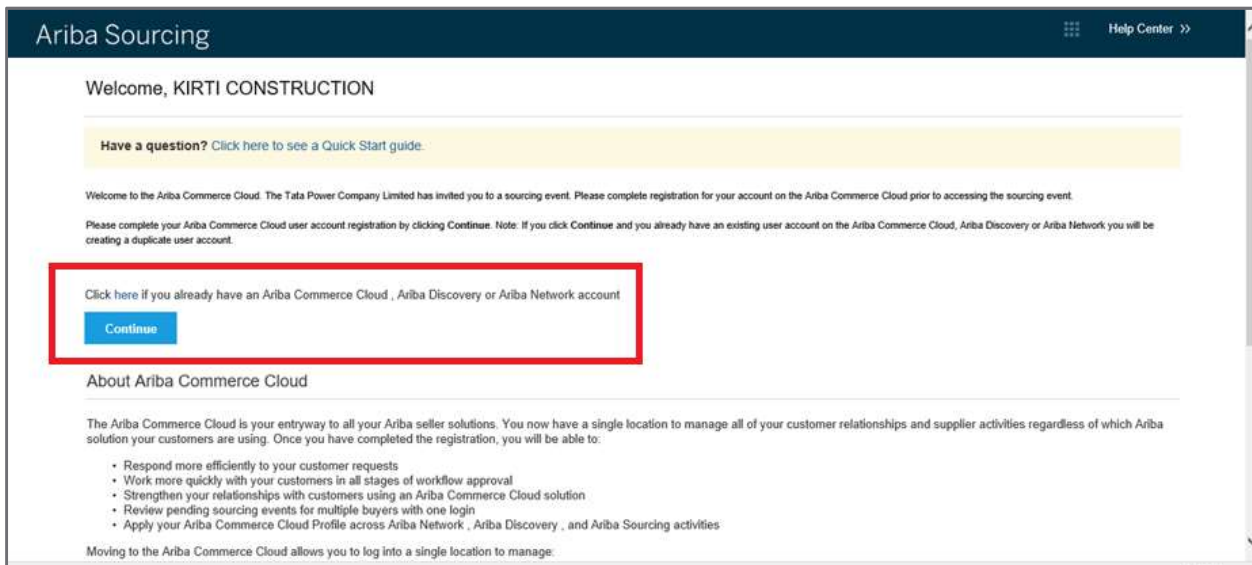
1- Accessing Ariba Sourcing

Step 1: You will get an invitation to your email from Ariba System. Keep this email, it contains your login Information and a direct link to Ariba.

Step 2: Click "Click Here" to access the Ariba Web Site.



Step 3: Supplier has to click on "Continue"



Step 4: The registration process only takes a few moments, with a simple one-page registration Define your password and secret question. Click "OK"

Company Name: KIRTI CONSTRUCTION

Country: India [IND]

Address: Yashodeep E3- 08
Sector 22 Koperkharne Navi Mumbai
400709

City: mumbai

State: maharashtra

Postal Code: 400709

Product and Service Categories: Enter Product and Service Categories [Add](#) -or- [Browse](#)

Ship-to or Service Locations: Enter Ship-to or Service Location [Add](#) -or- [Browse](#)

Tax ID: Optional Enter your Company Tax ID number.

DUNS Number: Optional Enter the nine-digit number issued by Dun & Bradstreet.

Supplier has to fill the form

Step 5: If it's the first time you are invited to use UPM Ariba, you'll need to accept the "Participant Terms". Select "I accept the terms of this agreement". Click "Submit".

The registration form includes the following elements:

- A password field with a strength indicator (*****).
- A "Secret Question" dropdown menu with the option "In what city was your mother born?". A note states: "The answer to your secret question must be atleast 5 characters."
- Two additional input fields, each with a strength indicator (*****).
- A "Language" dropdown menu set to "English". A note states: "The language used when Ariba sends you configurable notifications. This is different than your web b..."
- A paragraph of legal text regarding company profile visibility and data consent.
- A checkbox labeled "I have read and agree to the Terms of Use and the Ariba Privacy Statement", which is checked and highlighted with a red border.
- "Submit" and "Cancel" buttons at the bottom right.

2 Vendor Screen - Submitting Your Answers / Proposal

2.1.1 If vendor goes through mail invitation then directly Screen 3.1.1 will appear, but if If you have used Ariba before and have already accessed an event for the buyer-specific account with your current log in ID, click the **Login** button to continue. Log in with your Ariba username and password in order to participate in the event OR you have to follow the following steps.

Step 1 - Log on supplier.ariba.com

Step 2 - Put your USER ID and Password in following screen

The login screen features the SAP Ariba Proposals logo and the text "Powered by Ariba Sourcing". It includes a "Supplier Login" heading, input fields for "User Name" and "Password", and a "Login" button. Below the login button are links for "Forgot Username or Password" and "Need help? See Quick Start". On the right side, there is a laptop displaying a dashboard with various charts and data.

Step 3 - Go to "Ariba Proposals & Questionnaire".

The screenshot shows the Ariba Sourcing homepage. A blue oval annotation points to the 'Ariba Proposals and Questionnaire' link in the top navigation bar, with the text: "Goto 'Ariba Proposals & Questionnaire' after logging in at supplier.ariba.com". Another blue oval annotation points to the 'Events' table, with the text: "Events (Tender enquiries) in which Bidder has participated shall be visible. Click and enter into any specific event".

Events Table:

Title	ID	End Time	Event Type
Status: Open (2)			
Maintenance of HT and LT Networks for Tata Power Sistribution at Odisha (TPC-ENG-ENQ-016-20-21)	Doc2416130949	6/4/2020 4:55 PM	RFP
Tender Documents-Meter Reading Cum Spot billing and Bill Distribution(TPC-ENG-ENQ-015-20-21)	Doc2420255101	6/4/2020 3:00 PM	RFP

The screenshot shows the 'Event Details' page for Doc2420255101 - Tender Documents-Meter Reading Cum Spot bill... The page includes a 'Checklist' on the left with steps: 1. Review Event Details, 2. Review and Accept Prerequisites, 3. Submit Response. A blue oval annotation points to the 'Review Prerequisites' button, with the text: "Click on 'Review Prerequisites'".

Event Messages:

Review and respond to the prerequisites. Prerequisite questions must be answered before you can view event content or participate in the event. Some prerequisites may require the owner of the event to review and accept your responses before you can continue with the event. If you decline the terms of the prerequisites, you cannot view the event content or participate in this event.

Buttons: Download Content, Review Prerequisites, Decline to Respond, Print Event Information

Tender Documents:

1. Review Event Details

2. Review and Accept Prerequisites

3. Submit Response

Event Contents:

All Content

1. Tender Documents

2. Techno Commercial Bid

1.1 Introduction

1.1.1 Introduction

As per the Notice Inviting Tender dated 12th May 2020, Bidders are to download Tender from Tata Power website (Tenders section). Same Tender documents are attached in this E-tender enquiry for reference purpose.

As mentioned in the Procedure for participating in tender (which is enclosed with the tender documents), this e-Tender enquiry is being issued to the bidders who have purchased the tender documents following instructions therein.

All future/further communications wrt the subject tender and Bid submission shall be through this e-Enquiry only. Following is to be noted,

» Next Section: Techno Commercial Bid

Tata Power - Ariba Spend Manag

s1.ariba.com/Sourcing/Main/aw7a...

Checklist

1. Review Event Details
2. Review and Accept Prerequisites
3. Submit Response

Prerequisites must be completed prior to participation in the event.

In consideration of the opportunity to participate in on-line events ('On-Line Events') held and conducted by the company sponsoring this On-Line Event ('Sponsor') on the web site (this 'Site') hosted by Ariba, Inc. ('Site Owner'), your company ('Participant' or 'You') agrees to the following terms and conditions ('Bidder Agreement').

- 1. Bids.** If you are invited to participate in the On-Line Event, Sponsor reserves the right to amend, modify or withdraw this On-Line Event. Sponsor reserves the right to accept or reject all or part of your proposal. Submission of a bid does not create a contract or any expectation by Participant of a future business relationship. Rather, by submitting a bid, you are making a firm offer which Sponsor may accept to form a contract, subject to section 2 below. Sponsor is not liable for any costs incurred by Participant in the preparation, presentation, or any other aspect of Participant's bid.
- 2. Price Quotes.** Except to the extent Sponsor allows a non-binding bid, all Bids which Participant submits through the On-Line Events are legally valid quotations without qualification, except for data entry errors.
- 3. Procedures and Rules.** Participant further agrees to be bound by the procedures and rules established by the Site and Sponsor.
- 4. Confidentiality.** Participant shall keep all user names and passwords, the On-Line Event content, other confidential materials provided by the Site and/or Sponsor, and all bids provided by You or another participating organization in confidence and shall not disclose the foregoing to any third party.
- 5. Bids through Site only.** Participant agrees to submit bids only through the on-line bidding mechanism supplied by the Site and not to submit bids via any other mechanism including, but not limited to, post, courier, fax, E-mail, or orally unless specifically requested by Sponsor.
- 6. Ethical Conduct.** All parties will prohibit unethical behavior and are expected to notify the Site Owner by contacting the appropriate project team if they witness practices that are counter-productive to the fair operation of the On-Line Event. If Participant experiences any difficulties during a live On-Line Event, Participant must notify Site Owner immediately.
- 7. Survival.** The terms and conditions of this Bidder Agreement shall survive completion of the On-Line Event.

BA v1.1 19Aug05

☒ I accept the terms of this agreement.

☐ I do not accept the terms of this agreement.

Accept the Terms of Agreement and Submit

Tata Power - Ariba Spend Manag

s1.ariba.com/Sourcing/Main/aw7a...

Console

Doc2420255101 - Tender Documents-Meter Reading Cum Spot bill...

8 days 03:33:47

Event Messages
Response History
Response Team

Checklist

1. Review Event Details
2. Review and Accept Prerequisites
3. Submit Response

Event Contents

All Content

1 Tender Documents

2 Techno Commercial Bid

3 Price Bid

All Content

2.1 Please attach the Techno-Commercial bid

2.2 Please attach your techno commercial offer (Extra File)

3 Price Bid

3.1 Bidder to specify the prices either in terms of percentage (%) or Value where the options are available for both percentage (%) , please Specify Zero (0) in the amount field and vice-versa.

3.2 Bidders to download editable copy of Price bid format (Which is attached herewith), and re-attach the same after filling in prices as their Price Bid. No Alterations/changes shall be made by the bidders in this format as requested.

References

(*) indicates a required field

Submit Entire Response

Update Totals

Excel Import

Price Bid to be attached in Tab 3.2. Attach file link is towards extreme right, and is shown in next slide

Technical Bid to be attached in Tab 2.1 and 2.2. Attach file link is towards extreme right, and is shown in next slide

Divendra Sharma (desharma@gmail.com) last visited 26 May 2020 10:55:18 PM. Horizons Cybersoft Ltd. AN01523824134
© 1996-2019 Ariba, Inc. All rights reserved.

SAP Ariba Privacy Statement Security Disclosure Terms of Use

These are "Attach File" links for Tab 2.1 and 2.2 where Technical bid is to be attached. Pls attach files in BOTH these tabs otherwise it will show error on submission.

This is "Attach File" link for Tab 3.2 (Price Bid).

Click On "Submit Entire Response" AFTER Attaching technical and Price bids as above.

Note: In case of multiple files, all files can be kept in one folder and folder can be converted to zip file for attaching

terms of percentage (%) or Value where the options are available for both. In case price is specified in 0) in the amount field and vice-versa.
 h is part of Annexure I of Tender/attached herewith, and re-attach the same after filling in prices as their Price Bid.
 mat apart from entering their rates/prices/taxes as requested.

(*) indicates a required field

Submit Entire Response Update Totals Save draft Compose Message Excel Import

3 Communicating with Tata Power Buyer during e- bidding

Step 1: Click "Compose Message".

Submit Entire Response Update Totals Save draft **Compose Message** Excel Import

Step 2: Compose Your Message and click "Send".

back to The Tata Power Company Limited-TEST Dashboard Desktop File Sync Notifications

Compose New Message

From: shingare.manufacturers (Ravi Shingare)
 To: Project Team
 Subject: Dec681345837 - sourcing project 001
 Attachments: attach a file

Send Cancel

Dear Sir,
 Can we submit the price ??
 Regards
 ABC

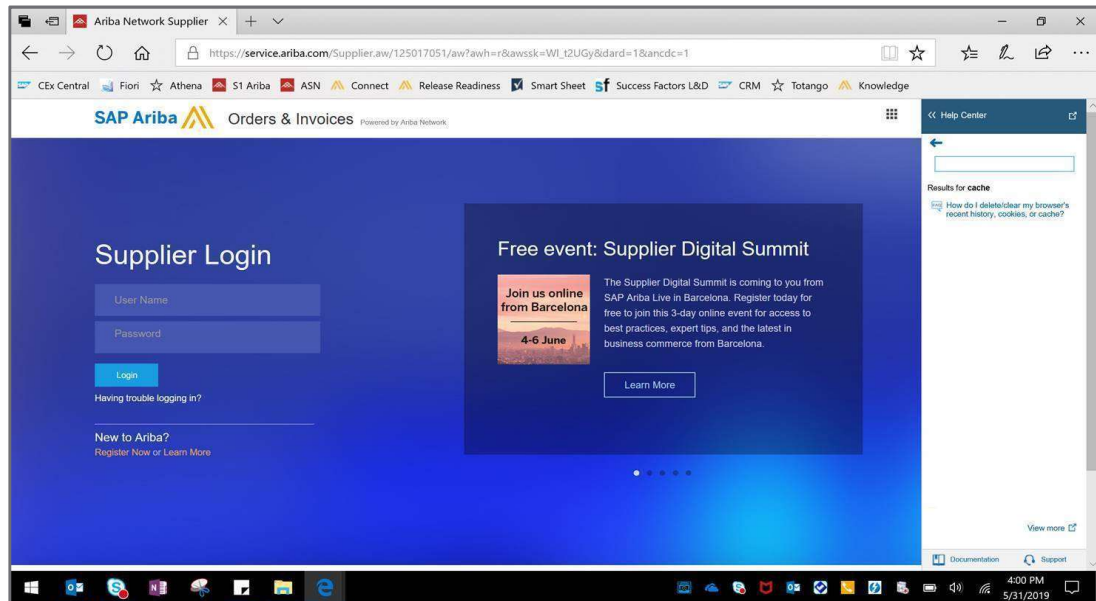
ARIBA TRAINING VIDEOS

Participating in a RFI or RFP on Ariba Network - https://www.youtube.com/watch?v=9_XXUaVyI7o

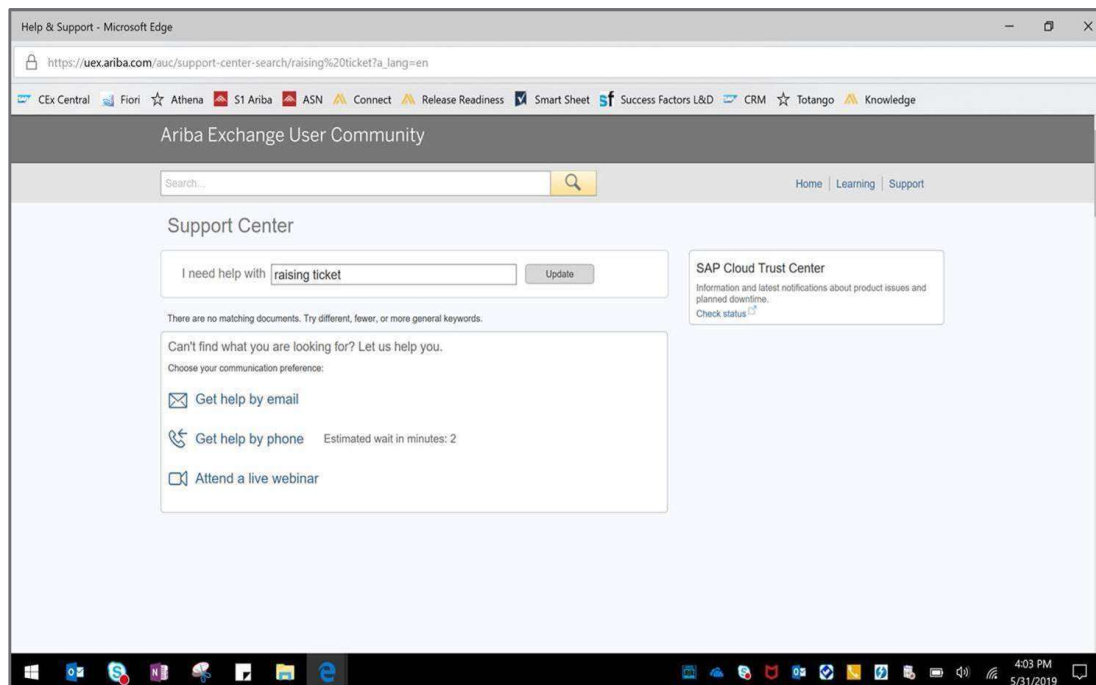
Support from Ariba - Supplier can raise the Ticket for “Support”

Here are the steps that Suppliers can follow for raising a ticket or requesting a call back from Support team. They can do so without logging in – pls follow the brief instructions given below.

1. Go to login page>Choose “Support” on the bottom right corner



2. Add query and press “Start” – After that, following screen will pop up where you can choose either Get Help by Email or Get Help by Phone.



3. Choose phone and add following basic details and you will get call back

Waiting for response from uex.ariba.com. - Microsoft Edge

https://uex.ariba.com/au/support-center/email-webform?channel=callme

CEx Central Fiori Athena S1 Ariba ASN Connect Release Readiness Smart Sheet Success Factors L&D CRM Totango Knowledge

SAP Ariba Phone Support

Provide the following information, and the next available specialist will call you.

Problem Description

Short Description: * logging in

Contact Information

First Name: *

Last Name: *

Company: *

Email: *

Requested Language: English

Select a different language from the Home tab.

Phone: * +1 201-555-0123 Extension: *

Confirm Number: *

☐ My phone number is correct.

☐ Do not record this phone call.

Ariba Network ID: *

You expressly agree and understand that your data entered into this system will be transferred to Ariba, Inc. and the Ariba hosted computer systems (currently located primarily in the U.S.), in accordance with the [Ariba Privacy Statement](#) and applicable law.

☐ I agree

* Required Fields

Submit Cancel

4:57 PM 6/7/2019

If not by phone, they can ask for a response/support by email.

[illegible]

SUPPLIER FREQUENTLY ASKED QUESTIONS

 **If I registered on my buyer's Ariba Sourcing site in the past, do I need to register again?**

Answer- Yes. Although you have registered on your buyer's Ariba Sourcing site in the past, registering on the Ariba Commerce Cloud is required. The registration process only takes a few moments, with a simple one-page registration. Registering on the Ariba Commerce Cloud gives you access to all your buyer relationships with one username and password.

What is the Ariba Commerce Cloud?

Answer: - The Ariba Commerce Cloud is your entry point to all of your seller solutions. Rather than managing log in information for multiple buyers' sites, you will have one log in and one account. This means fewer passwords to remember, easier user maintenance for your company, and a unified profile for your organization.

Do I need to add Product and Service Categories during registration?

Answer:-Yes; this is a required field. Product and Service Categories classify what your company sells, and the system uses this information to match potential business opportunities with your products and services.

Click **Add Product and Service Categories** to select one or more categories from the list of options. During registration, you only need to choose one category, preferably related to the event you are joining. You can add, refine, or remove categories any time after the registration process.

Do I need to add ship-to or service locations during registration?

Answer: - **Yes**; this is a required field. Ship-to or Service locations inform buyers where your company sells its products or provides its services, and the system uses this information to match potential business opportunities with your products and services.

Click **Add Ship-to or Service Locations** to select one or more sales territories from a list. You can add, refine, or remove ship-to or service locations any time after the registration process.

Additional Information: - D-U-N-S is a registered trademark of Dun & Bradstreet or its subsidiaries in the United States and other countries.

What is the difference between the Email and Username fields in my profile?

Answer: - The Email field represents the email address where you wish to receive email notifications. The Username field is the identifier that you use to access your account. The Username field must be in email format, but you do not have to use a valid email address.

Note: Leave the **This is my username** box checked if you want your email address to be the same as your username.

How do I participate in my buyer's event using an email invitation?

Answer: - Use the **Click here** link in the email notification to access the sourcing event.

While buyers might customize the email content you receive, all email invitations contain a link to access the event.

Depending on your previous experience with Ariba solutions, do one of the following to access the event after you click the link:

- If you are new user, click **Continue** on the welcome page. You continue to register an Ariba account to link with your buyer and participate in the event.
- If you have used Ariba before and have already accessed an event for the buyer-specific account with your current log in ID, click the **Login** button to continue. Log in with your Ariba username and password in order to participate in the event.
- If you already have an existing Ariba Network, Ariba Discovery, or Ariba Sourcing supplier account, but you have not accessed any events for the inviting buyer's site, use the **Click here if you already have an Ariba Commerce Cloud, Ariba Discovery or Ariba Network account** link. After clicking the link, log in with your existing account to move your information to your buyer's site.

Additional Information: - Registering an Ariba account provides you with a consolidated view of all your customer relationships. With this one profile, you can view business opportunities, participate in sourcing events, participate in contract negotiations, and manage orders, catalogs, and invoices.

Why doesn't the link in the email invitation to participate in a sourcing event work?

Answer: - If you cannot click the link, or the link does not open the log in page, highlight and copy the Uniform Resource Locator (URL), and then paste the URL into your web browser.

Can my company have multiple accounts?

Answer: - Your Company can have multiple Ariba accounts, depending on your business needs. For example, if your company has several locations around the world, you might want a separate account for each region.

Most companies choose to have one account with multiple customer relationships, which provides a centralized location to maintain their company profile information and all of their customer relationships.

How do I complete registration if my username already exists?

Answer: - This message means that you already have an Ariba Network, Ariba Discovery, or Ariba Sourcing supplier account registered under username you entered. You can either register a new account by creating a new username, or access one of the following sites to request a password reset for the registered username:

- [Ariba Network](#) (This login page is used for all Ariba Network, Ariba Sourcing, or Ariba Contracts suppliers).
- [Ariba Discovery login page](#)

To reset your password, click the **Having trouble logging in?** Link on the Login page.

Nothing happens when I click Forgot Username and enter my email address

Issue: - Nothing happens when I click the **Forgot Username** link and enter my email address.

Cause: - After you submit your request to retrieve your username, the Ariba Network sends an email notification with usernames that match the email address you submitted.

Some possible reasons why you may not receive this username retrieval email notification:

- The email address on your account does not match the email address you entered when submitting the request.
- Your buyer-specific account was deactivated before you could move it to the Ariba Commerce Cloud. Generally, that means you probably have not participated in an event with that buyer for a while.

Solution: -

- To ensure you receive this email notification:
- Make sure you type the email address configured within your account.

If your buyer-specific account has been deactivated, contact your buyer to determine how to proceed.

Where is my password reset email?

Answer: - After you submit your request for a password reset, Ariba sends instructions to the email address associated with your account. If you didn't receive a password reset email, check the following scenarios to troubleshoot.

The username you entered is in the wrong format, or it isn't associated with the email address you are checking.

- Keep in mind, your username is in the format of a full email address, but it can be associated with any email address you entered previously.
- Your username is also case-sensitive.
- To confirm that you are using the correct username and format, return to the Ariba login page, and click the **Having trouble logging in?** link (**Forgot Username** if you're working in Ariba Discovery).
 - Choose **I forgot my username**, and click **Continue**.
 - Enter the email address associated with your account, and click **Submit**.

- You will receive an email that lists the exact format of the username associated with the email you entered.

You entered the correct username, but you still didn't receive the password reset email notification.

- This can occur if the configured email address is different from the account you are checking.
- You might have multiple accounts for your company, so make sure you are attempting to access the correct account.

Your email configuration or company's security settings might also prevent you from receiving the password reset email. To find out, check your junk mail folder or email filter settings to verify that automated emails from Ariba are not blocked from your email account.

 **Why do I get this message on the SAP Ariba Login page: "The username and password pair you entered was not found"?**

Answer: - You entered an incorrect **Username** or **Password**. You might receive this message if you entered a previous **Username** or **Password**. Remember that your **Username** has the format of an email address, and both the **Username** and **Password** are case sensitive.

Click the **Having trouble logging in?** Link on the Login page if you don't remember your log in information.

Technical Specifications:

CONFIDENTIAL

	TP SOUTHERN ODISHA DISTRIBUTION LIMITED, BERHAMPUR		
	TECHNICAL SPECIFICATION		
Document Title	Specification of 9kV 10kA Distribution Class Polymeric Lightning Arrester		
Document No.	ENG-HV-2004-02	Eff. Date: 14/02/2023	
Revision No.	02	Page 1 of 14	
Prepared By:	Reviewed By:	Approved By:	Issued By:

CONTENTS

- 1.0 SCOPE
- 2.0 APPLICABLE STANDARDS
- 3.0 CLIMATIC CONDITIONS OF THE INSTALLATION
- 4.0 GENERAL TECHNICAL REQUIREMENTS
- 5.0 GENERAL CONSTRUCTIONS
- 6.0 NAME PLATE AND MARKING
- 7.0 TESTS
- 8.0 TYPE TEST CERTIFICATES
- 9.0 PRE-DESPATCH INSPECTION
- 10.0 INSPECTION AFTER RECEIPT AT STORE
- 11.0 GUARANTEE
- 12.0 PACKING
- 13.0 TENDER SAMPLE
- 14.0 TRAINING
- 15.0 QUALITY CONTROL
- 16.0 MINIMUM TESTING FACILITIES
- 17.0 MANUFACTURING ACTIVITIES
- 18.0 SPARES, ACCESSORIES AND TOOLS
- 19.0 DRAWING AND DOCUMENTS
- 20.0 GURANTEED TECHNICAL PARTICULARS
- 21.0 SCHEDULE OF DEVIATIONS

	TP SOUTHERN ODISHA DISTRIBUTION LIMITED, BERHAMPUR		
	TECHNICAL SPECIFICATION		
Document Title	Specification of 9kV 10kA Distribution Class Polymeric Lightning Arrester		
Document No.	ENG-HV-2004-02	Eff. Date: 14/02/2023	
Revision No.	02	Page 2 of 14	
Prepared By:	Reviewed By:	Approved By:	Issued By:

1.0	SCOPE	1. This specification covers the technical requirements of design, manufacture, testing at manufacturer's works, packing, forwarding, supply and unloading of 9 kV,10kA, DH class and SM class Lightning Arrester at site/stores complete with all accessories for efficient and trouble free-operation. The specific requirements are covered in the enclosed technical data sheet. 2. The material shall be complete with all components and accessories, which are necessary or usual for their efficient performance and trouble-free operation under the various operating and atmospheric conditions specified in clause no. 3 3. Such of the parts that may have not been specifically included, but otherwise form part of the Lightning arrester as per standard trade and/or professional practice and/or are necessary for proper operation, will be deemed to be also included in this specification. The successful bidder shall not be eligible for any extra charges for such accessories etc. notwithstanding the fact that at the time of an initial offer bidder had segregated such items and quoted for them separately.														
2.0	APPLICABLE STANDARDS	The equipment (and the materials used) covered by this specification shall unless otherwise stated, be designed, manufactured and tested in accordance with the latest editions of the following Indian standards & other relevant standards for components, BEE & CEA guidelines with latest amendment from time to time, thereof, some of which are listed below: <table><tr><th>Indian Standards (IS /IEC</th><th>Title</th></tr><tr><td>IS-3070:1993 (Part-3)</td><td>Specification for Lightning arresters for alternating current system.</td></tr><tr><td>IS-4759:1996 Reaffirmed 2006</td><td>Hot dip-zinc-coating on structural steel and other allied products.</td></tr><tr><td>IS-2633:1986 Reaffirmed 2006</td><td>Method for testing uniformity of coating on zinc coated particles.</td></tr><tr><td>IS-6209:1982 Reaffirmed 2006</td><td>Method of Partial Discharge Measurement</td></tr><tr><td>IS:6745:19824 Reaffirmed 2006</td><td>Method for determination of mass of zinc coating on zinc coated iron and steel articles.</td></tr><tr><td>IEC 60099-4 :2014 ed 03</td><td>Surge arrestor without gap for AC System.</td></tr></table> <i>*In case of any conflict on any technical particular in the specification, the stricter requirement mentioned in the relevant standard shall be valid.</i>	Indian Standards (IS /IEC	Title	IS-3070:1993 (Part-3)	Specification for Lightning arresters for alternating current system.	IS-4759:1996 Reaffirmed 2006	Hot dip-zinc-coating on structural steel and other allied products.	IS-2633:1986 Reaffirmed 2006	Method for testing uniformity of coating on zinc coated particles.	IS-6209:1982 Reaffirmed 2006	Method of Partial Discharge Measurement	IS:6745:19824 Reaffirmed 2006	Method for determination of mass of zinc coating on zinc coated iron and steel articles.	IEC 60099-4 :2014 ed 03	Surge arrestor without gap for AC System.
Indian Standards (IS /IEC	Title															
IS-3070:1993 (Part-3)	Specification for Lightning arresters for alternating current system.															
IS-4759:1996 Reaffirmed 2006	Hot dip-zinc-coating on structural steel and other allied products.															
IS-2633:1986 Reaffirmed 2006	Method for testing uniformity of coating on zinc coated particles.															
IS-6209:1982 Reaffirmed 2006	Method of Partial Discharge Measurement															
IS:6745:19824 Reaffirmed 2006	Method for determination of mass of zinc coating on zinc coated iron and steel articles.															
IEC 60099-4 :2014 ed 03	Surge arrestor without gap for AC System.															

Initiator		HOG (Engineering)	
-----------	--	----------------------	--

	TP SOUTHERN ODISHA DISTRIBUTION LIMITED, BERHAMPUR		
	TECHNICAL SPECIFICATION		
Document Title	Specification of 9kV 10kA Distribution Class Polymeric Lightning Arrester		
Document No.	ENG-HV-2004-02	Eff. Date: 14/02/2023	
Revision No.	02	Page 3 of 14	
Prepared By:	Reviewed By:	Approved By:	Issued By:

3.0	CLIMATIC CONDITIONS OF THE INSTALLATION	1	Maximum ambient temperature	50 deg C
		2	Max. Daily average ambient temp	35 deg C
		3	Min Ambient Temperature	0 deg C
		4	Maximum Humidity	95%
		5	Average Annual Rainfall	150 cm
		6	Average No. of rainy days per annum	120
		7	Altitude above MSL not exceeding	1000m
		8	Wind Velocity	300 Km/hr
		9	Earthquakes of an intensity in horizontal direction	equivalent to seismic acceleration of 0.3g
		10	Earthquakes of an intensity in vertical direction	equivalent to seismic acceleration of 0.15g (g being acceleration due to gravity)
		TPSODL service area has heavy saline conditions along the coast and High cyclonic Intensity winds with speed upto 300 Kmph. The atmosphere is generally laden with mild acid and dust in suspension during the dry months and is subjected to fog in cold months.		
4.0	GENERAL TECHNICAL REQUIREMENTS			
S No	Description	Requirements for 9kV 10kA Distribution Class (DH)		
1	Installation	Outdoor		
2	Type	Metal Oxide gapless with adhesive coated single wrap type / nylon direct injection molding		
3	Housing Material	Injection molded silicone rubber		
4	Service Voltage	11 Kv		
5	Rated Voltage	12 kV (for 9kV LA)		
6	Rated Frequency	50 Hz		
7	Maximum Continuous Operating Voltage (MCOV) , Uc	7.2 kV (rms)		
8	Arrester Rating Ur	9 kV (rms)		
9	Nominal Discharge Current In	10 Ka		
10	Distribution Class	DH		
11	Repetitive Charge transfer withstand (Coulombs) Qrs	≥0.4 C		
12	Thermal Energy	Qth (C)	≥1.1 C	
		Wth (kJ/kV)	-	

Initiator		HOG (Engineering)	
-----------	--	----------------------	--

	TP SOUTHERN ODISHA DISTRIBUTION LIMITED, BERHAMPUR		
	TECHNICAL SPECIFICATION		
Document Title	Specification of 9kV 10kA Distribution Class Polymeric Lightening Arrester		
Document No.	ENG-HV-2004-02	Eff. Date: 14/02/2023	
Revision No.	02	Page 4 of 14	
Prepared By:	Reviewed By:	Approved By:	Issued By:

	withstand rating		
13	Insulation Voltage Withstand on Arrester Housing		
13.1	Power Frequency Voltage (Dry/ Wet) for one minute.	28 kV (rms)	
13.2	Lightning Impulse Voltage kV Peak	75kV (Peak)	
14	Rated Short Circuit Current	16KA or better	
15	High Current impulse Operating Duty (4/10 μ s impulse wave) (kAp)	100 (kAp)	
16	Partial Discharge at 1.05 times M.C.O.V	<10 Pc	
15	Disconnecter	As per IEC 60099 ed 03	
15.1	Disconnecter connecting lead	Insulated flexible tinned plated copper braid with lugs	
15.2	Size of Insulated Tinned copper braid	25 sqmm	
15.3	Length of Insulated Tinned copper braid	300 mm	
16	Material of Insulating Braket	UV resistant Fire retardant DMC	
17	Material of End fittings	Machined / pressure die casted Aluminum	
18	Pull Strength (Min.)	1000N	
19	Cantilever Strength (Min.)	12 KGM	
20	Creepage Distance of Arrester Housing	31mm/KV (min) or 380 mm (min)	
21	Stack Height	To be submitted by bidder	
22	Rating of individual ZnO blocks used for assembly	3kV /4.5Kv	
23	Temporary Over Voltage rating (TOV) kVp	Bidders to submit the offered product values	
23.1	1Sec	Min. 12Kv	
23.2	10 Sec	Min. 12Kv	
23.3	100Sec	Min. 11Kv	
24	Maximum Residual Voltage during impulse discharge of 8/20microsec.	Desired Maximum Values	
24.1	5kAp	28 kVpeak	
24.2	10kAp	28 kVpeak	
25	Max Steep lightning current impulse 1/20 μ s residual voltage	40 kVpeak	
26	Material of Insulating terminal cap	Polyolefin	
27	Material of Nut Bolt washers	Stainless Steel	
28	Current at MCOV		
28.1	a. Resistive Current	Bidders to submit	
28.2	b. Capacitive Current	Bidders to submit	
29	The bolt grade	All hardware bolt shall be of 8.8 grade	

5.0	GENERAL CONSTRUCTION	1. Lightning arresters shall be designed with gapless metal oxide elements with silicon housing suitable for operation under the system conditions specified.
------------	-----------------------------	---

Initiator		HOG (Engineering)	
-----------	--	----------------------	--

	TP SOUTHERN ODISHA DISTRIBUTION LIMITED, BERHAMPUR		
	TECHNICAL SPECIFICATION		
Document Title	Specification of 9kV 10kA Distribution Class Polymeric Lightning Arrester		
Document No.	ENG-HV-2004-02	Eff. Date: 14/02/2023	
Revision No.	02	Page 5 of 14	
Prepared By:	Reviewed By:	Approved By:	Issued By:

		- Arresters shall be completely molded units with <i>absolutely no air volume inside</i>, suitable for mounting on bracket. <i>Arresters of tubular construction i.e arresters assembled in hollow core insulators with enclosed air volume are not acceptable</i> - The end fittings shall be non-magnetic and of corrosion proof material. - The end fittings used in polymer arrester shall be made from aluminum through machining process/pressure die-casting process. Sand casted and gravity casted end fittings are not acceptable. - MOV blocks shall have full metallization to have full face contact and to reduce contact resistance between adjacent discs. - Each unit of arrester assembly shall be hermetically sealed, leak tested and protected against ingress of moisture. - The seal shall be properly designed and tested for operation under extreme weather conditions. - Lightning arrester construction shall be suitable to withstand Seismic Loading, Short Circuit Forces and wind load and the force exerted on the arrester base and to the terminal imposed by the line conductor.
5.1	ASSEMBLY	- Lightning arrester shall be supplied along with disconnecter, insulating bracket, Insulating terminal Cap, disconnecter, Insulated tinned copper braid and necessary hard-wares. - The Assembly consists of stack of nonlinear Metal Oxide (ZnO) elements with highly non-linear voltage current characteristics, connected in series. - All the contact surfaces of metal oxide elements and Aluminum blocks must be smooth to have uniform contact surface. - Housing shall be made of Silicon rubber via injection molding to provide thermal dissipation of heat generated in the metal oxide elements during overvoltage and line discharge. - Polymeric housing shall be free from air bubble, flaws affecting the mechanical and electrical strength of the arrester. - Housing shall be capable to withstand the desired pollution stresses without flashover. - The polymer material used for the arrester housing must be tracking and erosion resistant, stabilized against UV radiation. - All metal parts shall be of non-rusting and non-corroding metal. - The arrester disconnecter shall be suitable for screwing directly to L.A with terminal of M10. - Stainless Steel Bolts, Nuts, washers shall be provided. - All similar parts, particularly removable ones, shall be interchangeable. - The arrester shall have thermal stability to withstand the heat generated from the ZnO element due to continuous operating voltage and surges. - The 9kV 10kA Distribution class Lightning Arrester shall have L-shaped terminal clamp suitable for conductor size of 9mm-16mm diameter.

Initiator		HOG (Engineering)	
-----------	--	----------------------	--

TPSODL	TP SOUTHERN ODISHA DISTRIBUTION LIMITED, BERHAMPUR		
	TECHNICAL SPECIFICATION		
Document Title	Specification of 9kV 10kA Distribution Class Polymeric Lightening Arrester		
Document No.	ENG-HV-2004-02	Eff. Date: 14/02/2023	
Revision No.	02	Page 6 of 14	
Prepared By:	Reviewed By:	Approved By:	Issued By:

5.2	DISCONNECTOR	- Each individual unit of Lightning Arrester with disconnector shall be hermetically sealed and fully protected against ingress of moisture. - The hermetic seal shall be effective for the entire life time of the Lightning Arrester with disconnector under the specified service conditions. - Disconnectors shall give the visible indication of the failed arrester. - The Lightning Arrester with disconnector shall be suitable for bracket type mounting. . - The corresponding units of Lightning Arrester with disconnector of the same rating shall be interchangeable without adversely affecting the performance. - All the necessary flanges, bolts, nuts, clamps etc. required for assembly of complete Lightning Arrester with disconnector and accessories and mounting on purchaser's support structure shall be included in bidder's scope of supply. - The mounting details for mounting the Lightning Arrester with disconnector on purchaser's support shall be given along with the bid.
5.3	MOUNTING BRACKET	- The 9kV 10kA Distribution class Lightning Arrester shall be fixed over a mounting bracket made of UV resistance, Fire retardant DMC material. - The 9kV 10kA Distribution class Lightning Arrester shall be fixed over a mounting arrangement made of Hot dip galvanized MS material and additionally one mounting bracket shall be provided
5.4	MECHANICAL STRENGTH	- The Lightning Arrester and its base shall withstand rated mechanical terminal load and electromagnetic forces without impairing their operational reliability. - The Lightning Arrester shall not come out of their positions by gravity, wind pressure, vibrations or reasonable shocks.
6.0	NAME PLATE AND MARKING	- The Lightning Arrester shall be provided with durable and legible name plate embossing, effectively secured against removal. - The name plate shall be indelibly and distinctly marked with all essential particulars as per the relevant standards along with the following : - The Name plate/product shall have marking of "PO no. with date" & "Property of TPSODL" - The following information shall be mentioned on the Name Plate: - Continuous operating Voltage - Rated Voltage - Rated Frequency - Nominal Discharge Current - Manufacturer's Name - Type and Identification of the complete arrester - Year of Manufacture - Serial Number
7.0	TESTS	- All routine, acceptance & type tests shall be carried out in accordance with the relevant IS/IEC. - All acceptance tests shall be witnessed by the purchaser/his authorized representative.

Initiator		HOG (Engineering)	
-----------	--	----------------------	--

	TP SOUTHERN ODISHA DISTRIBUTION LIMITED, BERHAMPUR		
	TECHNICAL SPECIFICATION		
Document Title	Specification of 9kV 10kA Distribution Class Polymeric Lightning Arrester		
Document No.	ENG-HV-2004-02	Eff. Date: 14/02/2023	
Revision No.	02	Page 7 of 14	
Prepared By:	Reviewed By:	Approved By:	Issued By:

		3. All the components and fittings shall also be type tested as per the relevant standards. 4. Following tests shall be necessarily conducted on the Lightning Arrester in addition to others specified in IS/IEC standards. <i>*In case of any conflict on any technical particular in the specification, the stricter requirement mentioned in the relevant standard shall be valid.</i>																																													
7.1	TYPE TEST	List of type test Reports to be submitted along with offer as per IEC 60099-4 Ed.3 <table> <tr> <th>Sr. No.</th><th>Test to be done</th><th>Reference BIS / Document</th></tr> <tr> <td>1</td><td>Power Frequency reference Voltage test(Both in Dry and Wet condition)</td><td>As per IEC 60099-4 Ed.3 clause 10.8.2</td></tr> <tr> <td>2</td><td>Lightning impulse residual voltage on complete arrester</td><td>As per IEC 60099-4 Ed.3 clause 10.8.2</td></tr> <tr> <td>3</td><td>Residual voltage tests</td><td>As per IEC 60099-4 Ed.3 clause 10.8.3</td></tr> <tr> <td>4</td><td>Test to verify long term stability under continuous operating voltage</td><td>As per IEC 60099-4 Ed.3 clause 10.8.4</td></tr> <tr> <td>5</td><td>Test to verify the repetitive charge transfer rating, Qrs</td><td>As per IEC 60099-4 Ed.3 clause 10.8.5</td></tr> <tr> <td>6</td><td>Heat dissipation behaviour</td><td>As per IEC 60099-4 Ed.3 clause 10.8.6</td></tr> <tr> <td>7</td><td>Operating duty test</td><td>As per IEC 60099-4 Ed.3 clause 10.8.7</td></tr> <tr> <td>8</td><td>Power-frequency voltage-versus-time test characteristic</td><td>As per IEC 60099-4 Ed.3 clause 10.8.8</td></tr> <tr> <td>9</td><td>Tests of arrester disconnector</td><td>As per IEC 60099-4 Ed.3 clause 10. 8.9</td></tr> <tr> <td>10</td><td>Operating withstand Test for Disconnector</td><td>As per IEC 60099-4 Ed.3 clause 8.9.2</td></tr> <tr> <td>11</td><td>Disconnector operation test – Current vs time</td><td>As per IEC 60099-4 Ed.3 clause 8.9.3</td></tr> <tr> <td>12</td><td>Short-circuit tests a. High current SC b. Low current SC</td><td>As per IEC 60099-4 Ed.3 clause 10.8.10</td></tr> <tr> <td>13</td><td>Bending moment test</td><td>As per IEC 60099-4 Ed.3 clause 10.8.11</td></tr> <tr> <td>14</td><td>Weather aging Test for 1000 hours of slat fog test and 1000 hours of UV test</td><td>As per IEC 60099-4 Ed.3 clause 10.8.17</td></tr> </table>	Sr. No.	Test to be done	Reference BIS / Document	1	Power Frequency reference Voltage test(Both in Dry and Wet condition)	As per IEC 60099-4 Ed.3 clause 10.8.2	2	Lightning impulse residual voltage on complete arrester	As per IEC 60099-4 Ed.3 clause 10.8.2	3	Residual voltage tests	As per IEC 60099-4 Ed.3 clause 10.8.3	4	Test to verify long term stability under continuous operating voltage	As per IEC 60099-4 Ed.3 clause 10.8.4	5	Test to verify the repetitive charge transfer rating, Qrs	As per IEC 60099-4 Ed.3 clause 10.8.5	6	Heat dissipation behaviour	As per IEC 60099-4 Ed.3 clause 10.8.6	7	Operating duty test	As per IEC 60099-4 Ed.3 clause 10.8.7	8	Power-frequency voltage-versus-time test characteristic	As per IEC 60099-4 Ed.3 clause 10.8.8	9	Tests of arrester disconnector	As per IEC 60099-4 Ed.3 clause 10. 8.9	10	Operating withstand Test for Disconnector	As per IEC 60099-4 Ed.3 clause 8.9.2	11	Disconnector operation test – Current vs time	As per IEC 60099-4 Ed.3 clause 8.9.3	12	Short-circuit tests a. High current SC b. Low current SC	As per IEC 60099-4 Ed.3 clause 10.8.10	13	Bending moment test	As per IEC 60099-4 Ed.3 clause 10.8.11	14	Weather aging Test for 1000 hours of slat fog test and 1000 hours of UV test	As per IEC 60099-4 Ed.3 clause 10.8.17
Sr. No.	Test to be done	Reference BIS / Document																																													
1	Power Frequency reference Voltage test(Both in Dry and Wet condition)	As per IEC 60099-4 Ed.3 clause 10.8.2																																													
2	Lightning impulse residual voltage on complete arrester	As per IEC 60099-4 Ed.3 clause 10.8.2																																													
3	Residual voltage tests	As per IEC 60099-4 Ed.3 clause 10.8.3																																													
4	Test to verify long term stability under continuous operating voltage	As per IEC 60099-4 Ed.3 clause 10.8.4																																													
5	Test to verify the repetitive charge transfer rating, Qrs	As per IEC 60099-4 Ed.3 clause 10.8.5																																													
6	Heat dissipation behaviour	As per IEC 60099-4 Ed.3 clause 10.8.6																																													
7	Operating duty test	As per IEC 60099-4 Ed.3 clause 10.8.7																																													
8	Power-frequency voltage-versus-time test characteristic	As per IEC 60099-4 Ed.3 clause 10.8.8																																													
9	Tests of arrester disconnector	As per IEC 60099-4 Ed.3 clause 10. 8.9																																													
10	Operating withstand Test for Disconnector	As per IEC 60099-4 Ed.3 clause 8.9.2																																													
11	Disconnector operation test – Current vs time	As per IEC 60099-4 Ed.3 clause 8.9.3																																													
12	Short-circuit tests a. High current SC b. Low current SC	As per IEC 60099-4 Ed.3 clause 10.8.10																																													
13	Bending moment test	As per IEC 60099-4 Ed.3 clause 10.8.11																																													
14	Weather aging Test for 1000 hours of slat fog test and 1000 hours of UV test	As per IEC 60099-4 Ed.3 clause 10.8.17																																													
7.2	ROUTINE TEST																																														

Initiator		HOG (Engineering)	
-----------	--	----------------------	--

TPSODL	TP SOUTHERN ODISHA DISTRIBUTION LIMITED, BERHAMPUR		
	TECHNICAL SPECIFICATION		
Document Title	Specification of 9kV 10kA Distribution Class Polymeric Lightning Arrester		
Document No.	ENG-HV-2004-02	Eff. Date: 14/02/2023	
Revision No.	02	Page 8 of 14	
Prepared By:	Reviewed By:	Approved By:	Issued By:

		The test shall be as per IEC 60099-4 Ed.3 clause no. 9.1 and or IS3070 latest editions, 1. Measurement of reference voltage test 2. Residual Voltage Test on complete arrester 3. Internal partial discharge test. This test shall be performed on each arrester unit. The test sample may be shielded against external partial discharges. Internal partial discharge shall not exceed 10 pC 4. Satisfactory absence from partial discharges and contact noise shall be checked on each unit by any sensitive method adopted by the manufacturer. 5. Disconnector Assembly- Proper assembly of each disconnector has to be demonstrated by either measurement of resistance / capacitance or partial discharges.																										
7.3	ACCEPTANCE TEST	<table><tr><th>Sr. No.</th><th>Test to be done</th><th>Reference BIS / Document</th></tr><tr><td>1</td><td>Measurement of power-frequency voltage on the arrester at the reference current.</td><td>As per IEC 60099-4 Ed.3 clause no. 9.2.1.a or IS:3070 part3 cl.6.2.8</td></tr><tr><td>2</td><td>Lightning impulse residual voltage on the arrester at nominal discharge current</td><td>As per IEC 60099-4 Ed.3 clause no. 9.2.1.b or IS:3070 part3 cl.6.4. and table 8</td></tr><tr><td>3</td><td>Partial Discharge Test (Both in Dry and Wet condition)</td><td>As per IEC60099 part4 cl.9.1</td></tr><tr><td>4</td><td>Visual Inspection</td><td>No damage and loose fitting</td></tr><tr><td>5</td><td>Verification of components and dimensions.</td><td>As per Approved GTP/TPSODL Specification</td></tr><tr><td>6</td><td>Verification of type test of ZnO Blocks</td><td>Document Verification</td></tr><tr><td>7</td><td>Peel off test (removal of housing)</td><td>Samples shall confirm to the specified design. Samples shall be free from air void, cavity and other visual defects. shall be Design conformation verification.</td></tr></table>			Sr. No.	Test to be done	Reference BIS / Document	1	Measurement of power-frequency voltage on the arrester at the reference current.	As per IEC 60099-4 Ed.3 clause no. 9.2.1.a or IS:3070 part3 cl.6.2.8	2	Lightning impulse residual voltage on the arrester at nominal discharge current	As per IEC 60099-4 Ed.3 clause no. 9.2.1.b or IS:3070 part3 cl.6.4. and table 8	3	Partial Discharge Test (Both in Dry and Wet condition)	As per IEC60099 part4 cl.9.1	4	Visual Inspection	No damage and loose fitting	5	Verification of components and dimensions.	As per Approved GTP/TPSODL Specification	6	Verification of type test of ZnO Blocks	Document Verification	7	Peel off test (removal of housing)	Samples shall confirm to the specified design. Samples shall be free from air void, cavity and other visual defects. shall be Design conformation verification.
Sr. No.	Test to be done	Reference BIS / Document																										
1	Measurement of power-frequency voltage on the arrester at the reference current.	As per IEC 60099-4 Ed.3 clause no. 9.2.1.a or IS:3070 part3 cl.6.2.8																										
2	Lightning impulse residual voltage on the arrester at nominal discharge current	As per IEC 60099-4 Ed.3 clause no. 9.2.1.b or IS:3070 part3 cl.6.4. and table 8																										
3	Partial Discharge Test (Both in Dry and Wet condition)	As per IEC60099 part4 cl.9.1																										
4	Visual Inspection	No damage and loose fitting																										
5	Verification of components and dimensions.	As per Approved GTP/TPSODL Specification																										
6	Verification of type test of ZnO Blocks	Document Verification																										
7	Peel off test (removal of housing)	Samples shall confirm to the specified design. Samples shall be free from air void, cavity and other visual defects. shall be Design conformation verification.																										
8.0	TYPE TEST CERTIFICATES	The Bidder shall furnish the type test certificates for the tests as mentioned above as per the corresponding standards. All the tests shall be conducted at CPRI/ERDA as per relevant standard. Type tests should have been conducted during the period not exceeding 5 years from the date of opening the bid. In the event of any discrepancy in the test reports, i.e. any test report not acceptable, same shall be carried out without any cost implication to TPSODL.																										
9.0	PRE-DESPATCH INSPECTION	1. Equipment shall be subject to inspection by a duly authorized representative of TPSODL. 2. Inspection may be made at any stage of manufacture at the option of the purchaser and the equipment if found unsatisfactory as to workmanship or material, the same is liable to rejection. 3. Bidder shall grant free access to the places of manufacture to TPSODL's representatives at all times when the work is in progress.																										

Initiator		HOG (Engineering)	
-----------	--	----------------------	--

TPSODL	TP SOUTHERN ODISHA DISTRIBUTION LIMITED, BERHAMPUR		
	TECHNICAL SPECIFICATION		
Document Title	Specification of 9kV 10kA Distribution Class Polymeric Lightning Arrester		
Document No.	ENG-HV-2004-02	Eff. Date: 14/02/2023	
Revision No.	02	Page 9 of 14	
Prepared By:	Reviewed By:	Approved By:	Issued By:

		4. Inspection by TPSODL or authorized representatives shall not relieve the supplier of his obligation of furnishing equipment in accordance with the specifications. 5. Material shall be dispatched after specific MDCC (Material Dispatch Clearance Certificate) is issued by TPSODL. 6. Following documents shall be sent along with material: - Test report - MDCC issued by TPSODL - Invoice in duplicate - Packing list - Drawings & catalogue - Guarantee / Warrantee card - Delivery Challan - Other Documents (as applicable)
10.0	INSPECTION AFTER RECEIPT AT STORE	The material received at TPSODL, Berhampur, Odisha store shall be inspected for acceptance and shall be liable for rejection, if found different from the reports of the pre-dispatch inspection and one copy of the report shall be sent to Engineering department.
11.0	GUARANTEE:	Bidder shall stand guarantee towards design, materials, workmanship & quality of process/ manufacturing of items under the contract for due and intended performance of the same, as an integrated product delivered under this contract. In the event any defect is found by the Company up to a period of 18 months from the date of commissioning or 24 months from the date of last supplies made under the contract, whichever is earlier, supplier shall be liable to undertake to replace/rectify such defects at his own costs. within mutually agreed timeframe, and to the entire satisfaction of the Company, failing which the Company will be at liberty to get it replaced/rectified at supplier's risks and costs and recover all such expenses plus the Company's own charges (@ 20% of expenses incurred), from the supplier or from the "Security cum Performance Deposit" as the case may be. The bidder shall further be responsible for ' free replacement' for another period of THREE years from the end of guarantee period for any 'latent defects' if noticed by the company.
12.0	PACKING	- Bidder shall ensure that all the equipment covered under this specification shall be prepared for rail/road transport in a manner so as to protect the equipment from damage in transit. - The material should be packed in vertical position in individual box in such a way that the shape of rain shed does not get deformed during transportation and storage. Note: Single use plastic not to be used for packing of the material.
13.0	TENDER SAMPLE	NA
14.0	TRAINING	NA
15.0	QUALITY CONTROL	The bidder shall submit with the offer Quality assurance plan indicating the various stages of inspection, the tests and checks which will be carried out

Initiator		HOG (Engineering)	
-----------	--	----------------------	--

	TP SOUTHERN ODISHA DISTRIBUTION LIMITED, BERHAMPUR		
	TECHNICAL SPECIFICATION		
Document Title	Specification of 9kV 10kA Distribution Class Polymeric Lightening Arrester		
Document No.	ENG-HV-2004-02	Eff. Date: 14/02/2023	
Revision No.	02	Page 10 of 14	
Prepared By:	Reviewed By:	Approved By:	Issued By:

		on the material of construction, components during manufacture and bought out items and fully assembled component and equipment after finishing. As part of the plan, a schedule for stage and final inspection within the parameters of the delivery schedule shall be furnished. TPSODL's engineer or its nominated representative shall have free access to the manufacturer's/sub-supplier's works to carry out inspections. The following information shall necessarily be submitted with the bid: 1. List of important raw materials, names of sub-suppliers for raw materials, standards to which raw material is tested and the copies of test reports of the tests carried out on raw materials in presence of Bidder's representatives. 2. List of manufacturing facilities available, level of automation achieved and the areas where manual process exists. 3. List of areas in manufacturing process where stage inspections are normally carried out for quality control and details of these tests and inspections 4. List of testing equipment for final testing with valid calibration reports. Manufacturer shall possess 0.1 class instruments for measurement of losses. 5. QAP withhold points for TPSODL 6. inspection.
16.0	MINIMUM TESTING FACILITIES	Bidder shall have adequate in house testing facilities for carrying out all routine tests, acceptance tests and pre-dispatch inspection as per relevant International / Indian standards.
17.0	MANUFACTURING ACTIVITIES	The successful bidder will have to submit technical compliance document and drawing as per RC line items for getting approval before mass manufacturing. Manufacturing shall start only after getting CAT-A approved drawings or as per intimation from TPSODL.
18.0	SPARES, ACCESSORIES ND TOOLS	Not Applicable
19.0	DRAWINGS AND DOCUMENTS	Following drawings and documents shall be prepared based on TPSODL specifications and statutory requirements and shall be submitted with the bid: a. Completely filled in Technical Particulars and compliance to each clause of the specification General Technical Requirements to Additional Details. b. Description of the equipment and all components including brochures. c. General Drawing arrangement of lightening arrester. d. Sectional drawing showing internal blocks etc. e. Bill of material. f. Experience Certificate and list. g. Type test certificates. h. List of makes of major components.

Initiator		HOG (Engineering)	
-----------	--	----------------------	--

	TP SOUTHERN ODISHA DISTRIBUTION LIMITED, BERHAMPUR		
	TECHNICAL SPECIFICATION		
Document Title	Specification of 9kV 10kA Distribution Class Polymeric Lightening Arrester		
Document No.	ENG-HV-2004-02	Eff. Date: 14/02/2023	
Revision No.	02	Page 11 of 14	
Prepared By:	Reviewed By:	Approved By:	Issued By:

		Drawings / documents to be submitted after the award of the contract are as under: <u>List of Drawings/Parameters to be submitted:</u> 1. Technical Parameters as asked in Specification (General Technical Particulars, General Technical Requirements, Additional Details, Fittings, Type test Reports and Routine test certificates of bought out accessories). 2. General Arrangement Drawing of the Lightening arrester (Front view and Top view. Complete list of fittings to be displayed and quantities to be mentioned with the drawing). 3. Sectional drawing showing the blocks arrangement. 4. Terminal and connection drawings 5. Type Test Certificates. 6. Installation/ Mounting Instructions/Drawing. <u>Additional Documents to be submitted :</u> a. List of raw materials as well as bought out accessories and the names of sub-suppliers selected from those furnished along with offer. b. Type test certificates of the raw materials and bought out accessories. c. The successful Bidder shall submit the routine test certificates of bought out accessories and central excise passes for raw material at the time of routine testing. All the documents & drawings shall be in English language. After the receipt of the order, the successful bidder will be required to furnish all relevant drawings/parameters/calculation to TPSODL for approval. <u>Instruction Manuals:</u> Bidder shall furnish softcopies of nicely bound manuals (In English language) covering erection and maintenance instructions and all relevant information and drawings pertaining to the main equipment as well as auxiliary devices.
20.0	GUARANTEED TECHNICAL PARTICULARS	All clauses and points in the Specification to be complied for along with GTR.
21.0	SCHEDULE OF DEVIATIONS	

Initiator		HOG (Engineering)	
-----------	--	----------------------	--

	TP SOUTHERN ODISHA DISTRIBUTION LIMITED, BERHAMPUR		
	TECHNICAL SPECIFICATION		
Document Title	Specification of 9kV 10kA Distribution Class Polymeric Lightning Arrester		
Document No.	ENG-HV-2004-02	Eff. Date: 14/02/2023	
Revision No.	02	Page 12 of 14	
Prepared By:	Reviewed By:	Approved By:	Issued By:

(TO BE ENCLOSED WITH THE BID)

All deviations from this specification shall be set out by the Bidders, clause by Clause in this schedule. Unless specifically mentioned in this Schedule, the tender shall be deemed to confirm the purchaser's specifications:

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

We confirm that there are no deviations apart from those detailed above.

Seal of the Company:

Signature

Designation

Initiator		HOG (Engineering)	
-----------	--	----------------------	--

	TP SOUTHERN ODISHA DISTRIBUTION LIMITED, BERHAMPUR		
	TECHNICAL SPECIFICATION		
Document Title	Specification of 9kV 10kA Distribution Class Polymeric Lightning Arrester		
Document No.	ENG-HV-2004-02	Eff. Date: 14/02/2023	
Revision No.	02	Page 13 of 14	
Prepared By:	Reviewed By:	Approved By:	Issued By:

ANNEXURE-I

INSPECTION TEST PLAN FOR PRE-DELIVERY OF LIGHTENING ARRESTER

Sr. No.	Test to be done	Reference BIS / Document	Acceptance criteria
1	Power Frequency reference Voltage test (In Wet condition)	As per IEC 60099-4 Ed.3 clause no. 9.2.1.a or IS:3070 part3 cl.6.2.8	Should withstand as per Specification requirements.
2	Lightning impulse residual voltage on the arrester at nominal discharge current	As per IEC 60099-4 Ed.3 clause no. 9.2.1.b or IS:3070 part3 cl.6.4. and table 8	Should withstand as per Specification requirements.
3	Partial Discharge Test (Both in Dry and Wet condition)	As per IEC60099 part4 cl.9.1	Should withstand as per Specification requirements.
4	Visual Inspection	No damage and loose fitting	Compliance as per Specification requirements and approved drawings
5	Verification of components and dimensions.	As per Approved GTP/ TPSODL Specification	Compliance as per Specification requirements and approved drawings
6	Verification of type test of ZnO Blocks	Document Verification	Compliance as per Specification requirements and IS/IEC standards
7	Peel off test (removal of housing)	Samples shall confirm to the specified design. Samples shall be free from air void, cavity and other visual defects. shall be Design conformation verification, free	Should meet the Specification requirements without any defect

Initiator		HOG (Engineering)	
-----------	--	----------------------	--

STANDARD TECHNICAL SPECIFICATION COVER SHEET

Specification No. : ENG-HV-2015

Specification Name : Technical Specification for 11KV Lightning Arrester (10 KA)

Prepared by	Reviewed by	Reviewed by	Reviewed by	Approved by	Released by
SRASTANTH MOHANTY	DEEPAK BADATYA	SMARANIKA ACHARYA	Vijender Goyal	KHAJAN BHARDWAJ	POURUSH GARG
TPCODL	TPNODL	TPWODL	TPSODL	TPCODL	TPCODL
21-01-2023	23-02-2023	01-03-2023	04-03-2023	18-03-2023	18-03-2023

Property of TATA POWER ODISHA DISCOMs – Not to be reproduced without permission of TPCODL/ TPNODL/ TPSODL/ TPWODL

CONTENTS

1. SCOPE
2. APPLICABLE STANDARDS
3. CLIMATIC CONDITIONS OF THE INSTALLATION
4. GENERAL TECHNICAL REQUIREMENTS
5. GENERAL CONSTRUCTIONS
6. MARKING
7. TESTS
8. TYPE TEST CERTIFICATES
9. PRE-DISPATCH INSPECTION
10. INSPECTION AFTER RECEIPT AT STORES
11. GUARANTEE
12. PACKING
13. TENDER SAMPLE
14. QUALITY CONTROL
15. TESTING FACILITIES
16. MANUFACTURING FACILITIES
17. SPARES, ACCESSORIES AND TOOLS
18. DRAWINGS AND DOCUMENTS
19. SCHEDULE "A" GUARANTEED TECHNICAL PARTICULARS
20. SCHEDULE "B" DEVIATIONS

1. SCOPE:

This specification covers the design, manufacture, testing and supply of 12kV,10kA, Station class-SL, (class-II) Metal Oxide Gap less Polymeric Lightning Arrester. The specific requirements are covered in the enclosed technical data sheet. Some of the parts that may have not been specifically included, but otherwise form part of the Lightning arrester as per standard practice or necessary for proper operation, will be deemed to be also included in this specification. The successful bidder shall not be eligible for any extra charges for such accessories etc. Scope also includes transportation & unloading at store / site.

2. APPLICABLE STANDARDS:

The equipment covered by this specification shall unless otherwise stated, be designed, manufactured and tested in accordance with the latest editions of the following Indian, International Standards and shall conform to the regulations of the local authorities:

IEC 60099-4	Specification for surge arrestor without gap for AC System
IS 15086	Specification for Metal Oxide Gap less Lightning arresters for alternating current System
IS 6209	Method of Partial Discharge Measurement
IS 8704 & IS 731	Guide for selection of creepage distance of polymeric housing insulator.
ISO 48	Rubber, vulcanized or thermoplastic -- Determination of hardness (hardness between 10 IRHD and 100 IRHD).
IEC 60721-3-2	Classification of environmental conditions. Classification of groups of environmental parameters and their severities. Transportation
IEC 60071	Insulation co-ordination -- Part 1 definitions, principles and rules; -- Part 2: Application Guide
IEC 60815-1	Selection and dimensioning of high-voltage insulators intended for use in polluted conditions –Part 1: Definitions, information and general principles
IS 2629	Recommended Practice for Hot-Dip Galvanizing of Iron and Steel
IS 2633	Methods for testing uniformity of coating of zinc coated articles
IS 4759	Hot-dip zinc coatings on structural steel and other allied products

3. CLIMATIC CONDITIONS:

1	Maximum ambient temperature	50 deg C
2	Max. Daily average ambient temp	35 deg C
3	Min Ambient Temperature	0 deg C
4	Maximum Humidity	95%
5	Average Annual Rainfall	150mm
6	Average No. of rainy days per annum	120
7	Altitude above MSL not exceeding	1000m
8	Wind Pressure	300 Km/hr
9	Earthquakes of an intensity in horizontal direction	equivalent to seismic acceleration of 0.3g
10	Earthquakes of an intensity in vertical direction	equivalent to seismic acceleration of 0.15g (g being acceleration due to gravity)

TPCODL/TPWODL/TPNODL/TPSODL service area has heavy saline conditions along the coast and High cyclonic Intensity winds with speed upto 300 Kmph. The atmosphere is generally laden with mild acid and dust in suspension during the dry months and is subjected to fog in cold months.

4. GENERAL TECHNICAL REQUIREMENTS:

SL. NO.	TECHNICAL PARTICULARS (Class-SL,Class-II)	DESIRED VALUE
1	Installation	Outdoor
2	Reference standards (Latest Amend.)	IS 15086,Part-4, IEC 60099
3	Arrester Type and Housing	Metal Oxide Gapless Cage type with Polymeric housing
4	Normal System Voltage	11 kV
5	Highest System Voltage	12 kv
6	Rated Frequency	50 Hz
7	Maximum Continuous Operating Voltage (M.C.O.V)	9.6 kV (rms)
8	Arrester Rating	12 kV (rms)
9	Discharge Current	
a	Nominal Discharge Current	10 kA
b	Switching impulse discharge current	0.5kA

SL. NO.	TECHNICAL PARTICULARS (Class-SL, Class-II)	DESIRED VALUE
10	Short Circuit rating	25 kA
11	Voltage Withstand on Arrester Housing	
a	Standard rated short duration Power Frequency withstand Voltage (Dry/Wet) as per IS:2165	28kV (rms)
b	Standard rated Lightning Impulse withstand Voltage (Peak in kV)	75kV (Peak)
12	Lightning Impulse Protection Level (at 10kA)	49 kV
13	Long Duration Current	
a	Peak Current	75 A
b	Virtual duration of Peak T	1000 T (Micro Sec)
14	High Current impulse Operating Duty	65 kA (Peak)
15	Creepage Distance of Arrester Housing	31mm/KV (min) or 380 mm (min)
16	Partial Discharge at 1.05 times M.C.O. V	<10 pc
17	Energy Absorption capacity (KJ/KV)	>=4KJ/KV
18	Repetitive charge transfer withstand (coloumbs),Qrs	>=1.0
19	Temporary over voltage (TOV)	
a	1 sec	15kVp
b	10 sec	14kVp
20	Maximum Lightning Impulse Residual voltage with 8/20 microsecond wave	
a	at 5kA	35kVp
b	at 10kA	38kVp
c	at 20kA	--
21	Maximum switching current impulse residual voltage in kVP at 500 A	21 kVp
22	Max. Cantilever Strength	12 Kg-M(minimum)
23	Total height of the arrester	To be specified by bidder
24	Total weight of the arrester	To be specified by bidder
25	No. of Metal oxide blocks in arrester	To be specified by bidder
26	Rating of individual ZnO blocks used for assembly	To be specified by bidder
27	Power Losses of the Arrester in watt	To be specified by bidder
28	Type of Mounting	Bracket type
29	Material of Insulating base	UV resistant Fire retardant DMC
30	Disconnecter (optional)	
a	Disconnecter connecting lead	Insulated flexible tinned plated copper braid with lugs
b	Size of Insulated Tinned copper	25 sq.mm

SL. NO.	TECHNICAL PARTICULARS (Class-SL,Class-II)	DESIRED VALUE
	braid	
c	Length of Insulated Tinned copper braid	300 mm
31	Insulating Terminal Cap	Polyolefin
32	Material of Nuts and bolts	Stainless Steel

5. GENERAL CONSTRUCTION:

Lighting arrestors shall be station class, zinc oxide and gapless type suitable for operation under the system conditions specified. This shall be self-supporting, structure mounting type. Each unit of arrester assembly shall be hermitically sealed, leak tested and protected against ingress of moisture and shall be individual demountable. The seal shall be properly designed and tested for operation under extreme weather conditions.

5.1 Assembly:

Lighting arrester shall be supplied along with the insulating base/Mounting bracket, terminal connector, insulating terminal cap (Polyolefin) and necessary hardware. The assembly consists of a stack of metal oxide elements arranged in cage type designs. All metal parts shall be of non-rusting and non –corroding metal. Bolts, screws and pins shall be provided with lock washers. Lightning arrester construction shall be suitable to withstand seismic loading, short circuit forces, wind load, the force exerted on the arrester base and to terminal imposed by the line conductor. All similar parts, particularly removable ones, shall be interchangeable.

- The 12kV 10kA station class Lightning Arrester shall have L-shaped terminal clamp suitable for conductor size of 148 sqmm.
- Housing shall be polymeric to provide thermal dissipation of heat generated in the metal oxide elements during over voltage and line discharge. Polymeric housing shall be free from flaws affecting the mechanical and electrical strength of the arrester. Housing shall be capable to withstand the temperature rise due to the non-uniform field distribution, caused by the pollution on the surface of the housing.
- The arrester shall have thermal stability to withstand the heat generated from ZnO element due to continuous operating voltages and surges. It shall remain in undamaged condition, capable protective function.
- Arrestors shall incorporate anticontamination feature to prevent arrester failure, consequent to uneven voltage gradient across the stack in the event of contamination of the arrester insulating material. These features shall be described in detail when submitting the Bid.

Arrestors shall be capable of discharging over voltages occurring during switching of unloaded transformers, capacitors banks and long lines. No radio interferences shall be caused by the arrestors operating at the normal rated voltage.

e) Bidder shall mention energy handling capacity.

5.2 EARTHING TERMINALS:

Earth Terminals shall be provided with Lightning arrester.

5.3 MECHANICAL STRENGTH:

a) The Lightning Arrester and it base shall withstand rated mechanical terminal load and electromagnetic forces without impairing their operational reliability.

b) The Lightning Arrester shall not come out of their positions by gravity, wind pressure, vibrations or reasonable shocks.

5.4 DISCONNECTORS (OPTIONAL):

a) Each Individual unit of Lighting Arrester with disconnector shall be hermetically sealed and fully protected against ingress of moisture. The hermetic seal shall be effective for the entire life time of the Lightning Arrester with disconnector under the specified service conditions. Disconnectors shall give the visible indication of the failed arrester. The Lightning Arrester with disconnector shall be suitable for bracket type mounting. Disconnector shall be suitable for screwing directly to LA with terminal of M10.

b) The corresponding units of Lightning Arrester with disconnector of the same rating shall be interchangeable without adversely affecting the performance. All the necessary flanges, bolts, nuts, clamps etc. required for assembly of complete Lightning Arrester with disconnector and accessories and mounting on purchaser's support structure shall be included in bidder's scope of supply. The mounting details for mounting the Lightning Arrester with disconnector on purchaser's support shall be given along with bid.

5.5 MOUNTING BRACKET:

a) The 12kV 10kA Distribution class Lightning Arrester shall be fixed over a mounting bracket made of UV resistance, Fire retardant DMC material.

b) The 12kV 10kA Station class Lightning Arrester shall be fixed over a mounting arrangement made of Hot dip galvanized MS material.

6. MARKING:

A stainless steel rating plate, of at least 1 mm thickness, shall be fitted to each Lightning Arrester in a visible position and shall carry all the information as specified in the standards. The letters on the rating plate shall be engraved black on the white/silver background. Fixing screws for outdoor use shall be of stainless steel or any other corrosion resistant metals. The Name plate shall be embossed with "PO no. with date" & "TPCODL/TPWODL/TPNODL/TPSODL",

The following information shall be mentioned on the Name Plate

- a) Continuous operating Voltage
- b) Rated Voltage
- c) Rated Frequency
- d) Nominal Discharge Current
- e) Pressure relief rated current in kA r.m.s.
- f) Manufacturer's Name
- g) Type and Identification of the complete
- h) Year/Month of Manufacture
- i) Serial Number.
- j) Warrantee/guarantee clause

7. TESTS:

All routine, acceptance & type tests shall be carried out in accordance with the relevant IS/IEC. All acceptance tests shall be witnessed by the purchaser/his authorized representative. All the components and fittings shall also be type tested as per the relevant standards. Following tests shall necessarily be conducted on lightning arrester in addition to others specified in IS/IEC standards: -

7.1 ACCEPTANCE TESTS

- a) Measurement of Power frequency reference voltage
- b) Lightning impulse residual voltage test on complete arrester or arrester unit.
- c) Internal Partial Discharge test
- d) Visual Examination

All acceptance tests shall be witnessed by TPCODL/TPWODL/TPNODL/TPSODL / the purchaser's or his authorized representative. The above mentioned tests shall be made on 100 % of arrestors to be supplied.

7.2 ROUTINE TESTS

- a) Measurement of reference voltage test
- b) Residual Voltage Test on complete arrester
- c) Internal partial discharge test. This test shall be performed on each arrester unit. The test sample may be shielded against external partial discharges. Internal partial discharge shall not exceed 10 pC

7.3 TYPE TESTS

- a) Insulation withstand tests, including lightning impulse voltage withstand test
- b) Residual voltage tests, including steep current impulse residual voltage test, lightning impulse residual voltage test and switching impulse residual voltage test.
- c) Operating duty tests
- d) Long duration current impulse withstand test/Repetitive charge transfer rating, Qrs.
- e) Weather ageing test
- f) Short circuit test (low/high current)
- g) Power frequency (voltage vs Time curve)
- h) Bending moment test
- i) Hot dip Galvanizing test on exposed steel parts.
- j) Internal partial discharge test
- k) Wet power frequency voltage withstand test.
- l) Seal leak rate test
- m) Tests on arrester disconnectors- Time current characteristics (optional)

7.4 SPECIAL THERMAL STABILITY TEST:

The test requires additional agreement between manufacturer and purchaser prior to the commencement of arrester assembly.

8. TYPE TEST CERTIFICATES:

The Bidder shall furnish the type test certificates for the tests as mentioned above as per the corresponding standards. All the tests shall be conducted at **CPRI/ERDA** as per relevant standard. Type tests should have been conducted during the period not exceeding 5 years from the date of opening the bid. In the event of any discrepancy in the test reports, i.e. any test report not acceptable, same shall be carried out without any cost implication to TPCODL/TPWODL/TPNODL/TPSODL.

9. PRE-DISPATCH INSPECTION:

The material shall be subject to inspection by a duly authorized representative of the TPCODL/TPWODL/TPNODL/TPSODL. Inspection may be made at any stage of manufacture at the discretion of the purchaser and the equipment, if found unsatisfactory as to workmanship or material, the same is liable to rejection. Bidder shall grant free access to the places of manufacture to TPCODL/TPWODL/TPNODL/TPSODL's representatives at all times when the work is in progress. Inspection by the TPCODL/TPWODL/TPNODL/TPSODL or its authorized representatives shall not relieve the bidder of his obligation of furnishing equipment in accordance

with the specifications. Material shall be dispatched after specific MDCC (Material Dispatch Clearance Certificate) is issued by TPCODL/TPWODL/TPNODL/TPSODL.

Following documents shall be sent along with material.

- a) Test reports
- b) MDCC issued by TPCODL/TPWODL/TPNODL/TPSODL
- c) TPCODL/TPWODL/TPNODL/TPSODL Invoice in duplicate
- d) Packing list
- e) Drawings & catalogue
- f) Guarantee / Warrantee card
- g) Delivery Challan
- h) Other Documents (as applicable).

10. INSPECTION AFTER RECEIPT AT STORE:

The material received at TPCODL/TPWODL/TPNODL/TPSODL, Odisha store will be inspected for acceptance and shall be liable for rejection, if found different from the reports of the pre-dispatch inspection and one copy of the report shall be sent to Engineering department.

11. GUARANTEE:

Bidder shall stand guarantee towards design, materials, workmanship & quality of process/ manufacturing of items under the contract for due and intended performance of the same, as an integrated product delivered under this contract. In the event any defect is found by the Company up to a period of 18 months from the date of commissioning or 24 months from the date of last supplies made under the contract, whichever is earlier, supplier shall be liable to undertake to replace/rectify such defects at his own costs. within mutually agreed timeframe, and to the entire satisfaction of the Company, failing which the Company will be at liberty to get it replaced/rectified at supplier's risks and costs and recover all such expenses plus the Company's own charges (@ 20% of expenses incurred), from the supplier or from the "Security cum Performance Deposit" as the case may be.

The bidder shall further be responsible for ' free replacement' for another period of THREE years from the end of gurantee period for any 'latent defects' if noticed by the company.

12. PACKING AND TRANSPORT:

Bidder shall ensure that all material covered by this specification shall be prepared for rail/road transport (local equipment) and be packed in such a manner as to protect it from damage in transit. The bidder shall provide instructions regarding handling and storage precautions to be taken at site. The material should be packed in vertical position in individual box in such a way that the

shape of rain shed does not get deformed during transportation and storage.

13. TENDER SAMPLE:

One sample to be submitted during technical bid submission. This shall be Non-returnable basis.

14. QUALITY CONTROL:

The bidder shall submit QAP indicating the various stages of inspection, the tests and checks which will be carried out on the material of construction, components during manufacture and bought out items and fully assembled component and equipment after finishing. As part of the plan, a schedule for stage and final inspection within the parameters of the delivery schedule shall be furnished. The Purchaser's engineer or its nominated representative shall have free access to the manufacturer's/sub-supplier's works to carry out inspections.

15. TESTING FACILITIES:

Bidder shall have adequate in house testing facilities for carrying out all routine tests & acceptance tests as per relevant International / Indian standards.

16. MANUFACTURING FACILITIES:

The successful bidder shall submit the bar chart for various manufacturing activities clearly elaborating each stage, with quantity. This bar chart should be in line with the Quality assurance plan submitted with the offer.

The successful bidder will have to submit technical compliance document and drawing as per RC line items for getting approval before mass manufacturing.

Manufacturing shall start only after getting CAT-A approved drawings or as per intimation from TPCODL/TPWODL/TPNODL/TPSODL.

17. SPARES, ACCESSORIES AND TOOLS

Not applicable.

18. DRAWINGS AND DOCUMENTS:

Following drawings and documents shall be prepared based on TPCODL/TPWODL/TPNODL/TPSODL specifications and statutory requirements and shall be submitted with the bid:

- a) Completely filled in Technical Particulars and compliance to each clause of the specification General Technical Requirements to Additional Details.
- b) Description of the equipment and all components including brochures.
- c) General Drawing arrangement of lightening arrester.
- d) Sectional drawing showing internal blocks etc.

- e) Bill of material.
- f) Experience Certificate and list.
- g) Type test certificates.
- h) List of makes of major components.
- i) Foundation plan

Drawings / documents to be submitted after the award of the contract are as under:

List of Drawings/Parameters to be submitted:

- a) Technical Parameters as asked in Specification (General Technical Particulars, General Technical Requirements, Additional Details, Fittings, Type test Reports and Routine test certificates of bought out accessories).
- b) General Arrangement Drawing of the Lightning arrester (Front view and Top view. Complete list of fittings to be displayed and quantities to be mentioned with the drawing).
- c) Sectional drawing showing the blocks arrangement.
- d) Terminal and connection drawings
- e) Type Test Certificates.
- f) Installation/ Mounting Instructions/Drawing.

Additional Documents to be submitted:

- a) List of raw materials as well as bought out accessories and the names of sub-suppliers selected from those furnished along with offer.
- b) Type test certificates of the raw materials and bought out accessories.
- c) The successful Bidder shall submit the routine test certificates of bought out accessories and central excise passes for raw material at the time of routine testing.

All the documents & drawings shall be in English language.

After the receipt of the order, the successful bidder will be required to furnish all relevant drawings/parameters/calculation to TPCODL/TPWODL/TPNODL/TPSODL for approval.

Instruction Manuals:

Bidder shall furnish softcopies of nicely bound manuals (In English language) covering erection and maintenance instructions and all relevant information and drawings pertaining to the main equipment as well as auxiliary devices.

19. SCHEDULE- "A" GUARANTEED TECHNICAL PARTICULARS:

SL. NO.	TECHNICAL PARTICULARS (Class-SL, Class-II)	DESIRED VALUE
1	Installation	
2	Reference standards (Latest Amend.)	
3	Arrester Type and Housing	
4	Normal System Voltage	
5	Highest System Voltage	
6	Rated Frequency	
7	Maximum Continuous Operating Voltage (M.C.O.V)	
8	Arrester Rating	
9	Discharge Current	
a	Nominal Discharge Current	
b	Switching impulse discharge current	
10	Short Circuit rating	
11	Voltage Withstand on Arrester Housing	
a	Standard rated short duration Power Frequency withstand Voltage (Dry/Wet) as per IS:2165	
b	Standard rated Lightning Impulse withstand Voltage (Peak in kV)	
	Lightning Impulse Protection Level (at 10kA)	
13	Long Duration Current	
a	Peak Current	
b	Virtual duration of Peak T	
14	High Current impulse Operating Duty	
15	Creepage Distance of Arrester Housing	
16	Partial Discharge at 1.05 times M.C.O. V	
17	Energy Absorption capacity (KJ/KV)	
18	Repetitive charge transfer withstand (coloumbs), Qrs	
19	Temporary over voltage (TOV)	
a	1 sec	
b	10 sec	
20	Maximum Lightning Impulse Residual voltage with 8/20 microsecond wave	
a	at 5kA	
b	at 10kA	
c	at 20kA	
21	Maximum switching current impulse residual voltage in kVP at 500 A	
22	Max. Cantilever Strength	
23	Total height of the arrester	

SL. NO.	TECHNICAL PARTICULARS (Class-SL, Class-II)	DESIRED VALUE
24	Total weight of the arrester	
25	No. of Metal oxide blocks in arrester	
26	Rating of individual ZnO blocks used for assembly	
27	Power Losses of the Arrester in watt	
28	Type of Mounting	
29	Material of Insulating base	
30	Disconnecter (optional)	
a	Disconnecter connecting lead	
b	Size of Insulated Tinned copper braid	
c	Length of Insulated Tinned copper braid	

20. SCHEDULE "B" DEVIATIONS:

(TO BE ENCLOSED WITH TECHNICAL BID)

All deviations from this specification shall be set out by the Bidders, clause by Clause in this schedule. Unless specifically mentioned in this Schedule, the tender shall be deemed to confirm the purchaser's specifications:

SL. No	Clause No.	Details of deviation with justifications

We confirm that there are no deviations apart from those detailed above.

Seal of the Company:

Signature

Designation

STANDARD TECHNICAL SPECIFICATION COVER SHEET

Specification No. : ENG-EHV-1021

Specification Name : Technical Specification for 33KV Lightning Arrester (10 KA)

Prepared by	Reviewed by	Reviewed by	Reviewed by	Approved by	Released by
SRASTANTH MOHANTY	DEEPAK BADATYA	SMARANIKA ACHARYA	Vijender Goyal	KHAJAN BHARDWAJ	POURUSH GARG
TPCODL	TPNODL	TPWODL	TPSODL	TPCODL	TPCODL
21-01-2023	23-02-2023	01-03-2023	04-03-2023	18-03-2023	18-03-2023

Property of TATA POWER ODISHA DISCOMs – Not to be reproduced without permission of TPCODL/ TPNODL/ TPSODL/ TPWODL



Specification No: ENG-EHV-1021

Specification Name: Technical Specification for
33KV Lightning Arrester (10 KA)

CONTENTS

1. SCOPE
2. APPLICABLE STANDARDS
3. CLIMATIC CONDITIONS OF THE INSTALLATION
4. GENERAL TECHNICAL REQUIREMENTS
5. GENERAL CONSTRUCTIONS
6. MARKING
7. TESTS
8. TYPE TEST CERTIFICATES
9. PRE-DISPATCH INSPECTION
10. INSPECTION AFTER RECEIPT AT STORES
11. GUARANTEE
12. PACKING
13. TENDER SAMPLE
14. QUALITY CONTROL
15. TESTING FACILITIES
16. MANUFACTURING FACILITIES
17. SPARES, ACCESSORIES AND TOOLS
18. DRAWINGS AND DOCUMENTS
19. TRAINING
20. SCHEDULE "A" GUARANTEED TECHNICAL PARTICULARS
21. SCHEDULE "B" DEVIATIONS

1. SCOPE:

This specification covers the design, manufacture, testing and supply of 33kV, 10kA, Station class-SL, (Station class-II) and 33 KV, 10 KA –SM (class –III), Metal Oxide Gap less Polymeric Lightning Arrester. The specific requirements are covered in the enclosed technical data sheet. Some of the parts that may have not been specifically included, but otherwise form part of the Lightning arrester as per standard practice or necessary for proper operation, will be deemed to be also included in this specification. The successful bidder shall not be eligible for any extra charges for such accessories etc. Scope also includes transportation & unloading at store / site.

2. APPLICABLE STANDARDS:

The equipment covered by this specification shall unless otherwise stated, be designed, manufactured and tested in accordance with the latest editions of the following Indian, International Standards and shall conform to the regulations of the local authorities:

IEC 60099-4	Specification for surge arrestor without gap for AC System
IS 15086	Specification for Metal Oxide Gap less Lightning arresters for alternating current System
IS 6209	Method of Partial Discharge Measurement
IS 8704 & IS 731	Guide for selection of creepage distance of polymeric housing insulator.
ISO 48	Rubber, vulcanized or thermoplastic -- Determination of hardness (hardness between 10 IRHD and 100 IRHD).
IEC 60721-3-2	Classification of environmental conditions. Classification of groups of environmental parameters and their severities. Transportation
IEC 60071	Insulation co-ordination -- Part 1 definitions, principles and rules; -- Part 2: Application Guide
IEC 60815-1	Selection and dimensioning of high-voltage insulators intended for use in polluted conditions –Part 1: Definitions, information and general principles
IS 2629	Recommended Practice for Hot-Dip Galvanizing of Iron and Steel
IS 2633	Methods for testing uniformity of coating of zinc coated articles
IS 4759	Hot-dip zinc coatings on structural steel and other allied products

3. CLIMATIC CONDITIONS:

1	Maximum ambient temperature	50 deg C
2	Max. Daily average ambient temp	35 deg C
3	Min Ambient Temperature	0 deg C
4	Maximum Humidity	95%
5	Average Annual Rainfall	1500mm
6	Average No. of rainy days per annum	120
7	Altitude above MSL not exceeding	1000m
8	Wind Pressure	300 Km/hr
9	Earthquakes of an intensity in horizontal direction	equivalent to seismic acceleration of 0.3g
10	Earthquakes of an intensity in vertical direction	equivalent to seismic acceleration of 0.15g (g being acceleration due to gravity)

TPCODL/TPWODL/TPNODL/TPSODL service area has heavy saline conditions along the coast and High cyclonic Intensity winds with speed upto 300 Kmph. The atmosphere is generally laden with mild acid and dust in suspension during the dry months and is subjected to fog in cold months.

4. GENERAL TECHNICAL REQUIREMENTS:

SL. NO.	TECHNICAL PARTICULARS (Class-SL, Class-II)	DESIRED VALUE
1	Installation	Outdoor
2	Reference standards (Latest Amend.)	IS 15086:Part.4(2017), IEC 60099
3	Arrester Type and Housing	Metal Oxide Gapless Cage type with Polymeric housing
4	Normal System Voltage	33 kV
5	Highest System Voltage	36 kV
6	Rated Frequency	50 Hz
7	Maximum Continuous Operating Voltage (M.C.O.V)	25 kV (rms)
8	Arrester Rating	30 kV (rms)
9	Discharge Current	
a	Nominal Discharge Current	10 kA
b	Switching impulse discharge current	0.5kA

SL. NO.	TECHNICAL PARTICULARS (Class-SL,Class-II)	DESIRED VALUE
10	Short Circuit rating	40 kA
11	Voltage Withstand on Arrester Housing	
a	Standard rated short duration Power Frequency withstand Voltage (Dry/Wet) as per IS:2165	70kV (rms)
b	Standard rated Lightning Impulse withstand Voltage (Peak in kV)	170kV (Peak)
12	Lightning Impulse Protection Level (at 10kA)	115 kV
13	Long Duration Current	
a	Peak Current	400A
b	Virtual duration of Peak T	2000 T (Micro Sec)
14	High Current impulse Operating Duty	100 kA (Peak)
15	Creepage Distance of Arrester Housing	1116 min or 31mm/KV
16	Partial Discharge at 1.05 times M.C.O. V	<10 pc
17	Energy Absorption capacity (KJ/KV)	>=4KJ/KV
18	Repetitive charge transfer withstand (coloumbs),Qrs	>=1.0
19	Temporary over voltage (TOV)	
a	1 sec	51kVp
b	10 sec	49kVp
20	Maximum Lightning Impulse Residual voltage with 8/20 microsecond wave	
a	at 5kA	85kVp
b	at 10kA	90kVp
c	at 20kA	100kVp
21	Maximum switching current impulse residual voltage in kVP at 500 A	73.2 KVP
22	Max. Cantilever Strength	325 kgF
23	Total height of the arrester	To be specified by bidder
24	Total weight of the arrester	To be specified by bidder
25	No. of Metal oxide blocks in arrester	To be specified by bidder
26	Rating of individual ZnO blocks used for assembly	To be specified by bidder
27	Power Losses of the Arrester in watt	To be specified by bidder
28	Type of Mounting	Pedestal
29	Material of Insulating base	UV resistant Fire retardant DMC
30	Insulating Terminal Cap	Polyolefin
31	Material of Nuts and bolts	Stainless Steel

SL. NO.	TECHNICAL PARTICULARS (Class-SM,Class-III)	DESIRED VALUE
1	Installation	Outdoor
2	Reference standards (Latest Amend.)	IS 15086:Part.4(2017), IEC 60099
3	Arrester Type and Housing	Metal Oxide Gapless Cage type and Polymeric housing
4	Normal System Voltage	33 kV
5	Highest System Voltage	36 kV
6	Rated Frequency	50 Hz
7	Maximum Continuous Operating Voltage (M.C.O.V)	25 kV (rms)
8	Arrester Rating	30 kV (rms)
9	Discharge Current	
a	Nominal Discharge Current	10 kA
b	Switching impulse discharge current	1kA
10	Short Circuit rating	40 KA
a	Reduced Short circuit currents	25 kA
b	Low short circuit current with a duration of 1 sec	600±200 kA
c	Prospective symmetrical fault current	40 kA for min 0.2 sec
11	Voltage Withstand on Arrester Housing	
a	Standard rated short duration Power Frequency withstand Voltage (Dry/Wet) as per IS:2165	70kV (rms)
b	Standard rated Lightning Impulse withstand Voltage (Peak in kV)	170kV (Peak)
12	Lightning Impulse Protection Level (at 10kA)	115 kV
13	Long Duration Current	To be provided by bidder
a	Peak Current	To be provided by bidder
b	Virtual duration of Peak T	2400 T (Micro Sec)
14	High Current impulse Operating Duty	100 kA (Peak)
15	Creepage Distance of Arrester Housing	1116 min or 31mm/KV
16	Partial Discharge at 1.05 times M.C.O. V	<10 pc
17	Energy Absorption capacity (KJ/KV)	>=7KJ/KV
18	Repetitive charge transfer withstand (coloumbs),Qrs	1.6 Coloumbs
19	Temporary over voltage (TOV)	
a	1 sec	51kVp
b	10 sec	49kVp
20	Maximum Lightning Impulse Residual voltage with 8/20 microsecond wave	
a	at 5kA	85kVp
b	at 10kA	90kVp

SL. NO.	TECHNICAL PARTICULARS (Class-SM,Class-III)	DESIRED VALUE
c	at 20kA	100kVp
21	Maximum switching current impulse residual voltage in kVP At 500 Amps	73.2KVp
22	Max. Cantilever Strength	325 kgF
23	Total height of the arrester	To be specified by bidder
24	Total weight of the arrester	To be specified by bidder
25	No. of Metal oxide blocks in arrester	To be specified by bidder
26	Rating of individual ZnO blocks used for assembly	To be specified by bidder
27	Power Losses of the Arrester in watt	To be specified by bidder
28	Type of Mounting	Pedestal
29	Material of Insulating base	UV resistant Fire retardant DMC
30	Insulating Terminal Cap	Polyolefin
31	Material of Nuts and bolts	Stainless Steel

5. GENERAL CONSTRUCTION:

5.1 Assembly:

The surge arresters shall conform in general to IEC-60099-4 ed 3.0

Surge arrester shall be supplied along with the insulating base, terminal connector, insulating terminal cap (Polyolefin) and necessary hardware. The Assembly consists of a stack of Metal Oxide elements arranged in a cage type design. All metal parts shall be of non-rusting and non corroding metal (All ferrous parts shall be Hot Dip Galvanized i.e. HDG). All nuts & bolts shall be with double spring washers. Bolts, screws and pins shall be provided with lock washers. Surge arrester construction shall be suitable to withstand Seismic Loading, Short Circuit Forces and wind load and the force exerted on the arrester base and to the terminal imposed by the line conductor. All similar parts, particularly removable ones, shall be interchangeable.

Arresters shall be completely molded units with absolutely no air volume inside.

Arresters of tubular construction i.e arresters assembled in hollow core insulators with enclosed gas volume are not acceptable due to abrupt short circuit performance and poor sealing mechanism.

- a) Housing shall be polymeric to provide thermal dissipation of heat generated in the metal oxide elements during over voltage and line discharge. Polymeric housing shall be free from flaws affecting the mechanical and electrical strength of the arrester. Housing shall be capable to withstand the desired pollution stresses without flashover. Housing shall be capable to

withstand the temperature rise due to the non uniform field distribution, caused by the pollution on the surface of the housing. The rain sheds / petticoats shall be of polymeric material and shall confirm to IEC 60815.

- b) The arrester shall have thermal stability to withstand the heat generated from ZnO element due to continuous operating voltages and surges. It shall remain in undamaged condition, capable protective function.
- c) Arrestors shall incorporate anticontamination feature to prevent arrester failure, consequent to uneven voltage gradient across the stack in the event of contamination of the arrester insulating material. These features shall be described in detail when submitting the Bid. Arrestors shall be capable of discharging over voltages occurring during switching of unloaded transformers, capacitors banks and long lines. No radio interferences shall be caused by the arrestors operating at the normal rated voltage.
- d) MO resistor diameter shall be mentioned by the bidder at the time of bidding along with its rating. MOV blocks shall have full metallization to have full face contact and to reduce contact resistance between adjacent discs.
- e) Surge arresters shall be of cage type construction with no gas volume to ensure that the arrester does not explode during the short circuit test condition. The MOV blocks should be housed in cage of FRP rods appropriately crimped at both end fittings. The housing should be directly molded on stack of MOV blocks without any intermediate interface.
- f) The end fittings shall be non-magnetic and of corrosion proof material. The end fittings used in polymer arrester shall be made from aluminum through machining process/pressure die-casting process. Sand casted and gravity casted end fittings are not acceptable due to poor microstructure and porosity issues.

5.2 EARTHING PADS:

Suitable earthing pads shall be provided in the lightning arrester and surge counter for earthing.

5.3 MECHANICAL STRENGTH:

- a) The Lightning Arrester and its base shall withstand rated mechanical terminal load and electromagnetic forces without impairing their operational reliability.
- b) The Lightning Arrester shall not come out of its position by gravity, wind pressure, vibrations or reasonable shocks.

5.4 SURGE COUNTER :

- a) Cyclometric 5 digit, non-resetting type counter, dial type surge counter shall be provided for each lightning arrester for automatically recording the number of discharges. Each counter shall have a continuous leakage current indicator and shall not require an external power source of

operation. The value of leakage current beyond which the operation is abnormal shall be clearly marked in red colour on the detector.

- b) Surge arrestor shall include a milli ammeter to monitor the leakage current. the milli –ammeter usually bare a red mark at the higher scale regions. Increase of leakage current to the red marked zone is essentially an indication that the arrestor is likely to attain the thermal runaway condition. The qualitative information regarding the arrestor the arrestor health, obtained from the milli-ammeter, helps the user to take preventive measures before the arrestor failure.
- c) Discharge counters and milli-ammeters shall be suitable for mounting on structure and shall be mounted at approximately 1.5 meters above ground level. The reading of the milli-ammeter and counters shall be visible through an inspection glass panel. The terminals shall be of robust and adequate size and shall be so located that incoming and outgoing connections are made with minimum possible bends.
- d) The connecting conductor from lightning arrester earth terminal to the discharge counter incoming terminal shall be insulated for a minimum of 1.1 kV and this insulated conductor shall be supplied along with the arrester by the bidder. The surge arrester surge counter connection shall be done by means insulated multi strand copper cable of minimum size 35 sq.mm to withstand the fault currents during severe operating conditions. Length of the each cable should be considered as 3.5 mtr (min.). This copper cable shall be of black color and shall have fire retardant & UV resistance properties. Approved Make for this Cable is Polycab/KEI/KEC/Sterlite/Finolex/Havells. The cable shall have copper lugs at both ends. Bimetallic strips must be provided along with Surge Counter for bimetallic connections.
- e) The surge arrester shall be designed to operate/ withstand without damage or change in performance for the high current impulse, long duration current impulse corresponding to the discharge class of the surge arrester and nominal discharged current corresponding to the discharge current of the surge with which it is used.
- f) The external and internal parts of the surge monitor shall be hermetically sealed to withstand the atmospheric variation of temperature and humidity, rain and dust encountered in station in which they are installed. RTV silicon sealant to be used. The surge Monitor line terminal shall be solidly connected to the ground terminal of the surge monitor through an inbuilt metal oxide element satisfying the operational requirement.

5.5 CONNECTORS:

Aluminum terminal to be provided for Surge Arrestor. This terminal shall be connected via Standard bolted type connector (L-Shaped) connector with the network equipment via AAAC Panther Conductor. Therefore terminal connector shall be part of Surge Arrestor.

	Specification No: ENG-EHV-1021 Specification Name: Technical Specification for 33KV Lightning Arrester (10 KA)
---	---

6. MARKING:

A stainless steel rating plate, of at least 1 mm thickness, shall be fitted to each Lightning Arrester in a visible position and shall carry all the information as specified in the standards. The letters on the rating plate shall be engraved black on the white/silver background. Fixing screws for outdoor use shall be of stainless steel or any other corrosion resistant metals. The Name plate shall be embossed with "PO no. with date" & "TPCODL/TPWODL/TPNODL/TPSODL",

The following information shall be mentioned on the Name Plate

- a) Continuous operating Voltage
- b) Rated Voltage
- c) Rated Frequency
- d) Nominal Discharge Current
- e) Pressure relief rated current in kA r.m.s.
- f) Manufacturer's Name
- g) Type and Identification of the complete
- h) Year/Month of Manufacture
- i) Serial Number.
- j) Warrantee/guarantee clause

7. TESTS:

All routine, acceptance & type tests shall be carried out in accordance with the relevant IS/IEC. All acceptance tests shall be witnessed by the purchaser/his authorized representative. All the components and fittings shall also be type tested as per the relevant standards. Following tests shall necessarily be conducted on lightning arrester in addition to others specified in IS/IEC standards: -

7.1 ACCEPTANCE TESTS

Acceptance test shall be as per cl. 9.2 of IEC 60099-4 ed 3 as mentioned below:

- a) Measurement of reference voltage test.
- b) Residual Voltage test on complete arrester.
- c) Partial Discharge Test
- d) Visual Inspection
- e) The resistive current drawn by the arrester at rated voltage
- f) Peel off test (removal of housing) shall be performed on 1 random samples from supplied lot to confirm cage design
- g) Measurement of power-frequency voltage on the arrester at the reference current
- h) Lightning impulse residual voltage on the arrester at nominal discharge current (wet power frequency voltage test)

All acceptance tests shall be witnessed by the Purchaser's or his authorized

	Specification No: ENG-EHV-1021 Specification Name: Technical Specification for 33KV Lightning Arrester (10 KA)
---	---

representative. The above mentioned test shall be made on the nearest lower whole number to the cube root of the number of arresters to be supplied as per IEC-60099-4.

7.2 ROUTINE TESTS

Routine test shall be as per cl. 9.1 of IEC 60099-4 ed 3 as mentioned below:

- Measurement of reference voltage test
- Residual Voltage Test on complete arrester
- Internal partial discharge test.
- The resistive current drawn by the arrester at rated voltage
- The power-frequency voltage

7.3 TYPE TESTS

- Insulation Withstand Test of Housing (Lightning impulse – (cl. 8.2.8; IEC 60099-4 ed.3))
- Residual voltage test (cl. 8.3.2, cl. 8.3.3., cl 8.3.4; IEC 60099-4 ed.3)
- Long duration current impulse withstand test (cl. 8.4; IEC 60099-4 ed.3)
- Operating duty test (cl. 8.7; IEC 60099-4 ed.3)
- Short circuit test (Low (600A)/High Current (40kA) (cl. 8.10; IEC 60099-4 ed.3)
- Test for Bending moments (cl. 8.11; IEC 60099-4 ed.3)
- Weather aging test on full arrester 1000 hrs (cl. 8.12 and annexure-C; IEC 60099-4 ed.3)
- Partial Discharge Test (cl. 8.15; IEC 60099-4 ed.3)
- Wet power frequency voltage test (cl. 8.2.8; IEC 60099-4 ed.3)
- Power frequency (voltage VS time curve) (cl. 8.8; IEC 60099-4 ed.3)
- Test to verify repetitive charge transfer withstand (cl. 8.5; IEC 60099-4 ed.3)
- Heat Dissipation behavior verification of test sample (cl. 8.6; IEC 60099-4 ed.3)

8. TYPE TEST CERTIFICATES:

The Bidder shall furnish the type test certificates for the tests as mentioned above as per the corresponding standards. All the tests shall be conducted at **CPRI/ERDA** as per relevant standard. Type tests should have been conducted during the period not exceeding **5** years from the date of opening the bid. In the event of any discrepancy in the test reports, i.e. any test report not acceptable, same shall be carried out without any cost implication to TPCODL/TPWODL/TPNODL/TPSODL.

9. PRE-DISPATCH INSPECTION:

The material shall be subject to inspection by a duly authorized representative of the TPCODL/TPWODL/TPNODL/TPSODL. Inspection may be made at any stage of manufacture at the discretion of the purchaser and the equipment, if found unsatisfactory as to workmanship or material, the same is liable to rejection. Bidder shall grant free access to the places of manufacture to TPCODL/TPWODL/TPNODL/TPSODL's representatives at all times when the work is in progress. Inspection by the TPCODL/TPWODL/TPNODL/TPSODL or its authorized

	Specification No: ENG-EHV-1021 Specification Name: Technical Specification for 33KV Lightening Arrester (10 KA)
---	---

representatives shall not relieve the bidder of his obligation of furnishing equipment in accordance with the specifications. Material shall be dispatched after specific MDCC (Material Dispatch Clearance Certificate) is issued by TPCODL/TPWODL/TPNODL/TPSODL.

Following documents shall be sent along with material.

- a) Test reports
- b) MDCC issued by TPCODL/TPWODL/TPNODL/TPSODL
- c) TPCODL/TPWODL/TPNODL/TPSODL Invoice in duplicate
- d) Packing list
- e) Drawings & catalogue
- f) Guarantee / Warrantee card
- g) Delivery Challan
- h) Other Documents (as applicable).

10. INSPECTION AFTER RECEIPT AT STORE:

The material received at TPCODL/TPWODL/TPNODL/TPSODL, Odisha store will be inspected for acceptance and shall be liable for rejection, if found different from the reports of the pre-dispatch inspection and one copy of the report shall be sent to Engineering department.

11. GUARANTEE:

Bidder shall stand guarantee towards design, materials, workmanship & quality of process/manufacturing of items under the contract for due and intended performance of the same, as an integrated product delivered under this contract. In the event any defect is found by the Company up to a period of 18 months from the date of commissioning or 24 months from the date of last supplies made under the contract, whichever is earlier, supplier shall be liable to undertake to replace/rectify such defects at his own costs. within mutually agreed timeframe, and to the entire satisfaction of the Company, failing which the Company will be at liberty to get it replaced/rectified at supplier's risks and costs and recover all such expenses plus the Company's own charges (@ 20% of expenses incurred), from the supplier or from the "Security cum Performance Deposit" as the case may be.

The bidder shall further be responsible for ' free replacement' for another period of THREE years from the end of gurantee period for any 'latent defects' if noticed by the company.

12. PACKING AND TRANSPORT:

Bidder shall ensure that all material covered by this specification shall be prepared for rail/road transport (local equipment) and be packed in such a manner as to protect it from damage in transit. The bidder shall provide instructions regarding handling and storage precautions to be taken at

	Specification No: ENG-EHV-1021 Specification Name: Technical Specification for 33KV Lightening Arrester (10 KA)
---	--

site. The material should be packed in vertical position in individual box in such a way that the shape of rain shed does not get deformed during transportation and storage.

13. TENDER SAMPLE:

NA

14. QUALITY CONTROL:

The bidder shall submit QAP indicating the various stages of inspection, the tests and checks which will be carried out on the material of construction, components during manufacture and bought out items and fully assembled component and equipment after finishing. As part of the plan, a schedule for stage and final inspection within the parameters of the delivery schedule shall be furnished. The Purchaser's engineer or its nominated representative shall have free access to the manufacturer's/sub-supplier's works to carry out inspections.

15. TESTING FACILITIES:

Bidder shall have adequate in house testing facilities for carrying out all routine tests & acceptance tests as per relevant International / Indian standards.

16. MANUFACTURING FACILITIES:

The successful bidder shall submit the bar chart for various manufacturing activities clearly elaborating each stage, with quantity. This bar chart should be in line with the Quality assurance plan submitted with the offer.

The successful bidder will have to submit technical compliance document and drawing as per RC line items for getting approval before mass manufacturing.

Manufacturing shall start only after getting CAT-B approved drawings or as per intimation from TPCODL/TPWODL/TPNODL/TPSODL.

17. SPARES, ACCESSORIES AND TOOLS

Spares:Not applicable.

Service Level Agreement

- In case of any failure vendor shall report to site, within 24 hours of receipt of reporting of failure occurrence.
- Vendor shall provide detailed root cause analysis of the fault within 15 days from the date of occurrence of the fault/ failure.
- Any spare part replacement, testing and its commissioning to be done by the vendor only, without any price implication to the purchaser.

18. DRAWINGS AND DOCUMENTS:

Following drawings and documents shall be prepared based on

	Specification No: ENG-EHV-1021 Specification Name: Technical Specification for 33KV Lightening Arrester (10 KA)
---	--

TPCODL/TPWODL/TPNODL/TPSODL specifications and statutory requirements and shall be submitted with the bid:

- Completely filled in Technical Particulars
- General description of the equipment and all components including brochures
- General arrangement drawing for Surge Arrestor (SA)
- Bill of material
- Experience List
- Type test certificates

Drawings / documents to be submitted after the award of the contract are as under:

List of Drawings/Parameters to be submitted:

S.No.	Description	For Approval	For Review Information	For Final Submission
1	Technical Particulars	✓	✓	✓
2	General Arrangement drawings including cross sectional view, mounting arrangement, Zno Block drawing, Surge Counter drawing, Name plate along with detailed Bill of Material)	✓	✓	✓
3	Terminal and Connection Drawing	✓	✓	✓
4	Manual/catalogue	✓	✓	✓
5	Installation/Commissioning Manuals	✓	✓	✓
6	Instruction for use	✓	✓	✓
7	Transport / Shipping dimension drawing	✓	✓	✓
8	QA & QC Plan	✓	✓	✓
9	Routine, Acceptance and Type Test Certificates	✓	✓	✓

Additional Documents to be submitted:

- List of raw materials as well as bought out accessories and the names of sub-suppliers selected from those furnished along with offer.
- Type test certificates of the raw materials and bought out accessories.
- The successful Bidder shall submit the routine test certificates of bought out accessories and central excise passes for raw material at the time of routine testing.

All the documents & drawings shall be in English language.

After the receipt of the order, the successful bidder will be required to furnish all relevant drawings/parameters/calculation to TPCODL/TPWODL/TPNODL/TPSODL for approval.

Instruction Manuals:

Bidder shall furnish softcopies of nicely bound manuals (In English language) covering erection and maintenance instructions and all relevant information and drawings

   	Specification No: ENG-EHV-1021 Specification Name: Technical Specification for 33KV Lightning Arrester (10 KA)
--	---

pertaining to the main equipment as well as auxiliary devices.

19. SCHEDULE- “A” GUARANTEED TECHNICAL PARTICULARS:

GENERAL TECHNICAL PARTICULARS			
SL. NO.	TECHNICAL PARTICULARS	SM Class (Class-III)	SL Class (Class-II)
1	Installation		
2	Reference standards (Latest Amend.)		
3	Arrester Type and Housing		
4	Normal System Voltage		
5	Highest System Voltage		
6	Rated Frequency		
7	Maximum Continuous Operating Voltage (M.C.O.V)		
8	Arrester Rating		
9	Discharge Current		
a	Nominal Discharge Current		
b	Switching impulse discharge current		
10	Short Circuit rating		
11	Voltage Withstand on Arrester Housing		
a	Standard rated short duration Power Frequency withstand Voltage (Dry/Wet) as per IS:2165		
b	Standard rated Lightning Impulse withstand Voltage (Peak in kV)		
12	Lightning Impulse Protection Level (at 10kA)		
13	Long Duration Current		
a	Peak Current		
b	Virtual duration of Peak T		
14	High Current impulse Operating Duty		
15	Creepage Distance of Arrester Housing		
16	Partial Discharge at 1.05 times M.C.O. V		
17	Energy Absorption capacity (KJ/KV)		
18	Repetitive charge transfer withstand (coloumbs),Qrs		
19	Temporary over voltage (TOV)		
a	1 sec		
b	10 sec		
20	Maximum Lightning Impulse Residual voltage with 8/20 microsecond wave		

   	Specification No: ENG-EHV-1021 Specification Name: Technical Specification for 33KV Lightning Arrester (10 KA)
--	---

a	at 5kA		
b	at 10kA		
c	at 20kA		
21	Maximum switching current impulse residual voltage in kVP at 500 A		
22	Max. Cantilever Strength		
23	Total height of the arrester		
24	Total weight of the arrester		
25	No. of Metal oxide blocks in arrester		
26	Rating of individual ZnO blocks used for assembly		
27	Power Losses of the Arrester in watt		
28	Type of Mounting		
29	Material of Insulating base		
30	Insulating Terminal Cap	Polyolefin	
31	Material of Nuts and bolts	Stainless Steel	

20. SCHEDULE "B" DEVIATIONS:

(TO BE ENCLOSED WITH TECHNICAL BID)

All deviations from this specification shall be set out by the Bidders, clause by Clause in this schedule. Unless specifically mentioned in this Schedule, the tender shall be deemed to confirm the purchaser's specifications:

SL. No	Clause No.	Details of deviation with justifications

We confirm that there are no deviations apart from those detailed above.

Seal of the Company:

Signature

Designation