20.06.2023

Corrigendum No. – 1

Tender Enquiry No- TPSODL/OT/2023-24/014

Work Description - Rate Contract for 11KV & LT Network Maintenance & Allied Works, 33KV Network Maintenance and Operational Assistance of 33/11KV Substations of all TPSODL Divisions.

1) Revised calendar of events will be as follows: -

(a)	Last Date of receipt of Tender Fee	24.06.2023, 18:00 Hrs
(b)	Last date and time of receipt of Bids	25.06.2023 up to 23:00 Hours
(c)	Date & Time of opening technical bids & EMD	25.06.2023 , 23:00 Hours onwards
(d)	Date & Time of opening of Price of qualified bids	Will be notified to the successful bidders through our website / e-mail.

2) The replies of pre-bid queries are attached with this document.

Warms Regards,

Shubhranshu Shekhar Sahu

Web www.tpsouthernodisha.com

TP SOUTHERN ODISHA DISTRIBUTION LIMITED
(A Tata Power and Odisha Government Joint Venture)

Courtpeta | Berhampur | Ganjam | Odisha - 760 004.

Note-This document does not require signature.

Replies of commercial pre-bid queries

Tender No **TPSODL/OT/2023-24/014**

Package Name: Rate Contract for r 11KV & LT Network Maintenance & Allied Works, 33KV Network Maintenance and Operational Assistance of 33/11KV Substations of all TPSODL Divisions.

Sr. No.	Detailed Reference to TPSODL Tender Document. Please specify Document No / Clause No / Page No	Description as per Bid Document	Remarks - Query / Clarification	TPSODL Response
1	2	3	4	5
1	**1.7.Qualification Criteria Point No.3 (page no.6)**	The bidder should have experience in Providing Maintenance Services / AMC works for 11 kV & 33kV level in any power distribution utility during last 3 years and should have executed cumulative contract with value equal to or more than Rs. 15 Cr. during last three years.	Is there any MSME relaxation for the volume of Order executed ?	Please refer the tender clause- "Preferential norms for Odisha MSMEs"
2	**7.1.Special Conditions of Contract Point P(page no.16)**	Any change in statutory taxes, duties and levies during the contract period shall be borne by TPSODL	Clause no. 7.1 is not clear about increase of wages or VDA. **Please clarify wheather VDA and Wage revision shall be absorbed by TPSODL or not ?**	VDA and Wage revision shall not be absorbed by TPSODL. BA may consider this cost in their bid.
3	**1.7.Qualification Criteria Point No.3 (page no.6)**	The bidder should have avg. Annual turnover of at least Rs. 10cr. For any of 3 financial year (FY) out of FY 19-20, FY 20-21, FY 21-22& FY 22-23. (Copy of audited balance sheet & profit loss account statement to be submitted.)	Generally the time to complete Financial audit for companies and Parternership firms are in the month of September. i. e. The reson we can't give a audited balance sheet for the FY '2022-23 . That's why we request you to kindly allow us to furnish an authenticate letter /certificate from the CA to support annual Turn over. Note- we will like to bring to your notice that other TATA Power run utililies like TPCODL and TPWODL have allowed this letter in their 11kv and 33kv AMC tender.	Consideration of CA certificate for meeting turnover eligibility criterion shall be at sole discretion of TPSODL.

Replies of Technical Pre- Bid Queries

Tender No TPSODL/OT/2023-24/014

Package Name Rate Contract for 11KV & LT Network Maintenance & Allied Works, 33KV Network Maintenance and Operational Assistance of 33/11KV Substations of all TPSODL Divisions.

Sr. No.	Detailed Reference to TPSODL Technical Document. Please specify Document No / Clause No / Page No	Description as per Bid Document	Remarks - Query / Clarification	TPSODL Response
1	2	3	4	5
1	Annexure VII(A) /11KV AMC Page No-44	In case of exigency/ Storm or any other natural calamity, etc. occurred, the BA shall arrange the manpower for rectification/ maintenance or any other work assigned by the EIC/ DOS for early restoration of supply.	The cost of natural calamity will be reimbursed to BA or Not because of during this time Additional Manpower, Vehicle, Pole Master & T&P will be required	If there is natural calamity like severe kalbasakhi or cyclone, cost of deployment of extra manpower, vehicle and pole master will be paid as per the actual deployment as per the Schedule of rates Annexure -I, However manpower depolyment shall be at the discretion of M/s TPSODL.
2	Annexure VII(A) /11KV AMC Page No-45	BA shall provide a Suitable Room / Office having power supply with proper wiring, 2 Chair, 1 Table, 1 Portable Fan, ELCB Board and facility for drinking water for accommodating his manpower along with the upkeep of the Tools and Tackles (like Ladder, Discharge rod etc.) including space for inventory storage related to attending complaints. This shall be named as "TPSODL Fuse Call Centre (FCC)" and shall be opened in mutually agreed area of a Section office, so that "No Power Supply" complaints can be addressed within Stipulated Timelines as per the SLA	The cost of room will be reimbursed to BA or Not	The Cost of the Room will be part of the 11kV AMC Fixed cost and no additional reimbursement will be done to the BA
3	Annexure VII (C)/ PSS Manpower/ Page No-8	Basic MOC Structure	MOC structure will be considered for each PSS or any different. Please clarify.	MOC will look after 2 or more PSS , they will be stationed at centre location [in PSS] and should move to other PSS for regular rounds , giving outage , opening the AB switch/ isolators , grounding the line as instructed by PSCC operators
4		Increment of Minimum Wages include VDA Yearly 2 times- I-April & ii- October average of amounting of Rs.15/- as per the CLRA Act.	Whether the additional cost will be reimbursed to BA or Not	No Change in tender terms & conditions. No additional cost shall be reimbursed by TPSODL. As BA has to bear these cost, BA may consider this cost in their bid.
5	Annexure VII(A) /11KV AMC Page No-16	Transportation charges for DTR out side of Division area to Work place.	The additional KM cost will be reimbursed to BA or Not	In case the Extra vehicle is engaged at the site apart from the 11kV AMC Fixed cost vehicle, then the same shall be paid based upon the actual usage at the site based upon the line items as mentioned in the schedule of Items (Annexure -I). However depolyment of extra vehicle shall be at the discretion of M/s TPSODL.
6	Annexure VII (A) - SOW 11Kv AMC - Point No. 2.3	Statutory Compliance and Human Resource Issues - TPSODL may impose a Penalty of Rs. 1,00,000 for Non-Submission of all Statutory compliances within the 21st of the month. This Compliance will be for the preceding month.	It is too High it should be revised.	This penalty clause will remain however the amount will be revised to **Rs. 5,000/-per day**

Sr. No.	Detailed Reference to TPSODL Technical Document. Please specify Document No / Clause No / Page No	Description as per Bid Document	Remarks - Query / Clarification	TPSODL Response
7	Annexure VII (A) - SLA 11Kv AMC - Point No. 3	Minimum Resources deployment (Manpower and Vehicle) - 1. Skilled persons should have valid license from Govt. of Odisha/ other state Govt. He should be able to climb on pole for working on line and before climbing the pole.	Skilled persons should have valid license from Govt. of Odisha is not easily available.	The skilled person shall have a valid license from the Govt. of Odisha only
8	Annexure VII (A) - SLA 11Kv AMC - Testing Equipment's.	Smart tools (Battery Operated – Bosch Cordless Impact Wrench GDS 18V- EC 250 or GDS 18V 400)	It Should be Normal Operated.	It shall be battery operated, however the models are defined that are to be purchased
9	Annexure VII (A) - SLA 11Kv AMC - Minimum Resources Deployment	Penalty may be imposed in case of Non-Deployment of Supervisor as specified in the Tender scope from the 1st day of the manpower deployment as per the RC. The penalty may be up to Rs. 1,00,000/- per day.	It is too High it should be revised.	This penalty clause will remain however the amount will be revised to **Rs. 5,000/-per day**
10	Annexure VII (A) - SLA 11Kv AMC - Fuse Call Centre	Desktop	Is Desktop is required for FCC, If required than who will provide it.???	The desktop is not required for the FCC
11	Annexure VII (A) - SLA 11Kv AMC - Fuse Call Centre	FCC Room Rent	FCC Room List with address required. And How much per FCC Room will rent.??? Kindly provide the details.	The FCC Room is in the scope of the BA - as per the 11kV AMC fixed cost, further details are mentioned in Annexure C clause no. 9; however the FCC is to be opened at a suitable location mutually agreed with M/s TPSODL
12	Annexure VII (A) - SLA 11Kv AMC - Minimum qualification of manpower	1. Degree/Diploma in electrical engineering and a valid supervisory license. Computer literate with proficiency in MS office. 2. ITI (Electrical Trade) OR Qualification shall be as per CEA regulation clause 7.2 - 2 years for ITI having valid Licence / 5 years for HT Workman Licence Holder	Supervisor License and HT Workmen is not easily available.	No Change in tender terms & conditions
13	Cl.1.7 Qualification Criteria: SL No- 3	The bidder should have experience in Providing Maintenance Services / AMC works for 11 kV & 33kV level in any power distribution utility during last 3 years and should have executed cumulative contract with value equal to or more than Rs. 15 Cr. during last three years.	Request to consider Qualification criteria at SL No-3 as, **The bidder should have executed multiple work (at 11KV & 33 KV level) in any power distribution utility with contract value equal to or more than Rs. 15 Cr. during last five years.**	No Change in tender terms & conditions
14	Cl.1.7 Qualification Criteria: SL No- 4	Bidder should have Performance Certificates for at least two years satisfactory performance from minimum 1 reputed utility for maintenance works of 11 kV & 33 kV level.	Request to consider Qualification criteria at SL.No-4 as, **Bidder should have Performance Certificates for at least one year satisfactory performance from minimum 1 reputed utility for works of 11 kV & 33 kV level.**	No Change in tender terms & conditions
15	Annexure VII (A), page no. 12, Sr. No. 19	Painting/Numbering of poles as per instruction of EIC and as per TPSOD Paint & Painter will be supplied by Vendor.	Please confirm maximum no. of nomenclature in BA scope	As per the Field requirement.

Sr. No.	Detailed Reference to TPSODL Technical Document. Please specify Document No / Clause No / Page No	Description as per Bid Document	Remarks - Query / Clarification	TPSODL Response
16	Annexure VII (A), page no. 13, Sr. No. 42	Pole to Pole Line survey and Thermo scanning to be ensured of the HT Lines and details to be provided as per the MIS format decided by EIC/ Head-DOS, in order to ensure effective preventive maintenance	Please confirm the Thermo scanning camera will be provided by TPSODL ?	The thermo-scanning camera will be provided by M/s TPSODL
17	Annexure VII (A), page no. 23, Extension of LT feeder for new connections	services for extension of LT feeder shall be provided by business associate. The work includes extension of overhead LT feeders by installation of poles, laying of bare conductor or AB cable, installation of distribution box and laying of service cable. The poles have to be painted and numbered as per GIS requirement.	Please confirm maximum limit of poles & length of the feeder	As per the Field requirement / as per EIC
18	Annexure VII (A), page no. 27, 2. Tools and Plants (T&P), Sr. no. 3	FRP Collapsible Ladder 5.5 Mtr to 6.0 Mtr	Please provide the specification & the approved supplier list for such type of ladder	The technical specification for 9 mtr Ladder is enclosed at the end of this document. For 12 meter FRP Ladder, other specifications shall be same except the followings : No of Fold :03 No's Length of Full Extended Ladder :12 meter Total weight : 30 to 57 Kg
19	Annexure VII (A), page no. 29, 2. Tools and Plants (T&P), Sr. no. 46	Fuse wire of different ratings	Please provide the sizes of fuse wire in SWG. This is a major item used for attending NCC and should be provided by TPSODL, if not then it should be reimbursed.	The fuse wire rating/ size requirement will be as per the field requirement as stated by the Section Head/SDO/ EIC/ DOS, it will be part of the 11kV AMC Fixed cost
20	Annexure VII (A), page no. 31, 3. List of PPE's: ,Sr. no. 15	Safety Induction Helmet (1 Per Skilled Person)	Please specify the specification for Safety Induction Helmet	The technical specifications are enclosed at the end of this document.
21	Annexure VII (A), Page no. 43, sr. no. 1	BA shall monitor all complaints and ensure resolution	Please confirm how the complaint will be generated & reached to our LM.	The No power supply complaints will be routed through the FCC Application / FG System, and the same shall be reflected on the registered mobiles of the FCC (manpower deployed under FCC) and also on the mobile of the Supervisors
22	Annexure VII (A),	Providing of Bamboo ladder	Please confirm bamboo ladders for rural areas are to be consider or not, if yes please confirm qty and size	No bamboo ladder required .
23	Annexure VII (C) page no. 1, Table no. 1	Table no. 1 for Deployment of manpower and other resources for PSS operation	The manpower given in table no. 1 does not match, if we consider one operator & one helper in each PSS for 24x7 monitoring. Kindly confirm	1 skilled and 1 unskilled / shift . making total 7 [4 skilled and 3 unskilled] for 24*7 PSS operations. Total 254 no of PSS s will be operated by the Number of manpower mentioned in the BOQ of tender document by introducinng MOC [Mobile Operation Crew] system.

Sr. No.	Detailed Reference to TPSODL Technical Document. Please specify Document No / Clause No / Page No	Description as per Bid Document	Remarks - Query / Clarification	TPSODL Response
24	Annexure VII (C) page no. 2, sr. no. 3	Providing Security person to any PSS under BA scope to be done after approval from TPSODL authority.	What will be the criteria for appointing security person	Qualification- 10th pass + 3 yrs experienece with Government certified security agency . Security person shall responssible to take periodic rounds / inspection of assigned PSS s of TPSODL . Any security related observations / suggestions in the PSS to be reported to PSS supervisor / incharge
25	Annexure VII (C) page no. 2, sr. no. 4	Providing smart mobile phone + valid sim card with monthly recharge (In workable condition) for PSS units and MOC will be under BA scope. Replacement of faulty mobile phone under scope of BA (as per mentioned in clause No. C).	Kindly confirm of smart mobile phone are to be arrange by BA as the qty. mentioned in Table 1 is very low & does not match with no. of PSS	Smart phones will be provided and maintained by BA . Each PSS will have one Smartphone and handed over to incoming operator in the shift . MOC will have one smartphone with Skilled person.
26	Annexure VII (C) page no. 2, List of Tools,	Sr. no. 23, 46 & 49	Please provide the specification	Specs will be provided.
27	Annexure VII (C) page no. 2, List of Tools, Special Tool	Special Tools for 33 KV feeder maintenance , Messenger Block	Please provide the technical specifications for messenger Block. If possible please share photographs	Specs will be provided.
28	11kV Feeder Maintenance Activities: **Point-32, (Page No.12)** **(11KV AMC)**	Naming of incoming/ outgoing cables and sign writing by the Painter. The Paint and Painter has to be provided by the BA.	Which type of cables are to be painted, Please clarify ?	The nomenclature on the XLPE cables if required as per site conditions is to be done
29	11 kV/415 V/ 230 V Distribution Sub-Station (DSS)- **point-a(page no.13)** **(11KV AMC)**	BA shall deploy expert technician for maintenance and upkeep of all equipment installed in the DSS including transformers. The technician deployed for maintenance of DSS should be able to perform preventive & breakdown maintenance, troubleshooting, and replacement of defective equipment/parts as per work requirement.	Is "Expert technician" include in the "Minimum Resource Deployment Division Wise"-Annexure-C ?	The expert technician is the skilled manpower, which is part of the 11kV AMC Fixed cost
30	Annexure VII (A) Scope of Works and Service Level Agreement (11kV AMC), **Page no.16(other equipment in DSS)Point no. f & g** **(11KV AMC)**	*Repair or replacement of burnt/faulty meter cubicle. *Repair or replacement of DTR Energy meter/CT/wiring. Installation of new DTR Energy meter/CT/wiring as instructed by EIC/DOS.	Who will provide metering Cubicle and New DTR Energy meter ?	The metering cubicle and the NEW DT energy meter will be provided by M/s TPSODL
31	LT Feeder Maintenance Activities, Techno-commercial and Fuse Call Activities. Point-b(Page No.21) (11KV AMC)	The vermin proofing of the LT Distribution boxes to be done by the BA.	What is vermin proofing ? Please clarify.	Sealing of all gaps and entry points to prevent entry of lizards , rodents etc.. Sealing to be done by using sealing agents
32	Annexure-C:- Manpower Deployment division wise (Page No.42) (11KV AMC)	Manpower Deployment division wise list (Minimum Resource Deployment Division Wise)	Is "safety engineer" include in the "Minimum Resource Deployment Division Wise"-Annexure-C ?	One safety Engineer is required in each Division for 33 kv network , PSS s , 11kv network up to DSS and LT network He will take care of safety related issues of entire division

Sr. No.	Detailed Reference to TPSODL Technical Document. Please specify Document No / Clause No / Page No	Description as per Bid Document	Remarks - Query / Clarification	TPSODL Response
33	Feeder Maintenance Activities point-IV **(Page No.8)** **(33KV AMC)**	Replacement of corroded, cracked, flashed insulators (Disc/Pin/Shackle). • Replacement / Repairing of GO switch / AB switch / line isolators • Replacement of damaged / weak cross arm. • Replacement of Binding wire joints by bolted / compression type, loop / wedge connectors as per the instructions from EIC. Rectification of hotspots by replacing clamps / connectors or replacement of jumpers / other actions	who will provide the minor materials i.e. Disc/pin/shackle insulators.	The Disc/ Pin insulator/ shackle insulators will be provided by M/s TPSODL
34	Highly trained lineman **(Page No.8)** **(33KV AMC)**	Business associate shall provide highly trained lineman capable of working on all type of steel towers and poles for safe & reliable operation of 33KV feeders.	Is the "highly trained lineman" include in the "Proposed Manpower FY24 (33KV AMC line and PSS)" ?-page-1	The skilled person provided in 33kV AMC should be capable of working on all type of steel towers and poles for safe & reliable operation of 33KV feeders.
35	Inspection and Maintenance of 33/11KV Primary Substations **(page No.10)** **(33KV AMC)**	BA shall deploy at least one lineman trained for industrial wiring and dressing. BA shall also deploy at least two lineman capable of preventive maintenance / trouble shooting of equipment such as power transformer, circuit breaker, CT/PT, control panels, battery and battery charge	Is the "lineman" include in the "Proposed Manpower FY24 (33KV AMC line and PSS)" ?- page-1	Yes
36	Composite type or any other type Rubber hand gloves approved by **TPSODL(Page No.21)** **(33KV AMC)**	Composite type or any other type Rubber hand gloves approved by TPSODL etc. to its each employees / workman deployed.	Is it mandatory to provide 33KV hand gloves to all the employees or only licensed technician engaged for this work ? Please clarify about the make/brand of hand gloves ?	Attached
37	Page No. 42 (11kV AMC)	Cable Jointer	To execute the cable jointing and welding works smoothly, from the above mentioned manpower 1) One skilled manpower per Division must be a qualified cable Jointer having adequate skills and experience in cable jointing	"One skilled manpower per Division must be a qualified cable Jointer having adequate skills and experience in cable jointing" - **Please consider this clause is cancelled / removed from the Tender**
38	The Executive Engineer of the respective Division will be the Engineer In-charge for the contract of their respective area for the 11kV & DSS & LT network AMC	The Executive Engineer of the respective Division will be the Engineer In-charge for the contract of their respective area for the 11kV & DSS & LT network AMC	The Executive Engineer of the respective Division will be the Engineer In-charge for the contract of their respective area for the 11kV & DSS & LT network AMC	The Executive Engineer/ Divisional Manager of the respective Division will be the Engineer In-charge for the contract of their respective area for the 11kV & DSS & LT network AMC

9Mtr Wall Supported Extention FRP Ladder with Alu.'D' Rung

Model No: LMEW 1629_D (2fold)

S.NO.	PARAMETERS	STANDARD VALUES
1	Material Description	Fibre Glass Reinforced Thermosetting Plastic made by Pultrusion process
2	Colour	Yellow
3	Length of fully extended ladder	9 mtr Approx
4	Length of section	4.85mtr Approx
5	No. of Folds	2 Fold
6	Overlap Length	0.9mtr Approx
7	Inside width between bottom “C” shaped side channels	375 to 400 mm Approx
8	Shape of side channel	“C” shaped with 10 mm overlap guide on both edges.
9	Type & size of the side supports	Pultruded FRP ribbed “C” type section of size 84x30x4 mm & 4 mm bend shall be provided in C type section is providing sufficient strength against the horizontal deflection test.
10	Shape and size of the steps (rungs)	Serrated Aluminum antislip‘D’ Shape and Size. 40x33x1.6mm (width x curvature depth x thickness) both side crimped on channel.
11	Distance between steps	300 ± 5 mm
12	load capacity	130 kg
13	Weight of the Ladder	38 Kg Approx
14	Ladder Bottom	Antiskid and stable Swivel shoes with rubber feet pad

Certification: Compliance to BIS / EN standard (3696-2: 1991, ISO 18319:2015, IS 3696-2 (1991):
FRP ladder must confirming Electrical Research and Development Association (ERDA) certification
Note: Rugs made of aluminum with adequate FRP Coating .

LT FRP Ladder

- Assemble Length : 5.5 to 6Mtr - FOR 6 METER OPENING LENGTH = 20 FEET = CLOSING APPROX 4 FEET with flexible and lockable telescopic shape.
- Type: Telescopic design - SLEEK ADVANCE ROUND
- Working load – Minimum 100 Kg to 130 kg
- Locking System- flexible locking system to extend the ladder in telescopic in nature for easy field usage and strap for locking the ladder during transportation.
- Collapsible length: Please suggest available options = AROUND 4 FEET or less than it.
- Type tested : tested for 110kV Voltage. ERDA Type Tested as per IEC 60060
- Colour: Yellow
- Ladder bottom part must be with rubber sole.
- NAME PLATE AND MARKING-
- Following details shall be screen printed on Discharge rod:
- PROPERTY OF TPSODL
- Month and Year of manufacturing (MM/YYYY)
- RO/PO No.

TPSODL	TPSODL		
	Technical Specifications		
Document Title	Safety Helmet Mounted with Electronic Induction Tester		
Document No.			Eff Date:
Rev No.			Page No.:
Prepared by	Reviewed by	Approved by	Issued by

1.0 SCOPE:

This specification covers the technical requirements of design, manufacture, testing at manufacturer's works, packing, forwarding, supply and unloading at store/site and performance of Electrical safety helmet mounted with electronic induction tester for both ac and dc installations with the system voltage up to 33kV AC and 48V DC . Helmet is one of the most important items of personal protective equipment used by workers for protection against head injuries caused due to falling objects and electrical hazards.

2.0 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 statutory authorities.

a) ANSI Z89.1-2009: Class E: Standard for Electrical Safety Helmets.

b) IS 2925: Standard for Industrial safety helmets

3.0 CLIMATIC CONDITIONS OF THE INSTALLATION:

The service conditions shall be as follows:

1. Maximum altitude above sea level 1,000m
2. Maximum ambient air temperature 50°C
3. Maximum daily average ambient air temperature 35°C
4. Minimum ambient air temperature 0°C
5. Maximum relative humidity 95%
6. Average number of thunderstorm days per annum (isokeraunic level) 70
7. Average number of rainy days per annum 120
8. Average annual rainfall 150cm
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
11. acceleration due to gravity)
12. Wind velocity: 300 km/hr, 200 km/hr and 160 km/hr. environmentally, some of the regions, where the work will take place includes coastal areas, subject to high relative humidity, which can give rise to condensation. Onshore winds will frequently be salt laden. On occasions, the combination of salt and condensation may create pollution conditions for outdoor insulators. Some places are in heavily industrial polluted areas. Therefore, Outdoor material and equipment shall be designed and protected for use in exposed, heavily polluted, salty, corrosive and humid coastal atmosphere.

The design of equipment and accessories shall be suitable to withstand seismic forces corresponding to an acceleration of 0.1 g.

4.0 GENERAL TECHNICAL REQUIREMNTS:

This technical sheet covers supply of Electrical safety helmets specially engineered to provide high head protection from electrical shocks due live line wires and working in stringent electrical work areas.

The salient features and specifications of Electrical safety Helmets are as below:

Sl. No.	Properties	Description
1	Material	HDPE
2	Standard	IS 2925:1984
3	Suspension	8 Point Textile suspension made out of good Nylon material
4	Weight	435 gms (Approx)
5	Size	500-640 mm
6	Sweat Band	Foam with vinyl for comfort, black
7	Chin strap	19mm Width Adjustable or elastic strap
8	Chin Cup	Hard plastic of good quality
9	Head Cushion	A small head cushion should be provided on the inner side of the helmet, for comfort.
10	Design	Distinctive Aerodynamic Design
11	Ventilation	The position of ventilation holes shall be such that the central axis of the holes is almost horizontal when the helmet is in normal wearing position. The diameter of any hole shall not exceed 6 mm nor the edges of adjacent holes closer than 15 mm. The minimum number of holes on each side shall be not less than 3 and total aggregate area of holes shall not exceed 300 mm2.
12	Short Strap	Offers Unobstructed wide angle vision for greater user safety
13	Nape Strap	Lower Extension to prevent dislodging
14	Colors	Milky White/ florescent orange/ lime yellow colour
15	Headband	Pin lock/ratchet Type
16	Printed Logo	TPSODL logo should be printed in Pantone 2727C color, on the front side of the helmet. The same will be finalized after signing the contract.
17	Marking	Each helmet (shell and harness) shall be legibly and indelibly markings. As per clause 10.1, 10.1.1 of IS 2925: 1984 (Latest amended), Helmet (shell and harness) shall have markings of Manufacturers name or trade mark, range/ size of helmet. Helmet also marked with the ISI certification mark. The month and year of manufacture should also be marked on the helmet shell. Marking shall be decided after the contract is signed.
18	Requirement For Electronic Induction Tester	a) Induction tester should be able to sense voltage of LIVE AC lines through remote sensing. b) The dimensions should be less than 9 cms x 2 cms x 1.8 cms (LxBxH). c) Batteries should be replaceable type. d) The tester should be helmet mountable type. e) Detects voltages from 220VAC (LT/LV) to 765KV AC (EHV) f) Minimum sensing distance for 11 KV line should be 200 cms (2 mtrs.). g) Should be equipped with a buzzer & audio level should not be less than 60 Db when measured from a distance of 2 inches from the tester. h) Should have flexible PVC insulated copper wire as an antenna.

4.1 PERFORMANCE REQUIREMENTS

S No.	Properties	Values	Standard

1	Shock Absorption Resistance	5kN	IS 2925:1984
2	Penetration resistance test	10 mm	IS 2925:1984
3	Flammability Test	The material of the shellshall not burn with the emission of flame after a period of 5 seconds following removal at flame.	IS 2925:1984
4	Proof Voltage	20kV,50Hz for 3 min	IS 2925:1984

5	Breakdown Voltage	34kv,50Hz for 1 min	IS 2925:1984
6	Leakage current	Less than 3mA	IS 2925:1984
7	Heat resistance	93+/-5 deg. centigrade	IS 2925:1984
8	High visibility luminance factor	Fluorescent Yellow-Green=70% Fluorescent Orange-Red=40% Fluorescent Red=25%	IS 2925:1984

ACCESSORIES (Optional):

1) Ear Muffs
2) Face Shield

The above-mentioned accessories to be provided along with the helmets.

5.0 WORKMANSHIP AND FINISH:

1) Helmets shall be free from harmful physical irregularities that can be detected by through test and inspection.

Harmful physical irregularities shall be defined as any feature that disrupts the uniform, smooth surface contour, such as pinholes, cracks, blisters, cuts, conductive embedded foreign matter, creases, pinch marks, voids (entrapped air), and prominent ripples.

It should have provision for printing of Company's Logo on the front side.

6.0 NAME PLATE AND MARKING:

Each Electrical Safety helmet (Shell and Harness) is legibly and indelibly marked with following information:

a) Manufacturer's name or trade mark
b) Date of manufacturing and order details
c) Applicable type and class designation
d) American national standard designation
e) Month and Year of manufacture

The exact marking shall be decided after the contract is signed.

7.0 TESTS:

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

7.1 Type test:

1. Shock absorption resistance test
2. Penetration resistance test
3. Flammability resistance test
4. Proof Voltage test
5. Breakdown Voltage Test
6. Leakage current Test
7. Heat Resistance Test
8. High Visibility luminance Test.

7.2 Routine tests:

1 Penetration resistance Test
2 Breakdown Voltage Test
3 Heat Resistance Test
4 Flammability resistance test

7.3 Acceptance tests:

1. Marking
2. Visual Examination and Dimensions
3. Breakdown Voltage Test
4. Heat Resistance Test

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/NABL accredited labs as per the relevant standards. Type tests should have been conducted in certified Test laboratories 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 the Purchaser.

9.0 PRE- DESPATCH INSPECTION:

The successful bidder shall submit two prototype samples for further testing and compliance as per specifications and getting approval before mass manufacturing.

Equipment shall be subject to inspection by a duly authorized representative of the Purchaser. 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. Bidder shall grant free access to the places of manufacture to the Purchaser's representatives at all times when the work is in progress. Inspection by the Purchaser or its authorized representatives shall not relieve the supplier 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 the Purchaser.

Following documents shall be sent along with material:

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

10.0 INSPECTION AFTER RECEIPT AT STORE

The material received at the Purchaser 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 Project Engineering department of TPSODL, Berhampur.

The successful bidder shall submit two extra boxes (unpaid) per lot delivered, with serial nos. in continuation to the lot (lot size shall be 15,000 numbers or as defined in the order) to the Purchaser for further testing and confirmation in line with the specifications and the material shall be liable for rejection, if test results are found different from the reports of the pre-dispatch inspection and one copy of the report shall be sent to Project Engineering department.

10.0 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 Purchaser up to a period of 12 months from the date of commissioning or 18 months from the date of last supplies made under the contract, whichever is earlier. Bidder 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 Purchaser, failing which the Purchaser will be at liberty to get it replaced/rectified at Bidder's risks and costs and recover all such expenses plus the Purchaser's own charges (@ 20% of expenses incurred), from the Bidder or from the " Security cum Performance Deposit" as the case may be.
In case of box fails within the guarantee period the purchaser will immediately inform the bidder who shall take back the failed box within 15 days from the date of intimation at his own cost and replace / repair the box within forty five days of date of intimation with a roll over guarantee.
The outage period i.e. period from the date of failure till unit is repaired / replaced shall not be counted for arriving at the guarantee period.
Bidder shall further be responsible for 'free replacement' for another period of THREE years from the end of the guarantee period for any 'Latent Defects' if noticed and reported by the Purchaser.

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 used for packing shall be environmentally friendly.

13.0 TENDER SAMPLE:

Bidders are required to one no. of the sample for safety helmets for the approval of the product before manufacturing of the Lot.

14.0 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 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.

15.0 MINIMUM TESTING FACILITIES:

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

16.0 MANUFACTURING ACTIVITIES:

The successful bidder will have to 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. This bar chart will have to be submitted within 15 days from the release of the order.

17.0 SPARES, ACCESSORIES AND TOOLS :

Not applicable

18.0 DRAWING AND DOCUMENTS:

Following drawings and documents shall be prepared based on Purchaser specifications and statutory requirements and shall be submitted with the bid:

a) Completely filled in Technical Particulars
b) General description of the equipment and all components including brochures.
c) General arrangement for insulating rubber mat
d) Experience List
e) Type test certificates

After the award of the contract, four (4) copies of following drawings, drawn to scale, describing the equipment in detail shall be forwarded for approval.

Sr. No.	Description	For Approval	For Review Information	Final Submission
1	Technical Parameters	√		√
2	GA Drawing of insulating rubber mat	√		√
3	Installation Instruction			√
4	Manual/Catalogues		√	
5	QA & QC Plan	√		√
6	Test Certificates	√	√	√

Bidder shall subsequently provide four (4) complete sets of final drawings,. Soft copy (Compact Disk CD) of all the drawing, GTP, Test certificates shall be submitted after the final approval of the same to purchaser.

All the documents & drawings shall be in English language.

Instruction Manuals: Bidder shall furnish two softcopies (CD) and four (4) hard copies 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.

19.0 GUARANTEED TECHNICAL PARTICULARS:

S. No	Properties	Description
1	Material	Particulars to be provided by the bidder
2	Standard	
3	Suspension	
4	Weight	
5	Size	
6	Sweat Band	
7	Chin strap	
8	Design	
9	Short Strap	
10	Nape Strap	
11	Colors	
12	Shock Absorption Resistance	
13	Penetration resistance test	
14	Flammability Test	
15	Proof Voltage	
16	Breakdown Voltage	
17	Leakage current	
18	Heat resistance	
19	High visibility luminance factor	

20.0 SCHEDULE OF DEVIATION:

The bidders shall set out all deviations from this specification, Clause by Clause in this schedule. Unless **specifically** mentioned in this schedule, the tender shall be deemed to confirm the purchaser's specifications.

(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:

Reference Photos:

For more Updates: Please watch the video on YouTube: https://youtu.be/tb6Oo4a1jFQ

Technical Specification of Electrical Safety Hand Gloves

1. The gloves must provide complete hand protection from electrical shock during electrical operations as per the required operation voltage.

Features:

The electrical insulating rubber gloves to be made with highest quality rubber which gives unique benefits like:

- Tensile Strength ≥ 16MPa – Gives higher operating life
- Average elongation at break ≥ 600% – flexibility for different hand sizes
- Puncture resistance ≥ 18N/mm – Gives higher puncture resistance
- Tension set ≤ 15%- Non deforming

Gloves as per IS-4770

- Used for applications ranging from 500V, 11000 KV, 33000 KV AC
- Resistance to ozone – Longer storage life
- Resistance to Moisture Absorption – Suitable for humid conditions

Gloves as per I EC-60903:2002-03

- Made from high quality synthetic latex rubber for better properties in less thickness
- Automated dipping process to control design variables
- Gloves voltage applications from 500V to 36kV
- Contoured design for less fatigue
- Must provide complete range of gloves in all classes and sizes
- Added benefit of resistance to acid, oil, ozone and very low temperature
- Conforms to Ageing Requirements and Flame Retardant properties

If bicolor hand gloves are vaiavle from Class o to class 4 is referable one

Minimum Range Use:

LT Work: Class 00

11 KV: Class 02

33 KV : Class 04

Test Certificate & Certification

Supplier must provide the electrical rubber hand gloves as per IS/EN specification and required test certificate needs to verify by TPSODL Safety during sample verification of each lot.