



TP Southern ODISHA DISTRIBUTION LIMITED
(A Tata Power & Odisha Govt. joint venture)
Kamapalli, Courtpeta, Berhampur, Ganjam, Odisha, India -760 004
NIT No.: TPSODL/OT/2020-21/019

Procedure for Participating in Tender

Tender Enquiry No	Work Description	EMD (Rs.)	Tender Participation Fee (Inclusive of GST) (RS.)	Last date and time for Payment of Tender Participation Fee
TPSODL/OT/2020-21/019	SITC of Automation equipment and relays for Scada implementation at TSPODL	5.00 Lakh	5,000	17.07.2021 18:00 hrs

Please note that corresponding details mentioned in this document will supersede any other details mentioned anywhere else in the Tender Document.

Procedure for Participating in Tender. Following steps to be done before “Last date and time for Payment of Tender Participation Fee” as mentioned above.

1. Eligible and Interested Bidders to submit duly signed and stamped letter on Bidder's letterhead indicating.
 - A. Tender Enquiry number
 - B. Name of authorized person
 - C. Contact number
 - D. e-mail id
 - E. Details of submission of Tender Participation Fee
 - F. GST Number
2. Non-Refundable Tender Participation Fee, as indicated in table above, to be submitted in the form of direct deposit in the following bank account and submit the receipt along with a covering letter clearly indicating the Tender Reference no:

Beneficiary Name : TP Southern Odisha Distribution Limited.
Account No : 625901010050070
Name of the Bank : Union Bank of India, Kamapalli Branch, Berhampur
IFSC Code : UBIN0562599

E-mail with necessary attachment of 1 and 2 above to be send to sumitkumar@tpsouthernodisha.com with copy to manoj.kharbanda@tpsouthernodisha.com before “Last date and time for Payment of Tender Participation Fee”.

3. Bids are to be submitted only through online e-procurement platform, ARIBA. Any other form of bid submission will not be accepted. Link for bidding through ARIBA e-procurement platform will be mailed to bidder once Letter received as mentioned in point no 1 & 2 above.
4. Refer Tender Document for other details.



NIT No.: TPSODL/OT/2021-22/019

OPEN TENDER NOTIFICATION

FOR

**SITC of Automation equipment and relays for Scada
implementation at TSPODL**

Tender Enquiry No.: TPSODL/OT/2021-22/019

Due Date for Bid Submission: 31.07.2021

**TP Southern Odisha Distribution Limited
Berhampur, Odisha**

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1. Event Information

1.1. Scope of work

Open Tenders are invited through E-Tender Bidding Process from interested Bidders for entering into a firm Rate Contract as defined below:

S. No.	Description	EMD Amount (Rs.)	Tender Fee (Rs.)
1	SITC of Automation equipment and relays for Scada implementation at TPSODL	5,00,000	5,000

1.2. Availability of Tender Documents

Non-transferable tender documents may be purchased by interested eligible bidders from address given below on submission of written application to the under mentioned and upon payment of non-refundable Tender Fee.

Chief (Procurement & Stores)
 TP Southern Odisha Distribution Limited
 Call Center /Training Center, Duduma Colony,
 Ambagada, Berhampur, Odisha-7610001

1.3. Calendar of Events

(A)	Date of sale/ availability of tender documents from TPSODL Website	From 08.07.2021 onwards
(B)	Last date and time of Payment of Tender Fee	17.07.2021 18:00 Hrs.
(C)	Last Date of receipt of pre-bid queries if any.	21.07.2021, 18:00 Hrs
(d)	Date and Time of Pre-Bid Meeting	NA
(E)	Last Date of Posting Consolidated replies to all the pre-bid queries as received	24.07.2021, 18:00 Hrs
(F)	Last date and time of receipt of Bids	31.07.2021, 17:00 Hrs
(G)	Date & Time of opening technical bids & EMD (Envelope-1 & 2)	31.07.2021 17:00 Hrs onwards

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 TPSODL's office, the last date of submission of bids and date of opening of bids will be the day following working day at appointed times.

1.2 Mandatory documents required along with the Bid.

- 1.4.1 EMD of requisite value and validity
- 1.4.2 Tender Fee in case the tender is downloaded from Website.
- 1.4.3 Requisite Documents for compliance to Qualification Criteria mentioned in Clause 1.7.
- 1.4.4 Drawing, Type Test details along with a sample of each item as specified at Annexure I (as applicable)
- 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 Proper authorization letter/ Power of Attorney to sign the tender on the behalf of bidder.
- 1.4.8 Copy of PAN, GST, PF and ESI Registration (In case any of these documents is not available with the bidder, same to be explicitly mentioned in the 'Schedule of Deviations')

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

1.5. Deviation from Tender

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

1.6. Right of Acceptance/Rejection

Bids are liable for rejection in absence of following documents:

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

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

1.7 Qualification Criteria

- The bidder should either be an OEM for tendered equipment's or an authorized channel partner of OEM. Authorization Letter along with MAF from OEM to be submitted in this regard. Bidder should meet the requirements as set out in the technical specification.

- The bidder should have average annual turnover of Rs. **25 Crores** in any of the three years from (FY 16-17, FY 17-18, FY 18-19, FY 19-20 & FY 20-21). Audited balance sheet, profit and loss account and auditors report from the statutory auditors of the company required).
- The intending bidder must have successfully undertaken at least the following numbers of similar assignments during last five years of value specified herein:
 - a. One project of similar nature of not less than the amount **Rs. 10 Cr.**
OR
 - b. Two projects of similar nature of not less than the amount **Rs. 5 Cr.** each
OR
 - c. Three projects of similar nature of not less than the amount of **Rs. 3 Cr** each.
- The bidder should have performance certificates from at least 2 reputed companies for similar or higher rating of work. The work against these issued certificates should be completed in last seven years from the date of bid submission.
- Bidder should be a company registered in India with an office in Orissa. Bidder should submit the undertaking and details of address in this regard. In case of BA not having office in Odisha, they shall open new office in Odisha within 2 months of Release of Contract.
- Bidder should not be blacklisted by any Govt. Organization / utility. Bidder must submit the self-undertaking.

1.8. Marketing Integrity

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

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

1.9. Supplier Confidentiality

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

2. Evaluation Criteria

- The bids will be evaluated technically on the compliance to tender terms and conditions.
- The bids will be evaluated commercially on the overall all-inclusive lowest cost for the complete tender BOQ as calculated in Schedule of Items [Annexure I].
- Bidder has to mandatorily quote against each item of Schedule of Items [Annexure I], Failing to do so, TPSODL may reject the bids.
- TPSODL will reserve the right to split the Order Quantity in more than one Bidder, sub-station/ Circle Wise.

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

2.1 Price Variation Clause: The prices shall remain firm during the entire contract period.

2.2 Quantity variation Clause: There will not be any guarantee on quantity of job. Job has to be carried out on as and when required basis order from TPSODL on the quantity to be specified in the order.

3. Submission of Bid Documents

3.1 Bid Submission

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

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



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All communication will be done strictly with the bidder who have done the above step to participate in the Tender.

Bids shall be submitted in 3 (three) parts:

FIRST PART: “EMD” as applicable shall be submitted. *The EMD of Rs. 5,00,000 (Rupees Five lakh Only) 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 Southern Odisha Distribution Limited’ payable at Berhampur. The EMD has to be strictly in the format as mentioned in General Condition of Contract, failing which it shall not be accepted by TPSODL and the bid as submitted shall be liable for rejection.

A separate *non-refundable tender fee of Rs. 5000.00 (Rupees Five Thousand only)* of stipulated amount also needs to be transferred online through NEFT/RTGS in case the tender document is downloaded from our website.

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

Beneficiary Name : TP Southern Odisha Distribution Limited.
Account No : 625901010050070
Name of the Bank : Union Bank of India, Kamapalli Branch, Berhampur
IFSC Code : UBIN0562599

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

Please note that in such case, Tender Fee and EMD should be strictly 2 separate transactions. Please note as return of EMD from Bank Account is non-standard practice the same may take more time than return of EMD BG.

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

Chief (Procurement & Stores)
TP Southern Odisha Distribution Limited
Call Center /Training Center, Duduma Colony,
Ambagada, BERHAMPUR, Odisha-7610001

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

- Documentary evidence in support of qualifying criteria
- Technical literature/GTP/Type test report etc. (if applicable)
- Qualified manpower (if available)
- Testing facilities (if applicable)
- No Deviation Certificate as per the Annexure III – Schedule of Deviations
- Acceptance to Commercial Terms and Conditions viz. Delivery schedule/period, payment terms etc. as per the Annexure IV – Schedule of Commercial Specifications.
- Quality Assurance Plan/Inspection Test Plan for supply items (if applicable)

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

THIRD PART: “PRICE BID” shall contain only the price details and strictly in format as mentioned in Annexure I along with explicit break up of basic prices, Taxes & duties, Freight etc. In case any discrepancy is observed between the item description stated in Schedule of



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Items mentioned in the tender and the price bid submitted by the bidder, the item description as mentioned in the tender document (to the extent modified through Corrigendum issued if any) shall prevail.

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

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

EMD

“(SITC of Automation equipment and relays for Scada implementation at TSPODL)”

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

SIGNING OF BID DOCUMENTS:

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

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

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

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

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

3.2 Contact Information

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

Communication Details:

Communication Details:

Name: Mr. Sumit Kumar

Contact No: 8003383014

E-Mail ID: sumitkumar@tpsouthernodisha.com

HoD – Procurement

Name: Mr. Manoj Kharbanda
Contact No.: 9971395197
E-Mail ID: manoj.kharbanda@tpsouthernodisha.com

Chief – Contract and Stores

Name: Mr. Subrata Dey
Contact No: 9818603067
E-Mail ID: subrata.dey@tpsouthernodisha.com

3.3 Bid Prices

Bidders shall quote for the entire Scope of Supply/ work with a break up of prices for individual items and Taxes & duties. The bidder shall complete the appropriate Price Schedules included herein, stating the Unit Price for each item & total price with taxes, duties & freight up to destination at various sites of TPSODL. The all-inclusive prices offered shall be inclusive of all costs as well as Duties, Taxes and Levies paid or payable during the execution of the supply work, breakup of price constituents.

Applicable GST to be specified clearly.

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

3.4 Bid Currencies

Prices shall be quoted in Indian Rupees Only.

3.5 Period of Validity of Bids

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

Notwithstanding clause above, the TPSODL 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.

3.6 Alternative Bids

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

3.7 Modifications and Withdrawal of Bids

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

3.8 Earnest Money Deposit (EMD), if applicable, The bidder shall furnish, as part of its bid, an EMD amounting as specified in the tender. The EMD is required to protect TPSODL against the risk of bidder's conduct which would warrant forfeiture.

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

- Banker's Cheque/ Demand Draft/ Pay order drawn in favor of TP Southern Odisha Distribution Limited payable at Berhampur.
- Online transfer of requisite amount through NEFT/ RTGS.
- Bank Guarantee valid for 120 days after due date of submission.

The EMD shall be forfeited in case:

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

Or

b) The successful Bidder does not

- a) accept the Purchase Order/Rate Contract, or
- b) furnish the required Performance Security Bank Guarantee

3.9 Type Tests (if applicable)

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

4 Bid Opening & Evaluation process

4.1. Process to be confidential.

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

4.2. Technical Bid Opening

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

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

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

4.3. Preliminary Examination of Bids/Responsiveness

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

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

Arithmetical errors will be rectified on the following basis: If there is a discrepancy between the unit price and the total price per item that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price per item will be corrected. If there is a discrepancy between the Total Amount and the sum of the total price per item, the sum of the total price per item shall prevail and the Total Amount will be corrected.

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

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

4.4. Techno Commercial Clarifications

Bidders need to ensure that the bids submitted by them are complete in all respects. To assist in the examination, evaluation and comparison of Bids, TPSODL may, at its discretion, ask the Bidder for a clarification on its Bid for any deviations with respect to the TPSODL specifications and attempt will be made to bring all bids on a common footing. All responses to requests for clarification shall be in writing and no change in the price or substance of the Bid shall be sought, offered or permitted owing to any clarifications sought by TPSODL.

4.5. Price Bid Opening

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

4.6. Reverse Auctions

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

5 Award Decision

TPSODL will award the contract to the successful bidder whose bid has been determined to be the lowest-evaluated responsive bid as per the Evaluation Criterion mentioned at Clause 2.0. The Cost for the said calculation shall be taken as the all-inclusive cost quoted by bidder in Annexure I (Schedule of Items) subject to any corrections required in line with Clause 3.2 above. The decision to place Rate Contract /LOI solely depends on TPSODL on the cost

competitiveness across multiple lots, quality, delivery and bidder's capacity, in addition to other factors that TPSODL may deem relevant.

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

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

6 Order of Preference/Contradiction

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

1. Schedule of Items (Annexure I)
2. Post Award Contract Administration (Clause 7.0)
3. Submission of Bid Documents (Clause 3.0)
4. Scope of Work and SLA (Annexure VII)
5. Technical Specifications (Annexure II)
6. Acceptance Form for Participation in Reverse Auction (Annexure VI)
7. General Conditions of Contract (Annexure VIII)

7 Post Award Contract Administration

7.1. Special Conditions of Contract

- TPSODL appreciates and welcomes the engagement/employment of persons from SC/ST community or any other deprived section of society by their Bas.
- Performance Bank Guarantee amounting to 5% of the Annual contract value shall be submitted by the BA as per GCC for a period equivalent to contract period plus one month.
- Any change in statutory taxes, duties and levies during the contract period shall be borne by TPSODL. However, in case of delay in work execution owing to reasons not attributable to TPSODL, 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 TPSODL.
- All the terms and conditions of TPSODL GCC shall be applicable.
- The successful bidder has to follow the Contract safety management (CSM) as per GCC. The penalty will be imposed to bidder for any safety violence as per CSM matrix.

7.2 Delivery Terms / Contract Period

As per Scope of Work/ SLA in Annexure VII

7.3 Completion Period

As per Scope of Work/ SLA in Annexure VII

7.4 Warranty Period

As per Technical specification in Annexure- 'I'

7.4 Payment Terms

The bidder shall submit the invoices on completion of installation against each release Order basis and the payment shall be released within 45 days from the date of submission of certified bills/invoices.

7.5 Climate Change

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

7.6 Ethics

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

TPSODL 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 at Annexure X for more information.

Any ethical concerns with respect to this tender can be reported to the following e-mail ID: mpkulkarni@tpsouthernodisha.com, copy to manoj.kharbanda@tpsouthernodisha.com

8 Specification and standards

As per Annexure II

9 General Condition of Contract

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

10 Safety

All jobs are this tender have to be executed strictly in compliance to the Safety terms and Conditions of TP Southern Odisha Distribution Limited. Please refer attached Safety terms and conditions, Annexure-IX, for details. Violation of Safety norms will result in Penalty as mentioned in the above document.

ANNEXURE I

Schedule for Items

S NO.	Item Description	HSN Code	UoM	Quantity 'A'	Unit Price (Rs.) 'B'	Applicable taxes and duties (Rs.) 'C'	All Inclusive Unit Price (Rs.) 'D= B+C'	All Inclusive Value In (Rs.) 'E=A*D'
1	RTU		EA	22				
2	Ethernet SWITCH for RTU		EA	44				
3	Ethernet SWITCH for Control Panel (IED)		EA	88				
4	MFM/MFT Incl. BC		EA	306				
5	Relay / BCPU		EA	102				
			EA	21				
6	Master Trip Relay		EA	102				
7	Kiosk		EA	5				

Spare Quantity (Only Supply)

S NO.	Item Description	HSN Code	UoM	Quantity 'A'	Unit Price (Rs.) 'B'	Applicable taxes and duties (Rs.) 'C'	All Inclusive Unit Price (Rs.) 'D= B+C'	All Inclusive Value In (Rs.) 'E=A*D'
1	RTU		EA	2				
2	Ethernet SWITCH for RTU		EA	2				
3	Ethernet SWITCH for Control Panel (IED)		EA	15				



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4	MFM/MFT Incl. BC		EA	5				
5	Relay / BCPU		EA	5				
			EA	1				
6	Master Trip Relay		EA	5				
7	Kiosk		EA	1				

Signature & Seal of the Bidder

NOTE:

- The overall period of the contract shall be for a period of five months and prices shall be firm till the validity of contract. Release order shall be issued as per requirement.
- Total Inclusive amount as mentioned above, shall be inclusive of all taxes, duties, freight, and insurance, loading & unloading charges.
- The bids will be evaluated commercially on the overall all-inclusive lowest cost for overall BOQ.
- The bidders are advised to quote prices strictly in the above format and for all the line items as mentioned above in line with requirements mentioned in this document. Failing to do so, bids are liable for rejection.
- The bidder must fill each and every column of the above format. Mentioning “extra/inclusive” in any of the column may lead for rejection of the price bid.
- No cutting/ overwriting in the prices is permissible.

ANNEXURE II
Technical Specification

CONTENTS

1. SCOPE
2. APPLICABLE STANDARDS
3. CLIMATIC CONDITIONS OF THE INSTALLATION
4. GENERAL TECHNICAL REQUIREMENTS
5. GENERAL CONSTRUCTION
6. NAME PLATE AND MARKING
7. TESTS
8. TYPE TEST CERTIFICATES
9. PRE-DISPATCH INSPECTION
10. INSPECTION AFTER RECEIPT AT STORES
11. GUARANTEE/WARRANTY DETAILS
12. PACKING
13. TRAINING
14. QUALITY CONTROL
15. MINIMUM TESTING FACILITIES
16. MANUFACTURING ACTIVITIES
17. SERVICES, SPARES, ACCESSORIES AND TOOLS
18. DRAWING AND DOCUMENTS
19. GUARANTEED TECHNICAL PARTICULARS

1.0	Scope	<p>TPSODL for planning towards SCADA / ADMS with Master Control Center and Back-up Control Centre through which 259 PSS are going to be controlled and monitored. TPSODL envisages adding the new grids and renovation of existing PSS to make them SCADA enabled. The station level automation should enable to communicate with both the stations simultaneously. The Substation Automation shall be structured in three levels – Station Level (RTU/DCU), Bay Level (IEDs) and Process Level (Merging Units cum Switchgear Control Units, Process Intelligence, Secondary Protections). The RTU/DCU, IEDs at both Station Bus level & Process Bus level and Network Switches should be accessible for engineering activities from a remote location by using TPSODL’s network.</p> <p>The scope of this specification covers all the Technical Requirements of Design, Engineering, Manufacture, Testing at manufacturer's works, packing, forwarding, supply and unloading at site/stores complete with all accessories including supply, testing, installation, testing and commissioning of efficient and trouble free Remote Terminal Unit / Data Concentrator Unit, Network Switches, ICS Firewall and Communication Cables including all works required for successful integration with all IED’s, Meters etc. on Station Bus and Process Bus level & with Master SCADA. The scope of this specification also covers the Automation requirement for Control and Relay Panels, IEDs, Aux. Relays, Network Switches and all other items required for SCADA controlled protection of 33kV/11kV power system.</p> <p>This specification will be applicable to all 33/11kV panels in the existing PSS/existing Bays/ Renovated PSS.</p> <p>The specific requirements are covered in the enclosed technical data sheet.</p>
2.0	Applicable Standards	<p>The equipment covered by this specification shall unless otherwise stated, be designed, constructed and tested in accordance with latest revisions of relevant Indian/IEC/other applicable standards shall confirm to the regulations of local statutory authorities.</p> <ul style="list-style-type: none"> • IEC 60870-5-104 • IEC 61850 (All Parts) • IEC 62439-3 (PRP) • IEC 61131-3 • IEC 62056 • IEC 61588/IEEE 1588v2 • IEC 62351

3.0	Climatic Conditions of the Installation	<p>The atmosphere is generally humid and dust suspended during dry months and subjected to fog in cold months. The design of the equipment and accessories shall be suitable to withstand seismic forces corresponding to an acceleration of 0.1g.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%;">Max. Ambient Temperature</td> <td style="width: 30%;">55°C</td> </tr> <tr> <td>Max. Daily Average Ambient Temperature</td> <td>35°C</td> </tr> <tr> <td>Min. Ambient Temperature</td> <td>4°C</td> </tr> <tr> <td>Max. Humidity</td> <td>100%</td> </tr> <tr> <td>Min. Humidity</td> <td>30%</td> </tr> <tr> <td>Average No. of Thunderstorm days per annum</td> <td>100 Days</td> </tr> <tr> <td>Average Annual Rainfall</td> <td>2000 mm</td> </tr> <tr> <td>Average No. of Rainy days per annum</td> <td>87</td> </tr> <tr> <td>Rainy months</td> <td>June to September</td> </tr> <tr> <td>Altitude above MSL not exceeding</td> <td>1000 m</td> </tr> <tr> <td>Highest Wind speed</td> <td>160 KM/Hr.</td> </tr> </table>	Max. Ambient Temperature	55°C	Max. Daily Average Ambient Temperature	35°C	Min. Ambient Temperature	4°C	Max. Humidity	100%	Min. Humidity	30%	Average No. of Thunderstorm days per annum	100 Days	Average Annual Rainfall	2000 mm	Average No. of Rainy days per annum	87	Rainy months	June to September	Altitude above MSL not exceeding	1000 m	Highest Wind speed	160 KM/Hr.
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4.0	General Technical Requirements																							
4.1	General Requirements from the Business Associates	<ul style="list-style-type: none"> The supplier should have at least 10 years of experience in design and supply of control, protection and automation systems for electricity transmission and distribution applications. The manufacturer, whose substation automation and protection system is offered, should have designed, manufactured, tested, installed and commissioned such a system for electricity transmission and distribution for at least 10 years. The manufacturer needs to submit the proof of completing such tasks with other utilities/concerns as its experience certificate. The SCADA system should be integrated with Numerical Relays on standard international protocols. The Business Associate can offer an innovative and advanced system and the ways and cost to integrate the same in the existing infrastructure. The offer is subjected to an approval from TPSODL after a thorough discussion between the BA and TPSODL. In case, an approval is not awarded to the BA's offered innovative system, TPSODL's existing/desired 																						

		<p>infrastructure prevails and the BA shall provide the system accordingly.</p> <ul style="list-style-type: none"> • The BA should optimize on the cost of software products offered to TPSODL considering already available licenses with TPSODL. The BA should clearly indicate licensing policy for the software tools offered. • The BA should provide the MIB Files of RTU/DC, TMU, Ethernet Switch, Firewall and GPS Clock to integrate the SNMP Traps with Network Management System • The BA should provide necessary training to the personnel recommended by TPSODL to maintain the system and troubleshooting reports.
<p>4.2</p>	<p>General System Design</p>	<p>The Substation Automation System (SAS) shall be suitable for operation and monitoring of the complete substation including future extensions and shall works on IEC 61850 Edition-2. The offered IEDs shall be compliant to IEC 61850 Edition-2 with backward compatibility to Edition-1.</p> <p>The systems shall be of the state-of-the art suitable for operation under electrical environment present in high voltage substations (33/11kV), follow the latest engineering practice, and ensure long-term compatibility requirements and continuity of equipment supply and the safety of the operating staff.</p> <p>The offered SAS shall support remote control and monitoring from Remote Control centers (MCC/BCC) via gateways.</p> <p>The system shall be designed such that personnel without any background knowledge in Microprocessor-based technology are able to operate the system. The operator interface shall be intuitive such that operating personnel shall be able to operate the system easily after having received some basic training.</p> <p>The system shall incorporate the control, monitoring and protection functions specified, self-monitoring, signaling and testing facilities, measuring as well as memory functions, event recording and evaluation of disturbance records.</p> <p>Maintenance, modification or extension of components may not cause a shutdown of the whole substation automation system. Self-monitoring of components, modules and communication shall be incorporated to increase the availability and the reliability of the equipment and minimize maintenance.</p>

		<p>All IEDs must have conformal coating for protection against harsh environments.</p>
<p>4.3</p>	<p>System Architecture</p>	<p>The SAS shall be based on a decentralized architecture and on a concept of bay-oriented, distributed intelligence. Functions shall be decentralized, object-oriented and located as close as possible to the process.</p> <p>The main process information of the station shall be stored in distributed databases. The typical SAS architecture shall be structured in three levels, i.e. Process Level, Bay Level and Station Level in a station and a bay level.</p> <p>The Process Level takes care of the data acquisition using instrument transformers. The output of these instrument transformers are sampled, converted to digital representation, and formatted for subsequent transmission through the Process Bus Local Area Network (LAN). The Process Bus is also used to control high voltage switchgear equipment such as breakers, breaker control units, disconnecter switches, etc. Process level information is then communicated over the LAN to the protection and control devices that are located in the Bay/Unit Level as per IEC 61850-9-2. The BCP/Relay Units and MFM are the interface to conventional current/voltage transformers, switchgear.</p> <p>IEC 61850 Process Bus standard defines the Specific Communication Service Mapping (SCSM) for the transmission of Sampled Values. IEC 61850-9-2 defines a bidirectional user configurable dataset that can be configured using the Substation Configuration Language and multicast to multiple subscribers. The IEC 61850-9-2LE defines a base sample rate of 80 samples per cycle for basic protection and control applications, and a sample rate of 256 samples per cycle for high frequency applications, such as power quality monitoring and high resolution oscillography. For 50 Hz systems, this translates to 4 kHz and 12.8 kHz sampling frequencies respectively.</p> <p>At Bay Level, the IEDs shall provide all bay level functions regarding control, monitoring and protection, inputs for status indication and outputs for commands. The Bay Level IEDs should be directly connected to the switchgear without any need for additional interposition or transducers.</p>

		<p>Each bay control IED shall be independent from each other and its functioning shall not be affected by any fault occurring in any of the other bay control units of the station.</p> <p>The data exchange between the Bay Level IEDs and RTU/DCU at Station Level shall take place via the communication infrastructure as per IEC 61850-8-1. This shall be realized using fibre-optic/CAT-VI cables, thereby guaranteeing disturbance free communication. The fibre optic cables shall be of armored cable and shall run in GI conduit pipes. Each fibre optic cable shall have four (4) spare fibres. The link between Bay Level IEDs and RTU/DCU shall be as per IEC 62439-3 Parallel Redundancy Protocol on dual star network topology with a redundant managed switched Ethernet communication infrastructure.</p> <p>The communication, including both the Process Bus LAN & Station Bus LAN shall be made in 1+1 mode, including the links between individual bay IEDs to switch, such that failure of one set of fibre/Ethernet shall not affect the normal operation of the SAS. However it shall be alarmed in SAS as well as in i-NMS.</p> <p>The Ethernet switch must be IEC 61850 compliance. The Speed of the Ethernet switch should be 1Gpbs for Process Bus and 10/100Mbps for Station Bus.</p> <p>At Station Level, the entire station shall be controlled and supervised from the station Remote Terminal Unit/Data Concentrator Unit. It shall also be possible to control and monitor the bay from the bay level equipment at all times.</p> <p>Clear control priorities shall prevent operation of a single switch at the same time from more than one of the various control levels, i.e. MCC/BCC, RTU/DCU, bay level or apparatus level. The priority shall always be on the lowest enabled control level.</p> <p>The station level contains the station-oriented functions, which cannot be realized at bay level, e.g. alarm list or event list related to the entire substation, gateway for the communication with remote control centers.</p> <p>Integration & testing of remote end LDR with RTU shall be in Scope of Bidder including the However, TPSODL shall provide necessary integration support at RTU end. System architecture shall be submitted by bidder for review & approval by TPSODL.</p>
4.4	Functional Requirements	The high-voltage apparatus within the station shall be operated from different places:

		<ul style="list-style-type: none"> • Remote control centers (MCC/BCC) • RTU/DCU • BCPUs/Main Protection Units (in the bays). • IEDs such as DCMU/Fire alarm panel/ temperature & humidity sensors <p>Operation shall be possible by only one operator at a time. The operation shall depend on the conditions of other functions, such as interlocking, synch-check, etc.</p> <p>Select-Before-Execute: For security reasons the command is always to be given in two stages: selection of the object and command for operation under all mode of operation except emergency operation. Final execution shall take place only when selection and command are actuated.</p> <p>Command Time-Out: Command execution timer (configurable) must be available for each control level connection. If the control action is not completed within a specified time, the command should get cancelled and an alarm shall be generated to indicate the failure of command.</p>
4.5	Communication Interface	<p>The Data concentrator shall have the capability to support simultaneous communications with multiple independent remote master stations (8 nos. minimum). It would have 2 nos. of physical ports and each port would have the capability of communicating to minimum of 8 nos. of SCADA masters simultaneously. Data Concentrator shall have complete redundancy for both master and slave communication.</p> <p>The communication interface to the SAS shall allow scanning and control of defined points within the substation automation system independently for each control centre. The substation automation system shall simultaneously respond to independent scans and commands from TPSODL's control centres (MCC & BCC). The substation automation system shall support the use of a different communication data exchange rate (bits per second), scanning cycle, and/or communication protocol to each remote control centre.</p> <p>Also, each control centre's data scan and control commands may be different for different data points within the substation automation system's database</p>
4.6	Communication Protocol	<p>The communication protocol for gateway to control centre must be open protocol and shall support IEC 60870-5-104 and IEC 61850 for</p>

		<p>all levels of communication for sub-station automation. In addition the Data Concentrator is expected to have serial ports RS 485 for communication to auxiliary devices such as MFMs, Meters, NIDSs, DCDBs, APFCs and other IEDs</p> <p>Data Concentrator to Remote Control Centers (MCC/BCC): IEC 60870-5-104</p> <p>Data Concentrator to BPCUs/LDR/TDR/Relays: IEC 61850-8-1</p> <p>Data Concentrator and Transformer Monitoring Unit: IEC 61850-8-1</p> <p>Data Concentrator to Meters: Modbus TCP/IP / RTU / IEC62056</p> <p>Data Concentrator to MFMs/DCDB/NIDS/APFC/Solar Logger: Modbus TCP/IP / RTU</p> <p>Data Concentrator to other IEDs such as battery charger DC monitoring unit (DCMU)/ Transformer monitoring unit (TMU), Temperature and Humidity sensor: Modbus TCP/IP / RTU</p> <p>Between BPCUs/LDRs/TDRs/Relays and TMU: IEC 61850-8-1</p> <p>*Converters (protocol/media/power supply) of any sort will not be permitted.</p>
4.7	Time Synchronization	<p>A redundant GPS time synchronizing signal for the synchronization of the entire system shall be provided. The GPS provided shall support IEEE 1588 PTP for process level.</p> <p>The RTU/DCU will get time synchronization signal from the Front End Processor (FEP) Servers over SNTP over IEC 60870-5-104 with CP56 time format.</p> <p>Further RTU/DCU shall act as SNTP Server for IEDs at Bay Level. This GPS signal would be available to the Data Concentrator at regular specified intervals and is independent of the station computers and gateways. The RTU/DCU in turn should synchronize all devices via inter bay bus using SNTP as defined in IEC 61850 standard.</p>
4.8	Response Time and IO Capabilities	<p>The total I/O count in a major substation will become large and it must be ensured that the hardware and communication links have sufficient performance to ensure prompt processing of incoming data. Overload in this area can lead to one or more of the following:</p> <ul style="list-style-type: none"> ▪ undue delay in updating the system status diagrams/events log/alarm log in response to an incident

		<ul style="list-style-type: none"> ▪ corruption of system database, so that the information presented to the operator is not an accurate representation of the state of the actual electrical system ▪ system lockup <p>As I/O at the bay level, both digital and analogue will typically be handled by intelligent relays or specialized IED's, it is therefore important to ensure that these devices have sufficient I/O capacity. If additional IED's have to be provided solely for ensuring adequate I/O capacity, cost and space requirements will increase. There will also be an increase in the number of communication links required.</p> <p>A practical specification for system response times is given in Tables below. Tables give a typical specification for the maximum I/O capacities of a substation automation system.</p> <div style="text-align: center; margin: 10px 0;"> <table border="1" style="width: 80%; border-collapse: collapse; background-color: #e6f2ff;"> <thead> <tr> <th style="text-align: center;">Signal Type</th> <th style="text-align: center;">Response Time to/from HMI</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Digital Input</td> <td style="text-align: center;">1s</td> </tr> <tr> <td style="text-align: center;">Analogue Input</td> <td style="text-align: center;">1s</td> </tr> <tr> <td style="text-align: center;">Digital Output</td> <td style="text-align: center;">0.75s</td> </tr> <tr> <td style="text-align: center;">Disturbance Record File</td> <td style="text-align: center;">3s</td> </tr> </tbody> </table> <p style="color: #0070c0; font-style: italic; margin-top: 5px;">Practical system response times for a substation automation scheme</p> </div> <div style="text-align: center; margin: 10px 0;"> <table border="1" style="width: 80%; border-collapse: collapse; background-color: #e6f2ff;"> <thead> <tr> <th style="text-align: center;">I/O Type</th> <th style="text-align: center;">Capacity</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Digital Input</td> <td style="text-align: center;">8196</td> </tr> <tr> <td style="text-align: center;">Digital Output</td> <td style="text-align: center;">2048</td> </tr> <tr> <td style="text-align: center;">Analogue Input</td> <td style="text-align: center;">2048</td> </tr> <tr> <td style="text-align: center;">Analogue Output</td> <td style="text-align: center;">512</td> </tr> </tbody> </table> <p style="color: #0070c0; font-style: italic; margin-top: 5px;">Typical I/O capacities for a substation automation system</p> </div> <p>The above values are the minimum capacity which may change during detailed engineering of data concentrator. The Data concentrator should have the capability of expansion for I/O.</p>	Signal Type	Response Time to/from HMI	Digital Input	1s	Analogue Input	1s	Digital Output	0.75s	Disturbance Record File	3s	I/O Type	Capacity	Digital Input	8196	Digital Output	2048	Analogue Input	2048	Analogue Output	512
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4.9	Errors in Communication	<p>A significant problem to be overcome in the implementation of communication links is the possibility of electromagnetic interference. The low voltage levels that are used on most types of communication link may be prone to interference as a result. Careful design of the interfaces between the devices used and the communication bus, involving the use of opto-couplers is required to minimize the risk. Care over the arrangement of the communication cables is also required. It may also help to use a communication protocol that</p>																				

		<p>incorporates a means of error detection/correction. While it may not be possible to correct all errors, detection offers the opportunity to request re-transmission of the message, and also for statistics to be gathered on error rates on various parts of the system. An unusually high error rate on a part of the communication system can be flagged to maintenance crews for investigation. Error detail should be available/ archived in RTU/DC log/Archive, Archiving limit should be min 1000.</p>
<p>4.10</p>	<p>Data Concentrator (DC) or Remote Terminal Unit (RTU)</p>	<p>In general, the RTU/DC design should aim to minimize power consumption and heat generation. It should be designed to work in an electrical installation by being of robust physical construction with immunity to electrical noise.</p> <p>The RTU/Data Concentrator shall be assembled from modular units, for example, power supply module, CPU and communications module, communication interface modules and modules for input/output purposes. I/O and serial cards shall be able to be arranged in the RTU rack in any order.</p> <p>The data concentrator shall be a product manufactured using industrial grade components and should be based on microprocessor technology and shall use numerical techniques for the calculation and evaluation of externally input analog and digital signals. Should provide following functionalities:</p> <ul style="list-style-type: none"> • CPU should be of 32-bit Processor @ 350MHz Speed at least. • The Flash Memory should not be less than 2GB • There should not be more than 16 IEDs per Ethernet Port and 8 IEDs per Serial Port. • All the cards/modules of the RTU/DC must have conformal coating for protection against harsh environments. • The RTU/Data Concentrator should be designed for 10000 I/Os. • The RTU/ Data Concentrator should support min. of 4 SNTP Servers and broadcast the time sync to the IEDs at Bay level • The RTU/Data Concentrator should support IEC 61850, IEC 60870-5-101, IEC 60870-5-103, IEC 60870-5-104, Modbus

RTU, Modbus TCP/IP, DNP3.0 Serial and DNP3.0 TCP/IP
(Configuration will be based on requirement at PSS)

- There should be a provision to simulate the I/Os from the RTU
- There should be option to download (RTU to Laptop) the existing configuration from the RTU/Data Concentrator
- Provide a communication facility to the IEDs & Auxiliary Devices through Network Communication and/or Serial communication over RS485
- Data concentrator should support all the Data Types i.e, all Type Identifiers as specified in IEC 60870-5-104 for remote communication.
- Should have an ability to collect data from all connected devices, regardless of protocol and make it available to the control centers & HMI using a LAN/WAN connectivity.
- Should act as a protocol translator to ensure interoperability with the protocols defined in the communication principle section.
- Should communicate to minimum 8 masters simultaneously on IEC 60870-5-104 protocol on a same CASDU
- Should be compatible to integrate IEDs on both IEC 61850 Ed.1 and Ed.2
- Should be capable of handling real time data exchange services to publish or subscribe information for defined master and slave protocols.
- Web Server Functionality that makes substation information available to authorized users.
- Substation Information Manager to manage important substation information and events
- Should provide of Hardware diagnostics, System initialization, Watchdog management functions
- Should provide for time & millisecond synchronization function.

		<ul style="list-style-type: none"> • Provide for pass through access for remote maintenance of the automation devices connected • Should provide latest Microsoft Windows based maintenance and configuration tools. The tools should have functionality of both remote and local access. • Minimum functionalities to be provided through these tools are device configuration, security settings, log files, communication traces and system statistics. • Software, configuration tools and firmware updates/releases must be upgraded at free of cost for next 5 years after commissioning of the data concentrator (supplier should inform us for any updates in advance) • It should have complete redundant hardware design including CPU, Power Supply, Communication Modules and Bus Interface Unit/Card. • It should have enough RS485 ports to communicate with all Modbus devices taking into consideration that each Modbus loop will not have more than 6 devices. • Data Concentrator should support IEC 61131-3 with necessary license. • Data concentrator should have following the cyber security features <ul style="list-style-type: none"> i) Access Management ii) System Audit Logs iii) Events Management iv) System Hardening v) Secured connection via SSH/SFTP/SCP/HTTPS/TLS • Should support SNMP v1.0/2.0/3.0 (as Client and server both) feature. • Auxiliary power supply for the RTU/DC should have in the range of 24VDC or 48VDC depends upon Station DC Supply with tolerance of $\pm 15\%$. • The processor shall monitor the health of the RTU with built in diagnostics, which are capable of remote interrogation including diagnostics for memory and bus errors, buffer overflows, local software routine health, communication ports
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		<p>status, input/output card health. Diagnostics shall also be supplied that shall permit complete testing of the RTU with a portable computer. Diagnostic checking of the communication ports shall be provided to permit checking by a portable computer.</p> <ul style="list-style-type: none"> • The RTU shall possess memory to permit storage of a minimum of 2000 events (input changes) locally for subsequent transmission to the SCADA master station. A separate buffer shall be preferable for digital and analogue events. • The RTU shall have a real time clock, with a resolution of 1ms. It shall have the capability of time stamping events. The RTU clock is normally synchronized by the SCADA/DMS FEPs. In the advent that this does not occur, the RTU clock shall drift no more than 1 second in 24 hours. • Provisioning of RF receiver module or 3G/4G network module in RTU so that RTU shall integrate with FRTU/or other IEDs over RF or 3G/4G interface also. • PC based Gateway Solution is strictly not acceptable. 		
4.11	TPSODL approved Make and Models for RTU/DC	S. No.	Make	Model
		1	ABB Ltd.	RTU 560A
		2	GE T&D Ltd.	D400
		3	Siemens Ltd.	AK3
		4	Schneider Electric	Latest user friendly model equivalent to above in market.
4.12	Ethernet Switch	<p>The 61850 compliance Managed Ethernet Switch shall meet the demands of power system automation systems Auxiliary Power Supply: 24VDC or 48VDC (depending upon the Station DC Voltage) with ±15% tolerance, Dual Power Supply</p> <ul style="list-style-type: none"> • Separate MCB with appropriate rating shall be used to power up the Switch • Operating Temperature: -5° to +85°C. • 19" Rack Mountable with Power Socket and Ports at rear side • Compliance to IEC 61850-3, IEEE 1613 Standards • Port Speed: 10Mbps/100Mbps for Station Bus and 1Gbps for Process Buss 		

		<ul style="list-style-type: none"> • Should support PTP • Each switch should have minimum of 24 Ports • LED indicators for link establishment and data transfer for each port • Should support remote user setting configuration. • Warranty for the switch must be 5 years. • It should own separate maintenance/console port • Latency shall be not more than 10ms. • Should support SNMP Server v1.0/v2.0/v3.0 • Should be KEMA Certified or equivalent • All the cards/modules of the Switch must have conformal coating for protection against harsh environments. <p>Approved makes: 1. Ruggedcom, 2. Garrettcom, 3. Siemens</p>
<p>4.13</p>	<p>ICS Firewall</p>	<p>The offered ICS Firewall should meet the following requirements</p> <ul style="list-style-type: none"> • The firewall shall be of industrial ruggedized grade. Should be IEEE 1613 compliant i.e., service conditions, electrical ratings, thermal ratings, and environmental testing requirements are defined for communications networking devices to be installed in electrical power substations • Meets various standards and approvals <ul style="list-style-type: none"> – Safety: EN 60950-1, UL 60950-1,2 – Radio Equipment: FCC – Industrial: IEEE 1613, IEC 61850-3 • The firewall should have integrated firewall, IPS and VPN • The firewall should support Stateful inspection, filter IP and Mac address, ports, ICMP, DDoS, Port Scanning, Improper commands, Access Control List Ethernet protocols • Deep Packet Inspection: Modbus TCP/UDP, IEC-61850 • Quick Automation Profiles: EtherNet/IP, Modbus/TCP, IEC 60870-104, IEC-61850, FTP, SSH, Telnet, HTTP, IPsec, L2TP, PPTP • The firewall should have minimum of 4 x 10/100BASE-TX RJ-45 Ports • The firewall should have functionality of standard Layer 3 mode of configuration • Proposed appliance must support integration with other SIEM products • The firewall should be possible to protect the firewall policies from being compromised.

		<ul style="list-style-type: none"> • The firewall must provide NAT functionality, including dynamic and static NAT • The firewall shall be of DIN Rail mountable • The firewall should support VLAN tagging (IEEE 802.1q) • The firewall should be capable of upgrading to new versions/products in case a new feature is released by the OEM. • The firewall should be configurable and manageable using Command Line Interface & Web Interface • The firewall should focus on Service Control, Direction Control, User Control and Behavior Control • The firewall should support SNMP V1, V2 & V3 • Firewall shall support Web based (HTTP and HTTPS). • Firewall shall support Command Line Interface using console, and SSH. • The administration software must provide a means of viewing, filtering and managing the log data • Firewall shall support software upgrades using secure web Interface. • The firewall should have Inline and bridge mode of configuration. The proposed appliance should support Firewall Learning Mode • Power Input: 24V DC/48V DC with $\pm 15\%$ tolerance • The firewall should have redundant power supply input. • Proposed appliance must support operating Temperature: 0°C to 70°C . 20% to 90% relative humidity (non-condensing) environment shall be supported. • Proposed solution must be Certified for industrial specifications like IEC-62443 and NERC-CIP etc. • Separate MCB (appropriate rating) shall be used for Auxiliary Power Supply (Separate MCB for Redundant Power Supply Port)
<p>4.14</p>	<p>Energy Meter (Multifunction Meter)</p>	<p>The Energy Measurements should be preferably done as per 3 wattmeter method. It shall use Potential Transformer and the Metering Core of the respective Current Transformers. The desired Metering class accuracy of 0.2s is expected for metering functions.</p> <ul style="list-style-type: none"> • Supply and Integration of Energy Meters with Software for centralized meter data reading shall be in supplier's scope. Supplied Software shall have independent for meter make or OEM to retrieving the meter data. • Laying of Communication Cable along in GI conduit shall be in supplier's scope

- Supply and Installation of RJ11 Splitters shall be in supplier's scope
- Supply, Installation and Configuration of TCP/IP to Serial Converter shall be in supplier's scope if required.
- Software configuration for integration of energy meters (at centralized meter data acquisition system) shall be in supplier's scope. Supplier shall have ensured the data communication.

The basic metering functions should be additionally supported by following:

S. No.	Description	Requirement
01	Type of the Meter	3 Phase 4 Wire, CT/PT Operate Meters
02	Accuracy Class of the Meter	Active Energy – 0.2S Reactive Energy – 2 or better
03	Basic Current (I _b) & rated Max. Current (I _{max})	When I _b =1A; I _{max} =2A When I _b =5A; I _{max} =10A
04	Rated Secondary Current (I _b)	1A or 5A for 66/33kV/11kV (b and unbalanced load),
05	Reference conditions for testing the performance of the meter	V _{ref} = 110V ± 1% Freq = 50Hz ± 0.3% Temperature = 27°C ± 2°C
06	Operating Voltage	110V (P-P), Meter shall be operated with required accuracy from 0.1 to 1.2V _{ref}
07	Operating Frequency	50Hz ± 5%
08	Power Consumption	Voltage Circuit: Max. 1.5W and Current Circuit: Max. 1VA
09	Starting Current	0.1% of I _b
10	Short time over current	The meter shall be able to carry a current equal to 20 times the rated current
11	Influence of heating	Temperature rise at any point on external surface of the meter shall not exceed 5°C

			exceed by more than 20k with an ambient temperature at 45oC
12	Rated Impulse withstand voltage	6kV (Shall be applied ten times with one polarity & then repeated with the other polarity and minimum time between each impulse to be 3s)	
13	AC withstand voltage for 1 min	4kV	
14	Insulation resistance between	Frame & current, voltage circuits connected together: 5MΩ Each current circuit (and voltage circuit) & each and every other: 50MΩ	
15	Mechanical Requirements	Meter shall be in compliance with clause 12.3 of IS 14697	
16	Resistance to Heat and Fire	The terminal block, terminal cover and Meter case shall ensure safety against spread of fire. They should not be ignited by thermal overload of live parts in contact with them as per clause 6.8 of IS 14697. Fire retardant material shall be used.	
17	Protection against penetration of dust and water	Degree of Protection: IP 51, but without suction in the meter	
18	Resistance against Climatic influence	Meter shall be in compliance with clause 12.6 of IS 14697	
19	Electromagnetic Compatibility (EMC)	Meter shall be in compliance with clause 12.8 of IS 14697	
20	Accuracy requirements	Meter shall be in compliance with clause 11.0 of IS 14697	
21	Power Factor Range	Zero lag to Zero lead	
22	Energy Measurement	Fundamental energy +Energy due to Harmonics. Energy meters shall record Total Harmonics distortion (THD) in voltage and current for at least 30 days	
23	Connection Diagram	The connection diagram for the system shall be provided on terminal cover	

		24	Self-Diagnostic Feature	Self-diagnostic for calendar, RTU Battery, all display segments and NVM.
		25	Initial startup of meter	Meter shall be fully functional within 5s after reference voltage is applied to the meter terminals
		26	Internal diameter of the terminal holes and Depth of terminal hole	5.5mm (min), 25mm
		27	Clearance between adjacent Terminals	10mm (min)
		28	Display	Backlit LCD, Scrolling, 10s for each parameter
		29	History requirements	<p>The meter shall be capable of recording the last two months data for following parameters, at the end of every month at 24:00 hrs:</p> <ul style="list-style-type: none"> • Active demand (MW), import • Apparent demand (MVA), import • Reactive energy (MVArh) lag, import • Reactive energy (MVArh) lead, import • Active energy (MWh), import • Apparent energy (MVAh), import • Active demand (MW), export • Apparent demand (MVA), export • Reactive energy (MVA) lag, export • Reactive energy (MVArh) lead, export • Active energy (MWh), export • Apparent Energy (MVAh), export
		29	Security feature	Programmable facility to restrict the access to the information recorded at different security level such as read communication, write communication etc.

		30	Software and Communication compatibility	The BCS and CMRI Software shall be supplied by the bidder for free of cost. Training for the use of the software shall also be provided by the bidder
		31	Calibration	Meters shall be software calibrated at factory and modifications in calibration shall not be possible at site by any means.
4.15	Transformer Monitoring Unit	<p>A transformer monitoring cum automatic voltage regulator unit is to be provided for each power transformer with following functionalities:</p> <ul style="list-style-type: none"> • Automatic voltage control shall be initiated by a voltage regulating relay of an approved make and suitable for flush or DIN-rail mounting. • The relay shall operate from the nominal reference voltage derived from a circuit mounted 1 phase / 3 phase Voltage transformer (VT). • The Unit shall Microprocessor based Numerical relay having LCD display • Compliant to IEC 61850-9-2LE Standard • The relay shall have sufficient selectable set point voltages. • All the modules/cards of the TMU must have conformal coating for protection against harsh environments. • The Unit should have at least the following methods as option for the compensation of voltage. <ul style="list-style-type: none"> ▪ Active Current ▪ Reactive current • The relay bandwidth shall be adjustable between $\pm 0.1\%$ to $\pm 10\%$ of set point voltage. • The relay shall have following options regarding time behavior with Time factor selectable from 0.1 to 30. • The relay shall incorporate an under voltage / over voltage blocking facility which shall make the control inoperative if voltage falls / rises by percentage value of set point value with automatic restoration of control when nominal voltage rises / falls to a particular value. • The T/F Monitoring unit shall have integrated features for the display of the parameters such as <ul style="list-style-type: none"> ▪ Integrated tap changer position display ▪ Nominal Voltage ▪ Load current ▪ Bandwidth 		

		<ul style="list-style-type: none"> ▪ Measuring values V, I, Active power, Reactive power, Apparent power, phase angle, Power factor, Reactive current and frequency • The unit shall have facility to compensate the VT and CT-errors. • The unit shall have facility to register the tap-changer statistics. In the statistics mode, the relay shall display the no. of tap changing operations occurred on each tap. • The unit shall have facility to record the voltage and current with respect to time. Each of voltage value shall be measured for 100ms and averaged for 1 second. The recorded values shall be presented in graphical format on the device. • The unit shall have integrated feature to make the parallel operation of 10 transformers working in parallel. The relay shall be self-sufficient and shall not require any additional devices like parallel balancing module etc. All industry standard principals for OLTC control should be available in the unit. • The Unit shall have facility to monitor or control the following parameters <ul style="list-style-type: none"> ▪ Monitoring of life time consumption of transformer ▪ Monitoring of operating hours of Tap changer, Fans and Pump ▪ Control of cooling levels of transformer ▪ Recording of Hot spot temperature • The Unit shall have facility to record specific events (Event-Recorder) like Under Voltage, Over Voltage, Over Current, Auto/ Manual, Local/Remote etc. with date and time stamping. • The Unit shall have facility to make selection of Auto/Manual and Local/Remote. • The Unit shall have different LEDs to indicate Service and Blocked condition. • It is preferred that sufficient nos. of freely programmable LEDs shall be available to indicate different Operations / Alarm / Faults condition. • The Unit shall have freely programmable sufficient Binary Inputs, Binary outputs, Analog Inputs and Analog Outputs. • The Unit shall have software to make the parameter settings of the device and it shall also be possible to do the parameter setting through keyboard of unit. • The Unit shall have suitable interface to make communication with higher level SCADA system as per the protocol proposed as an integrated package solution
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		<ul style="list-style-type: none"> It shall have facility by which a customer specific software program can be written and incorporated as feature in the unit. Minimum 2 communication port (preferably RJ45) shall be available based on RSTP/PRP for Station Bus and 2 FO Port for Process Bus. This device should communicate on IEC 61850-8-1 Ed. 1 & Ed. 2 The minimum IO & LED Capacity of TMU shall be <table border="1" style="margin: 10px auto; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="padding: 5px;">DI</th> <th style="padding: 5px;">DO</th> <th style="padding: 5px;">AI</th> <th style="padding: 5px;">CT</th> <th style="padding: 5px;">LED</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">22</td> <td style="padding: 5px;">11</td> <td style="padding: 5px;">04</td> <td style="padding: 5px;">04</td> <td style="padding: 5px;">12</td> </tr> </tbody> </table> <p>The device should be capable of taking tap position, oil temperature and winding temperature inputs directly from the Merging Units wherever applicable.</p>	DI	DO	AI	CT	LED	22	11	04	04	12
DI	DO	AI	CT	LED								
22	11	04	04	12								

4.16	GPS Clock	<p>The offered GPS Clock should meet the following requirements:</p> <ul style="list-style-type: none"> Redundant GPS based Time Synchronization Server with Antenna Tracking: 12 Satellites in parallel LCD Display with Status LED's Redundant Ethernet Port NTP v2/v3/v4 Ipv4, Ipv6, UDP, TCP, SNMP, SSH, SCP, HTTP, HTTPS, SYSLOG, Telnet, FTP networking protocols Remote Alarm notifications via SNMP, SYSLOG Remote configuration using SSH, Web, SNMP, Telnet USB Port Supports synchronization of IEC61850 compliant devices via NTP/SNTP/PTP protocol Mounting Type: 19" Rack Mountable NTP Client Synchronization software Diagnostic Relay outputs Supporting Timing Protocols: <ul style="list-style-type: none"> (a) NTP/SNTP (b) PTP v2 (c) IRIG-B Modulated (d) IRIG-B TTL Power Supply: Redundant, 24VDC \pm 15% or 48VDC \pm 15% Operating Temperature: 0° C to +55° C Alarms: <ul style="list-style-type: none"> (a) GPS Lost
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		<p>(b) Watchdog (c) Power Fail</p> <ul style="list-style-type: none"> • Antenna: Coaxial Cable with 360 Degree Coverage
4.17	Fibre Optic Cable	<p>Between Control Room and Switchyard/Switchgear Room: 4 Core, 62.5/125µm Multi-mode, Loose tube, Jelly filled, Armoured Fiber Optic Cable.</p> <p>Within Control Room: 2 Core, 62.5/125µm Multi-mode Fiber Optic Patch Chord.</p>
4.18	CAT – VI	<p>4 Pairs, 23 AWG Solid Bare Copper Conductor, PE Insulation, Unshielded Twisted Pair (UTP) with separator and PVC Outer Jacket</p> <p>It should be designed to the ANSI/TIA-568-C.2 ISO / IEC 11801 Category 6 requirements and transmit data at 1000 Mbps (~1 Gigabit per second) with a frequency of 250 MHz and suitable for 10BASE-T, 100BASE-TX Fast Ethernet and 1000BASE-T / 1000BASE-TX (Gigabit Ethernet).</p>
4.19	RS 485 Cable	1 Pair, 24 AWG Tinned Copper, PE Insulation, Overall Foil + Tinned Copper Braid (90%) Shield, PVC Outer Jacket
4.20	Telephone Cable	1 Paris, 0.5/0.63mm Solid Bare Copper Conductor, PE Insulation, Telephone Cable with PVC Outer Jacket
4.21	Maintenance Performance Requirements	It is a requirement that all RTUs require no routine or planned maintenance. Therefore, no fans or moving parts shall be used in the RTU to avoid any need for maintenance. To ensure this, the RTU should be constructed to resist the entry of dust. A single technician shall be able to remove and replace for repair purposes, without special tools and test equipment, all equipment involved in the operation of an RTU. Restoration of equipment to full operational use shall be possible within 15 minutes (nominally) of repairs being completed. It should not be necessary to dismantle (remove multiple pieces of) the RTU in order to replace a module.
4.22	Service Life	<p>TPSODL prefers that the equipment shall be capable of complying with this standard, including performing its intended purpose, for a minimum of 15years from the date of supply.</p> <p>The supplier shall indicate the following:</p> <ul style="list-style-type: none"> • The date at which the product was released for sale. • The anticipated date at which the product will be withdrawn from sale, but support will continue to be supplied.

		<ul style="list-style-type: none"> The anticipated date that product support will be withdrawn, i.e. spares will no longer be available and technical support is no longer provided. 								
4.23	Inter-changeability	RTU parts shall be interchangeable individually, and as a whole RTU. Any such change or replacement shall not reduce the capability of the equipment to conform to the requirements of this specification.								
4.24	Reliability	<p>The equipment will normally remain in continuous service to provide SCADA facilities. Failure can result in the interruption of the operation of the Power System Control and a high level of reliability is therefore required.</p> <p>The supplier shall provide the predicted mean time to failure and the mean time to repair of the equipment. Where insufficient historical data is available, the supplier shall state the methods used to determine the reliability performance.</p> <p>Predicted availability of equipment supplied should exceed the following:</p> <table border="1" style="width: 100%; margin-left: 20px;"> <thead> <tr> <th style="width: 70%;">System Function</th> <th style="width: 30%;">System Availabil</th> </tr> </thead> <tbody> <tr> <td>Control and monitoring of any one breaker</td> <td style="text-align: center;">99.99%</td> </tr> <tr> <td>Monitoring of any one single alarm</td> <td style="text-align: center;">99.99%</td> </tr> <tr> <td>Monitoring of any one analogue input</td> <td style="text-align: center;">99.99%</td> </tr> </tbody> </table>	System Function	System Availabil	Control and monitoring of any one breaker	99.99%	Monitoring of any one single alarm	99.99%	Monitoring of any one analogue input	99.99%
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Control and monitoring of any one breaker	99.99%									
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Monitoring of any one analogue input	99.99%									
4.25	Remote Monitoring and Maintenance	<p>The vendor should provide a configuration and diagnostic software which should able to access the Data Concentrator and all the other IEDs using the TPSODL TCP/IP WAN network. This software shall include facilities for:</p> <ul style="list-style-type: none"> Monitoring of all inputs, control of all outputs and testing of calculation logic. Monitoring of all inputs and logic at card level, logic level and protocol level. Display of communications statistics and eavesdropping of communications channels, including Ethernet, IP, IEC 104, IEC 61850 and Modbus. Download & upload of RTU software, database configuration and calculations, upload the complete configuration from RTU to modify and then download to RTU. On-line help. Display current firmware, software and configuration running in the RTU 								

		<ul style="list-style-type: none"> • Configuration and diagnostic software must run on latest Microsoft Windows. <p>The diagnostic and configuration utility software shall be provided on a CD/DVD that is compatible with the laptop PC. The current version number of such software shall be provided.</p>
4.26	Grounding	<p>Grounding is required for all equipment. Control and data acquisition equipment shall not ground a floating power source. Care shall be exercised to ensure ground compatibility when grounded power sources are used. Separate 2 no. of pits required RTU panel connected separately which will be connected with the Grid Earthing mesh, supply of pits is not in manufacturer scope but connection to up to pits to be provided.</p> <p>Separate trench for cable laying for communication, automation & IED equipment shall be provided.</p>
4.27	Device Grounding	<p>Cabinets and device enclosures shall be grounded only at the same point that the electrical service or UPS neutral is grounded. All devices within one cabinet shall be grounded together by means of a ground cable or strap. Earthing Strip (Copper) shall be available in RTU panel for device earthing.</p>
4.28	Signal or Instrumentation Grounding	<p>The signal or instrumentation circuit ground shall be connected to an external ground at a single point so that ground loop conditions are minimized. The shielded wire, drain wire, and/or ground wire of input/output cables shall be terminated at one ground point in each cabinet or the device shall be insulated from the cabinet. These ground points shall be connected together and connected to the facility ground.</p> <p>Caution shall be taken to prevent inadvertent ground paths from apparatus such as convenience outlets, conduit, structural metal, test equipment, and external interfaces.</p> <p>The manufacturer shall be consulted prior to selection of the cable end to be bonded as the optimal location is dependent upon the manufacturer's design choices.</p> <p>A special caution on filtering is worth noting. If the noise is shunted to the signal ground, then it becomes another source of signal reference corruption. Sometimes separate power, noise, digital, and analog ground buses are necessary. However, the NEC requirement for a single point safety grounding source shall always be met. A very important design rule is to keep all signal reference voltages, at all</p>

		frequencies of operation, as close to zero as possible (i.e., at zero voltage signal reference).
4.29	Fibre Optic Grounding	Fibre optic circuits require no grounding unless the cable has a conductive element
4.30	Electrical Circuit Grounding	Where grounding is provided with the power source, safety grounding conductors shall be bundled with the power source conductors, but be insulated from the power conductors and from other equipment and wiring conduit. The ground conductor shall be terminated in the cabinet enclosure, and grounded only at the same point that the source of the electrical service to the cabinet or UPS neutral is grounded.
4.31	Extendibility in Future	Offered substation automation system shall be suitable for extension in future for additional bays. During such requirement, all the drawings and configurations, alarm/event list etc. displayed shall be designed in such a manner that its extension shall be easily performed by the employer. During such event, normal operation of the existing substation shall be unaffected and system shall not require a shutdown. The contractor shall provide all necessary software tools along with source codes to perform addition of bays in future and complete integration with SAS by the user. These software tools shall be able to configure IED, add additional analogue variable, alarm list, event list, modify interlocking logics etc. for additional bays/equipment which shall be added in future. Offered substation automation system including switches shall have minimum 20% spare port for future extendibility.
4.32	Power Supply	Power for the substation automation system shall be derived from substation 24/48V DC system. In the event of Power failure, necessary safeguard software shall be built for proper shutdown and restart.
4.33	Low Voltage Control Cables	1.5 sqmm cable for circuit inside panel and 2.5 sqmm cable for circuit outside panel for Relays and RTU wiring shall be of 1.1kV class Low voltage cables of stranded copper conductor, PVC insulated. Cables shall be laid in Cables trays and in indoor trenches as a complete system. Trays shall be supported properly from the building structure. The entire cable tray system shall be rigid and leveled. The installation of cable tray support system shall be using the required accessories and using grip bolts for proper strength in fixing. All the above required material shall be supplied and installed by the bidder.

		<p>Control cables shall be stranded copper conductor having minimum 7 strands, extruded PVC inner sheathed, galvanised steel wire armoured, over all sheathed, outer sheath (ST-2) made of FRLS PVC compound. The cables shall conform to IS-1554 (Part-1) 1988/IEC-60502 (1998) & IEC-60502- amendment -1 999 in all other respects. In situations where accuracy of measurement or voltage drop in control circuit warrants, higher cross sections as required shall be used.</p>
<p>4.43</p>	<p>Low Voltage Power Cables</p>	<p>L T Power cables for the 415V AC, 240V AC system and 220V DC system shall be single core / Multi core 1100V earthed H4 grade with stranded aluminium/copper conductor, extruded cross-linked polyethylene (XLPE) insulated, core identification by colour coding, extruded PVC (Type -ST 2) inner sheathed, armoured, 43luminium wire armour for single core cables and galvanized steel wire for multi core cables and extruded PVC (Type ST-2) outer sheathed with FRLS properties, generally conforming to IS: 7098 (Part 1). Upto 16 sq.mm cables, Copper conductor shall be used and above 16 sq.mm cables, Aluminium conductor shall be used for L T power cables. For DC all cables shall be of Copper conductor irrespective of its size.</p>
<p>4.44</p>	<p>Numerical Over Current and Earth Fault Relay / Bay Control & Protection Unit</p>	<p>Following functions shall be available in the Protection Relay for 33KV Incomer / 33KV Outgoing / 11KV Incomer /11KV outgoing & 33/11KV Transformer Feeder.</p> <p>Current protection (Directional & Non-directional feeder Protection)</p> <ol style="list-style-type: none"> 1) Over current instantaneous (50). 2) Over current IDMT (51). 3) Earth fault instantaneous (50N). 4) Earth fault IDMT (51N). 5) Broken Conductor. 6) Breaker Failure Protection. 7) Negative Phase Sequence Protection. 8) Separate Sensitive Earth fault Protection. 9) Separate Measure Earth fault Protection. 10) Binary Input-24 & Binary Output-12 Minimum Required. 11) Trip and Close Logic Programmable Facility Function required in the Relay. 12) Current & Voltage, Binary Input, Binary Output DR /Event same to be mapped with SCADA.

		<p>13) The device should have front port serial communication with Software, RJ45, USB type or RS232.</p> <p>14) Rear ports shall be redundant with RSTP/PTP requirement for client server Communication.</p> <p>15) Rear ports should be either of electrical or optical RJ45 type.</p> <p>16) All configuration and Relay Protection Parameter Setting are uploading or downloading should be possible any of the relay ports irrespective of IEC 61850 configuration.</p> <p>17) Relay output Contact shall be possible for Breaker Close & Open from Remote through SCADA</p> <p>18) Downloading/ uploading file from any relay ports shall not change its 61850 engineering and device engineering.</p> <p>19) All Protection internal triggering logic shall be interface with SCADA.</p> <p>20) Goose Signal interface facility required.</p> <p>21) Relay Suitable for SCADA Application.</p> <p>22) The relay shall have a facility to have communication on IEC61850 protocol through redundant rear port (i.e., RJ45 or FO) which supports IEC 62439-3 PRP and latest redundant technology for SAS connectivity without use of any external converter. Further, the test levels of EMI as indicated in IEC 61850 shall be applicable to these.</p> <p>The relay shall support peer to peer communication</p>
	<p>Numerical Relay for Transformer differential protection</p>	<p>Differential Relay Shall have the Following Function Required for transformer Protection:</p> <ol style="list-style-type: none"> 1) Relay shall be capable for Minimum Two Winding Transformer Differential Protection with any rating CT ratio. 2) Separate Sensitive Earth Fault/High Impedance Restricted Earth Fault/Stand by earth fault Protection Coil Required in the Relay. 3) Binary Input-24 & Binary Output-12 Minimum Required. 4) 2nd and 5th Harmonics Blocking. 5) Overcurrent / Derived / Measured Sensitive earth Fault / Stand by Earth fault Selection HV or LV side Enabled facility required. 6) Breaker Failure Protection. 7) Trip and Close Logic Programmable Facility Function required in the Relay. 8) Current & Voltage, Binary Input, Binary Output DR /Event same to be mapped with SCADA. 9) The device should have front port serial communication with Software, RJ45, USB type or RS232.

		<p>10) Rear ports shall be redundant with RSTP/PTP requirement for client server Communication.</p> <p>11) Rear ports should be either of electrical or optical RJ45 type.</p> <p>12) All configuration and Relay Protection Parameter Setting are uploading or downloading should be possible any of the relay ports irrespective of IEC 61850 configuration.</p> <p>13) Relay output Contact shall be possible Breaker Close & Open from Remote through SCADA.</p> <p>14) Downloading/ uploading file from any relay ports shall not change its 61850 engineering and device engineering.</p> <p>15) All Protection internal Protection triggering logic shall be interface with SCADA.</p> <p>16) Goose Signal interface facility required.</p> <p>17) Relay Suitable for SCADA Application.</p> <p>18) The relay shall have a facility to have communication on IEC61850 protocol through redundant rear port (i.e., RJ45 or FO) which supports IEC 62439-3 PRP and latest redundant technology for SAS connectivity without use of any external converter. Further, the test levels of EMI as indicated in IEC 61850 shall be applicable to these.</p>
<p>4.45</p>	<p><u>Relay requirement for SCADA Communication & Other Functionalities</u></p>	<p>1) The relay should be modular type. It will be installed at outdoor or indoor CR Panel. Standard terminal blocks should be located at the rear of the relay providing connections for all input and output circuits.</p> <p>2) Large MIMIC display with CB Open Close button for breaker Control from Front</p> <p>3) Conformal Coating.</p> <p>4) Ring Type Terminal for CT & VT.</p> <p>5) IEC 61850 edition / HSR & PRP.</p> <p>6) Cyber Security.</p> <p>7) Proper enclosure Protection.</p> <p>8) The relay shall have a facility to have communication on IEC61850 protocol through redundant rear port (i.e. RJ45 or FO) which supports IEC 62439-3 PRP and latest redundant technology for SAS connectivity without use of any external converter. Further, the test levels of EMI as indicated in IEC 61850 shall be applicable to these.</p> <p>9) The relay shall support peer to peer communication.</p> <p>11) The relays shall generate GOOSE messages as per IEC 61850 standards, interlocking/tripping and also to ensure interoperability with third party relays.</p> <p>12) Necessary user-friendly configuration tool shall be provided to configure the relays. It should be compatible with SCL/SCD files generated by a third-party system.</p>

		<p>13) Goose signals shall be freely configurable for any kind of signals using graphic tool/user friendly software. Bidder shall also ensure adequate hardware.</p> <p>14) The Relay shall have facility for Time synchronization on IRIG B or SNTP port.</p> <p style="text-align: center;">Approved Makes for Relays / BCPUs:</p> <ol style="list-style-type: none"> 1. ABB India Ltd. 2. Siemens Ltd. 3. GE T&D India Ltd. 4. Schneider Electric
4.46	Terminal Block and panel wiring	<ol style="list-style-type: none"> 1) Terminal Blocks including disconnecting type TB's of Elmex make KLTD -M4 of 1.1kV class to be considered for CT's, PTs and DC voltage SCADA status/alarm and control requirement. 2.5 Sq mm cable to be considered for CT wiring. This shall be considered for all cabling from all cores of CTs. 2) Disconnecting Type Terminal block For DC control and trip, CT & PT Wiring Connection. 2.5Sqmm and 1.5Sqmm. 3) Single Feed Terminal Block or suitable Terminal Block for Control Wire Connection 2.5 Sqmm and 1.5 Sqmm. 4) Din Rails and Support Brackets Different type for Terminal Block and MCB Fixing during Retrofit work. 5) Different Size Bundle wire Cable for 2.5Sqmm/1.5 Sqmm different Colour code (Red, Yellow, Blue, Black, Green & Gray)
5.0	General Construction	<p>RTU/DCU shall have separate Panel and shall complied to the following</p> <ul style="list-style-type: none"> • RTU/DC Panel shall have simplex dust proof design with front and rear door, front door shall design with glass. • RTU/DC Panel shall have rack mounted arrangement. • RTU/DC panel shall have dual exhaust Fan system for heat dissipation. • RTU/DC panel shall have copper earthing strip. • RTU/DC Panel shall be placed properly in Communication Room • Doors shall have handles with either built-in locking facility or will be provided with pad-lock.
5.1	Outdoor Kiosk for housing Control & Relay	<p>The outdoor kiosks to be used for housing max 20 numbers control and relay panels in two rows having control and protection IEDs for performing sub-station automation and protection functions will be made of "sandwich insulated panels" 80 mm thick with Poly Urethane</p>

panels and RTU panels	<p>Foam (PUF) as filler material between polyester pre-coated cold rolled steel. The insulation characteristics of PUF material will conform to following requirement:</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">SN</th> <th style="width: 65%;">Particulars</th> <th style="width: 30%;">Parameter</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Thickness</td> <td>78.6 mm</td> </tr> <tr> <td>2.</td> <td>Density</td> <td>40 kg/m³</td> </tr> <tr> <td>3.</td> <td>Compressive Strength</td> <td>1.2 kg.cm³</td> </tr> <tr> <td>4.</td> <td>Tensile Strength</td> <td>3.6 kg/m²</td> </tr> <tr> <td>5.</td> <td>Bending Strength</td> <td>4.0 kg/m²</td> </tr> <tr> <td>6.</td> <td>Adhesion Strength</td> <td>2.9 kg/m²</td> </tr> <tr> <td>7.</td> <td>Dimension Stability</td> <td>At -25°C : 0.1% and at 38 °C : 0.4%</td> </tr> <tr> <td>8.</td> <td>Temperature Range</td> <td>-15 °C to 95 °C</td> </tr> <tr> <td>9.</td> <td>Thermal Conductivity</td> <td>0.02 kcal/hr/m/ °C</td> </tr> <tr> <td>10.</td> <td>Fire Resistance</td> <td>As per BS-4735 Horizontal <125 mm</td> </tr> <tr> <td>11.</td> <td>Water absorption</td> <td>0.2% @ 100% RH</td> </tr> <tr> <td>12.</td> <td>Vapour Permeability</td> <td>0.08/0.12 g/hr/m²</td> </tr> <tr> <td>13.</td> <td>Self-Extinguishing</td> <td>Yes</td> </tr> <tr> <td>14.</td> <td>Biodegradable</td> <td>Yes</td> </tr> </tbody> </table> <p>The thickness of the inner and outer steel sheet except floor panel sheet will be minimum 0.8 mm and 0.6 mm respectively. The outer bottom sheet will be hot dip galvanised steel sheets to avoid rusting at bottom and will be of sufficient thickness to support the cables. The sandwich panels will be manufactured by high pressure injection techniques. The floor of the kiosk will be suitably designed for accommodating the control and relay IEDs in the panels. Adequate lighting and fire detectors will be provided in the kiosk. The kiosk will have adequate space for working and maintenance clearances as per requirement of Indian Electricity Rules. The kiosk will be provided with locking arrangement. The paint shade of kiosks will be RAL 7032. The</p>	SN	Particulars	Parameter	1.	Thickness	78.6 mm	2.	Density	40 kg/m ³	3.	Compressive Strength	1.2 kg.cm ³	4.	Tensile Strength	3.6 kg/m ²	5.	Bending Strength	4.0 kg/m ²	6.	Adhesion Strength	2.9 kg/m ²	7.	Dimension Stability	At -25°C : 0.1% and at 38 °C : 0.4%	8.	Temperature Range	-15 °C to 95 °C	9.	Thermal Conductivity	0.02 kcal/hr/m/ °C	10.	Fire Resistance	As per BS-4735 Horizontal <125 mm	11.	Water absorption	0.2% @ 100% RH	12.	Vapour Permeability	0.08/0.12 g/hr/m ²	13.	Self-Extinguishing	Yes	14.	Biodegradable	Yes
SN	Particulars	Parameter																																												
1.	Thickness	78.6 mm																																												
2.	Density	40 kg/m ³																																												
3.	Compressive Strength	1.2 kg.cm ³																																												
4.	Tensile Strength	3.6 kg/m ²																																												
5.	Bending Strength	4.0 kg/m ²																																												
6.	Adhesion Strength	2.9 kg/m ²																																												
7.	Dimension Stability	At -25°C : 0.1% and at 38 °C : 0.4%																																												
8.	Temperature Range	-15 °C to 95 °C																																												
9.	Thermal Conductivity	0.02 kcal/hr/m/ °C																																												
10.	Fire Resistance	As per BS-4735 Horizontal <125 mm																																												
11.	Water absorption	0.2% @ 100% RH																																												
12.	Vapour Permeability	0.08/0.12 g/hr/m ²																																												
13.	Self-Extinguishing	Yes																																												
14.	Biodegradable	Yes																																												

kiosk will be completely dust proof and weather proof with a degree of protection IP55. The whole kiosk will be designed to be sufficiently strong and rigid. To ensure this, required reinforcement will be provided to the frames.

These kiosks will be placed in the switchyard area generally unmanned, therefore, ventilation system comprising exhaust fans and fresh air fans shall be designed considering 20 nos Control and Relay panels inside the kiosk. Each Control and Relay panel will have two numerical relays, one MFM, 4 aux relays, annunciator and control switches. Also provision for future AC system shall be kept which shall be rugged, reliable, maintenance free and designed for long life. The ventilation system (or future air conditioning system) is required for maintaining the temperature for critical sub-station control and protection equipment. To provide reliability for such critical applications, each kiosk will be installed with dust removing filters. The system will be designed for 24 hours, 365 days of the year to maintain the inside kiosk temperature for proper operation of the critical equipment. To ensure longer life of the system a temperature monitoring system will be provided with alarm contacts wired to SCADA system for annunciation.

The kiosk will be erected at least 300 mm above the finished ground level with suitable pedestal to avoid any entry of water. Foundation drawing for the same for housing 20 number Control and Relay panels, is in bidder's scope.

The minimum distance between panels facing each other will be 1.2m.

One kiosk meeting the specified requirement as described above, will be fabricated at the factory and offered for inspection at the factory. This kiosk will be equipped with all required accessories like cutout for ventilation / air-conditioning system, fire and smoke detector, lighting, various cut outs for panel erection etc. The kiosk will be tested for dust and rain protection to check out any leakage and air tightness.

The following main tests will be carried out:

- a) Illumination inside the kiosk will be switched off and it will be checked that no light enters through panel joints, holes and other joints in the kiosk.

		<p>b) Water leakage test (with a water pipe with suitable pressure from all sides for one hour.)</p> <p>c) Working and functional tests of all accessories like fresh air wall mounted fans system, exhaust fans, fire and smoke detector, lighting arrangements as per technical specification</p> <p>d) The total heat load for panels and devices to be placed inside the kiosk including all IEDs etc. will be calculated and equivalent calculated heating load (maximum value from among the calculated values for various kiosk) will be placed inside the kiosk and the kiosk will be made operational for four hours with all accessories and inside & outside temperature of kiosk will be recorded.</p> <p>On successful completion of proto testing, all other kiosks will be manufactured after incorporation of all alteration/modifications observed/suggested during/after proto testing. The detail test procedure will be submitted by the contractor and get it approved by the owner before commencement of proto testing.</p> <p>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.</p> <p>QUALITY CONTROL:</p> <p>The bidder shall have a prove track of not less than 5 years in manufacturing and servicing of the items in Indian market .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.</p> <p>The Bidder shall invariably furnish following information along with his bid, failing which the bid shall be liable for rejection. Information shall be separately given for individual type of equipment offered.</p>
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Statement giving list of important raw materials, names of sub-suppliers for the raw materials, list of standards according to which the raw materials are tested. List of tests normally carried out on raw materials in the presence of Bidder's representative, copies of test certificates.

Information and copies of test certificates as in (a) above in respect of bought out accessories.

List of manufacturing facilities available.

Quality Assurance Plan (QAP) with holds points for purchaser's inspection.

The successful Bidder shall within 10 days of placement of order, submit following information to the purchaser.

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.

NAME PLATE:

Name plate shall be provided with non-rusting metal or 3-ply lamicold with white engraved lettering on black base ground for easy identification. This shall be positioned so as to be clearly visible.

DRAWINGS AND DOCUMENTS:

Following documents shall be prepared based on TPSODL specifications

1. Technical Particulars.
2. General Arrangement drawing of the equipment
3. Plan and Section drawing
4. Foundation drawing
5. Bill of Material
6. Type test Certificates if applicable

After the award of the contract, four (4) copies of the drawings, drawn to scale, describing the equipment in detail shall be forwarded for approval and shall subsequently provide four (4) complete sets of final drawings, one of which shall be auto

		<p>positive suitable for reproduction, before the dispatch of the equipment. Soft copy (Compact Disk CD) of all the drawing, GTP, test certificates shall be submitted after the final approval of the same to the TPSODL.</p> <p>Following Drawings/Documents shall be submitted after the award of the contract:</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 5%;">S · N o</th> <th style="width: 45%;">Description</th> <th style="width: 15%;">For Appro val</th> <th style="width: 15%;">For Revie w Inform ation</th> <th style="width: 10%;">Fina Sub ssio</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>Technical Parameters</td> <td style="text-align: center;">√</td> <td style="text-align: center;">√</td> <td style="text-align: center;">√</td> </tr> <tr> <td style="text-align: center;">2</td> <td>General Arrangement drawing</td> <td style="text-align: center;">√</td> <td style="text-align: center;">√</td> <td style="text-align: center;">√</td> </tr> <tr> <td style="text-align: center;">3</td> <td>Plan & Section drawings</td> <td style="text-align: center;">√</td> <td style="text-align: center;">√</td> <td style="text-align: center;">√</td> </tr> <tr> <td style="text-align: center;">4</td> <td>Foundation drawing</td> <td style="text-align: center;">√</td> <td style="text-align: center;">√</td> <td style="text-align: center;">√</td> </tr> <tr> <td style="text-align: center;">5</td> <td>QA & QC Plan</td> <td style="text-align: center;">√</td> <td style="text-align: center;">√</td> <td style="text-align: center;">√</td> </tr> <tr> <td style="text-align: center;">6</td> <td>Routine, Acceptance and Type test Certificates as applicable</td> <td style="text-align: center;">√</td> <td style="text-align: center;">√</td> <td style="text-align: center;">√</td> </tr> <tr> <td style="text-align: center;">7</td> <td>Site tests and checks</td> <td style="text-align: center;">√</td> <td style="text-align: center;">√</td> <td style="text-align: center;">√</td> </tr> </tbody> </table>	S · N o	Description	For Appro val	For Revie w Inform ation	Fina Sub ssio	1	Technical Parameters	√	√	√	2	General Arrangement drawing	√	√	√	3	Plan & Section drawings	√	√	√	4	Foundation drawing	√	√	√	5	QA & QC Plan	√	√	√	6	Routine, Acceptance and Type test Certificates as applicable	√	√	√	7	Site tests and checks	√	√	√
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6.0	Name Plate & Marking	<p>A sticker shall be fixed to each material like RTU/DCU, IEDs, Ethernet Switches, Firewall, TMU and Energy Meters in a visible position and shall carry all the information as specified in the standards. The following information shall be mentioned on the Sticker.</p> <ul style="list-style-type: none"> (i) Serial number (ii) Warranty/guarantee details (iii) Purchase order with date (iv) "PROPERTY OF TPSODL" <p>A sticker shall be fixed on each MCBs/Fuses in a visible position and shall carry the information to which it feeds the power supply.</p>																																								
7.0	Tests	<p>Factory Acceptance Test: The manufacturing phase of the SAS shall be concluded by the factory acceptance test (FAT). The purpose is to</p>																																								

		<p>ensure that the Contractor has interpreted the specified requirements correctly and that the FAT includes checking to the degree required by the user. The general philosophy shall be to deliver a system to site only after it has been thoroughly tested and its specified performance has been verified, as far as site conditions can be simulated in a test lab. If the FAT comprises only a certain portion of the system for practical reason, Database shall be prepared completely as per actual site requirement and it will submit to TPSODL for validation. An integrated-FAT shall be conducted as per the TPSODL I-FAT Document (ENG-EHV-1006 Rev. 00 -Annexure-III). If the complete system consists of parts from various suppliers or some parts are already installed on site, in such case supplier will arrange the intra-communication between RTU/DC and such IEDs to meet the requirement.</p> <p>Hardware Integration Tests shall be performed on the specified systems to be used for Factory tests when the hardware has been installed in the factory. The operation of each item shall be verified as an integral part of system. Applicable hardware diagnostics shall be used to verify that each hardware component is completely operational and assembled into a configuration capable of supporting software integration and factory testing of the system. The equipment expansion capability shall also be verified during the hardware integration tests.</p> <p>Integrated System Tests shall verify the stability of the hardware and the software. During the tests all functions shall run concurrently and all equipment shall operate a continuous 100 Hours period. The integrated system test shall ensure the SAS is free of improper interactions between software and hardware while the system is operating as a whole.</p>					
8.0	Type Test Certificate	<p>The bidder shall furnish the type test certificates of following tests as per the corresponding standards for RTU, MFM, TMU and Network Switches. Type tests should have been conducted in certified Test laboratories and shall not be more than 5 years old 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 Purchaser.</p> <p>For type test of Energy Meter, please refer Clause 4.14 Energy Meter.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 25%;">Name of the Test</th> <th style="width: 25%;">Standard</th> <th style="width: 25%;">Equipment Status</th> <th style="width: 25%;">Test Level</th> <th style="width: 20%;">Pa Cr</th> </tr> </thead> </table>	Name of the Test	Standard	Equipment Status	Test Level	Pa Cr
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Immunity Test					
		Electrostatic Discharge	IEC 61000-4-2 IEC 60870-2-1 IEC 60255-22-2	ON	8 kV air (level 3) 6 kV contact (level 3) Performance criteria A
		Radiated Radio-Frequency Electromagnetic Field	IEC 61000-4-3 IEC 60870-2-1 IEC 60255-22-3	ON	10 V/m (level 3) Performance criteria A
		Electrical Fast Transient / Burst	IEC 61000-4-4 IEC 60870-2-1 IEC 60255-22-4	ON	2 kV (level 3) Performance criteria A
		Surge	IEC 61000-4-5 IEC 60870-2-1	ON	2 kV (level 3) Performance criteria A
		Conducted Disturbances induced by RF Fields	IEC 61000-4-6 IEC 60870-2-1	ON	10 V (level 3) Performance criteria A
		Power Frequency Magnetic Field*	IEC 61000-4-8 IEC 60870-2-1	ON	30/300 A/m (level-3) Performance criteria A
		Damped Oscillatory Magnetic Field*	IEC 61000-4-10 IEC 60870-2-1	ON	30 A/m (level-3) Performance criteria A
		Damped Oscillatory Wave*	IEC 61000-4-12 IEC 60870-2-1 IEC 60255-22-1	ON	2.5 kV (level 3) Performance criteria A
Insulation Tests					

		Power Frequency Voltage Withstand	IEC 60870-2-1	OFF	1 kV _{rms} for 1 minute	No break down or flashover shall occur
		Impulse voltage Withstand	IEC 60870-2-1	OFF	2 kVp	No break down or flashover shall occur
		Insulation Resistance		OFF	Measure Insulation resistance using 500 V DC Megger before & after Power Frequency & Impulse Voltage Withstand Tests	
Environmental Test						
		Cold Test	IEC 60068-2-1	ON	Continuous operation at 0°C for 16 hours	Normal performance within the specified limits. No failure.
		Dry Heat Test	IEC 60068-2-2	ON	Continuous operation at 55°C for 16 hours	Normal performance within the specified limits. No failure.
		Damp Heat Test	IEC 60068-2-38	ON	Continuous operation at 95% RH and 40°C for 16 hours	Normal performance within the specified limits. No failure.
9.0	Pre-Dispatch inspection	Equipment shall be subject to inspection by a duly authorized representative of the Purchaser as detailed at Clause No.6.0. 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 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				

		<p>the specifications. Material shall be dispatched after specific MDCC (Material Dispatch Clearance Certificate) is issued by the Purchaser.</p> <p>Following documents shall be sent along with material:</p> <ul style="list-style-type: none"> a) Test reports b) MDCC issued by TPSODL 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 Stores	<p>Equipment/material received at TATA POWER-DDL's store shall be inspected by Stores Department and shall be liable for rejection, if found different from Pre-Dispatch Inspection Report.</p> <p>One copy of the Inspection Report shall be sent to the Plant Engineering and Automation Departments.</p>
11.0	Guarantee / Warranty Details	<p>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 for 60 months. In the event any defect is found by the Company up to a period of 60 months from the date of commissioning supplier shall be liable to undertake to replace such defects at his own costs within the 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.</p> <p>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 Company</p>
12.0	Packing	<p>Bidder shall ensure that all equipment 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.</p>
13.0	Training	<p>Contractor personnel who are experienced instructors and who speak understandable English shall conduct training. The contractor shall arrange on its own cost all hardware training platform required for successful training and understanding in India at manufacturer's work. The Contractor shall provide all necessary training material including</p>

configuration document in advance (before FAT or during FAT). Each trainee shall receive individual copies of all technical manuals and all other documents used for training. These materials shall be sent to Employer at least two months before the scheduled commencement of the particular training course. Class materials, including the documents sent before the training courses as well as class handouts, shall become the property of Employer. Employer reserves the right to copy such materials, but for in-house training and use only. Hands-on training shall utilize equipment identical to that being supplied to Employer. For all training courses, the travel (e.g., airfare) and per-diem expenses will borne by the participants. The schedule, location and detailed contents of each course will be finalized during Employer and Contractor discussions.

System Hardware Course

A computer system hardware course shall be offered, but at the system level only. The training course shall be designed to give Employer hardware personnel sufficient knowledge of the overall design and operation of the system so that they can correct obvious problems, configure the hardware, perform preventive maintenance, run diagnostic programs, and communicate with contract maintenance personnel. The following subjects shall be covered:

- System Hardware Overview: Configuration of the system hardware.
- Equipment Maintenance: Basic theory of operation, maintenance techniques and diagnostic procedures for each element of the computer system, e.g., processors, auxiliary memories, LANs, routers and printers. Configuration of all the hardware equipment.
- System Expansion: Techniques and procedures to expand and add equipment such as loggers, monitors, and communication channels.
- System Maintenance: Theory of operation and maintenance of the redundant hardware configuration, failover hardware, configuration control panels, and failover switches. Maintenance of protective devices and power supplies.
- Subsystem Maintenance:
 - Theory of design and operation, maintenance techniques and practices, diagnostic procedures, and (where applicable) expansion techniques and procedures. Classes shall include hands-on training for the specific subsystems that are part of Employer's equipment or part of similarly designed and configured subsystems. All interfaces to the computing equipment shall be taught in detail.

		<ul style="list-style-type: none"> ▪ Operational Training: Practical training on preventive and corrective maintenance of all equipment, including use of special tools and instruments. This training shall be provided on Employer equipment, or on similarly configured systems. <p>System Software Course</p> <p>The Contractor shall provide a computer system software course that covers the following subjects:</p> <ul style="list-style-type: none"> ▪ System Programming: Including all applicable programming languages and all stand-alone service and utility packages provided with the system. An introduction to software architecture, Effect of tuning parameters (OS software, Network software, database software etc.) on the performance of the system. ▪ Operating System: Including the user aspects of the operating system, such as program loading and integrating procedures; scheduling, management, service, and utility functions; and system expansion techniques and procedures ▪ System Initialization and Failover: Including design, theory of operation, and practice ▪ Diagnostics: Including the execution of diagnostic procedures and the interpretation of diagnostic outputs, ▪ Software Documentation: Orientation in the organization and use of system software documentation. ▪ Hands-on Training: One week, with allocated computer time for trainee performance of unstructured exercises and with the course instructor available for assistance as necessary. <p>Application Software Course</p> <p>The Contractor shall provide a comprehensive application software courses covering all applications including the database and display building course. The training shall include:</p> <ul style="list-style-type: none"> ▪ Overview: Block diagrams of the application software and data flows. Programming standards and program interface conventions. ▪ Application Functions: Functional capabilities, design, and major algorithms. Associated maintenance and expansion techniques. ▪ Software Development: Techniques and conventions to be used for the preparation and integration of new software functions. ▪ Software Generation: Generation of application software from source code and associated software configuration control procedures.
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- Software Documentation: Orientation in the organization and use of functional and detailed design documentation and of programmer and user manuals.
- Hands-on Training: One week, with allocated computer time for trainee performance of unstructured exercises and with the course instructor available for assistance as necessary.

Requirement of Training

The contractor shall provide training for a batch (maximum of 10 people) for five days on the following courses.

Name of Course

- System Hardware
- System Software
- Application Software

Day	First Half	Second Half
Day 1	PPT/Live demo-based session on SAS Architecture, RTU Hardware Structure & details, details of existing developed supportive cards and devices, Firewall Switch & Manageable Ethernet Switch.	PPT/Live demo-based session on SAS Architecture, RTU Hardware Structure & details, details of existing developed supportive cards and devices, Firewall Switch & Manageable Ethernet Switch.
Day 2	Theoretical PPT based session on Protocols, especially on IEC 61850, IEC- 104, IEC103, Modbus RTU/TCP/IP	Practice on live system as per first half given session (majorly Configuration of ICD/CID & SCD File and its configuration on BCPU/BPU)
Day 3	Theoretical PPT based session on RTU Database creation, configuration of ICD/CID/SCD file in RTU.	Practice on live system as per first half given session (Database Creation on all Protocols, configuration of ICD/CID/SCD file in RTU)
Day 4	Theoretical PPT based session on PLC Configuration, Cyber Security, SNMP, diagnostics, system log analyze.	Practice of first half given session on live system

		Day 5	Practice on configuration of Firewall Switch & Manageable Ethernet Switch with data analysis on Wireshark or equivalent software.	Other Queries related discussion, Test/Examination and Certificate Distribution
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 after finishing, bought out items and fully assembled component and equipment including drives. 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/sub-supplier's works to carry out inspections.		
15.0	Minimum Testing Facilities	The Bidder shall have in house testing facilities for carrying out all routine tests and acceptance tests as per relevant international/Indian 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 shall be in line with the Quality assurance plan submitted with the offer. The bar chart will have to be submitted within 15 days from the release of the order.		
17.0	Services, Spares, Accessories and Tools			
17.1	Support Services SLA	<p>Services to be included during guarantee period</p> <ol style="list-style-type: none"> 1. Guarantee shall be for 60 months from the date of commissioning 2. Vendor shall conform in a signed SLA to the following guidelines to mitigate major failure rate. To mitigate major failure like Complete system failure, RTU, BCU, BCPU system instability, loss or failure of any major subsystem or system component such as to cause a significant adverse impact to system availability, performance, or operational capability <ol style="list-style-type: none"> a. Vendor shall report to site within 48 hours of receipt of reporting of the failure occurrence. b. Vendor shall provide replacement of the faulty equipment within 7 days after confirmation of the fact that the equipment can't be repaired at site. Failure to this clause may have some penalty reference on vendor. 		

		<p>c. Vendor always will provide detailed analysis report of the faulty equipment within 30 days from the date of the site visit by BA</p> <p>d. Any spare Equipment replacement, testing and its commissioning to be done by vendor only without any cost implications. Any equipment, any software or any hardware to test the IEDs/RTU to be borne by vendor only.</p> <p>e. Any up gradation in application software and RTU (except hardware) will be informed to us and necessary up gradation to be carried out by vendor without any cost implications.</p> <p>Services to be included during tender</p> <ol style="list-style-type: none"> 1. Tri-party agreement to be made to have protection against quitting of executing vendor. 2. Vendor to share Spare parts cost for RTU which will be valid for next 10 years. 3. Vendor need to provide life cycle support and supplies to ensure necessary support in terms of services and spares for next 15 years from date of Purchase Order. Vendor shall provide expected life of IEDs in writing.
<p>17.2</p>	<p>Spares</p>	<p>The bidder is required to list the spares, which may be required for ensuring the availability during the guaranteed availability period. The final list of spares shall form part of scope of supply and accordingly the price thereof shall be quoted by the bidder and shall be considered in the evaluation of the bids. During the guaranteed availability period, the spare parts supplied by the Contractor shall be made available to the Contractor for usage subject to replenishment at the earliest. Thus, at the end of availability period the inventory of spares with the Employer shall be fully replenished by the Contractor. However, any additional spares required to meet the availability of the system (which are not a part of the above spares supplied by the Contractor) would have to be supplied immediately by the Contractor free of cost to the Employer.</p> <p>The list shall include the following:</p> <ul style="list-style-type: none"> • Item identification • Recommended spares quantities • Base price • Procurement lead time Probability the required item is available given its MTBF based on recommended spares and procurement lead time.

- Quantity of item held in Local office by Supplier as emergency spare parts
- Quantity of item held in head office as an emergency spare part

All spare parts shall be fully tested.

Mandatory Spares (without any extra cost implication)

S. No.	RTU Make	Model No.	Hardware
1	Schneider Electric	Latest most user friendly model as equivalent in the market as below	Power Supply Card
			CPU card
			Communication card
1	ABB Ltd	RTU560A	560CMU05 - CPU Card + Flash Card with PLC License
			560PSU01/560PSU02 - Power Supply Card
2	GE India Ltd.	D400	D400-UGK-160-S-001-U-51M-UUU-UUU-U – D400 CPU with Flash Cards & Firmware
			520-0217LF - D400 AC-DC Supply, 5V 12 A Assembly
			520-0213LF - D400 Ethernet 4 Port Switch Assembly
			517-0247LF - D400 RS232 Switch Panel
3	Siemens Ltd	AK3	CP2016- Main CPU along with Flash Card
			CP2017/CP2019 - Aux. CPU
			SM2556/SM2558 - Network Interface Card

					SM0551/SM2551 - Serial Interface Card	2
					PS5620/PS5622 - Power Supply Card	1
18.0	Drawing and Documents	<p>Following drawings and documents shall be prepared on Purchaser's specifications and statutory requirements and shall be submitted with the bid:</p> <ol style="list-style-type: none"> 1. Completely filled in Technical Particulars 2. General description of the equipment and all components including brochures 3. Bill of material 4. Type test certificates 5. System Architecture Drawing 6. Hardware Specification 7. Sizing Calculations of various components 8. Response Time Calculation 9. Functional Design Document 10. Power Distribution Schematic Diagrams for each RTU 11. Standard documentation per IED, according to IEC 61850 12. MICS document (model implementation conformance statement), 13. PICS (protocol implementation conformance statement), 14. Conformance test certificate, 15. ICD/CID Cite (IED capability description file) 16. SCD file (substation configuration description) 17. MIB Files of RTU, TMU, Ethernet Switches & Firewall <p>After the award of the contract four (4) copies of drawings, drawn to scale, describing the equipment in detail shall be forwarded for approval and shall subsequently provide four (4) complete sets of final drawings, one of which shall be auto positive suitable for reproduction, before the dispatch of the equipment. Soft copy (Compact Disk CD) of all the drawing, GTP, Test certificates shall be submitted after the final approval of the same to purchaser.</p> <p>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</p>				

		information and drawings pertaining to the main equipment as well as auxiliary devices.		
19.0	Guaranteed Technical Particulars	Bidder shall submit separate sheet showing guaranteed technical particulars		
19.1	RTU/DC	S. No.	Guaranteed Technical Particular	Bidder Response
		1	All the cards/modules of the RTU/DC must have conformal coating for protection against harsh environments.	
		2	The RTU/Data Concentrator should be designed for 10000 I/Os.	
		3	The RTU/Data Concentrator should support IEC 61850, IEC 60870-5-101, IEC 60870-5-103, IEC 60870-5-104, Modbus RTU, Modbus TCP/IP, DNP3.0 Serial and DNP3.0 TCP/IP	
		4	There should be a provision to simulate the I/Os from the RTU	
		5	There should be option to download (RTU to Laptop) the existing configuration from the RTU/Data Concentrator	
		6	Data concentrator should support all the Data Types i.e., all Type Identifiers as specified in IEC 60870-5-104 for remote communication.	
		7	Should have an ability to collect data from all connected devices, regardless of protocol and make it available to the control centers & HMI using a LAN/WAN connectivity.	
		8	Should communicate to minimum 8 masters simultaneously on IEC 60870-5-104 protocol on a same CASDU	
		9	Should be capable of handling real time data exchange services to publish or subscribe information for defined master and slave protocols.	
		10	Should provide of Hardware diagnostics, System initialization, Watchdog management functions	

		11	Should provide for time & millisecond synchronization function.		
		12	Should provide latest Microsoft Windows based maintenance and configuration tools. The tools should have functionality of both remote and local access.		
		13	Minimum functionalities to be provided through these tools are device configuration, security settings, log files, communication traces and system statistics.		
		14	It should have complete redundant hardware design including CPU, Power Supply, Communication Modules and Bus Interface Unit/Card.		
		15	Data Concentrator should support IEC 61131-3 with necessary license.		
		16	Data concentrator should have following the cyber security features (a) Access Management (b) System Audit Logs (c) Events Management (d) System Hardening (e) Secured connection via SSH/SFTP/HTTPS		
		17	Should support SNMP v1.0/2.0/3.0 (as Client and server both) feature.		
		18	Auxiliary power supply for the RTU/DC should have in the range of 24VDC or 48VDC depends upon Station DC Supply with tolerance of $\pm 15\%$.		
		19	The RTU shall have a real time clock, with a resolution of 1ms. It shall have the capability of time stamping events. The RTU clock is normally synchronized by the ADMS FEPs. In the advent that this does not occur, the RTU clock shall drift no more than 1 second in 24 hours.		
19.2	Ethernet Switch	S. No.	Guaranteed Technical Particular	Bidder Response	
		1	19" Rack Mountable with Power Socket and Ports at rear side		
		2	Compliance to IEC 61850-3, IEEE 1613 Standards		

		3	Port Speed: 10Mbps/100Mbps for Station Bus and 1Gbps for Process Buss		
		4	Should have minimum of 24 Ports		
		5	LED indicators for link establishment and data transfer for each port		
		6	Should support remote user setting configuration.		
		7	Should own separate maintenance/console port		
		8	Should support SNMP Server v1.0/v2.0/v3.0		
		9	Auxiliary Power Supply: 24 VDC or 48VDC (depending upon the Station DC Voltage) with $\pm 15\%$ tolerance, Dual Power Supply		
		10	All the cards/modules of the Switch must have conformal coating for protection		
19.3	ICS Firewall	S. No.	Guaranteed Technical Particular	Bidder Response	
		1	The firewall should have integrated firewall, IPS, router and VPN		
		2	The firewall should support Stateful inspection, filter IP and Mac address, ports, ICMP, DDoS, Port Scanning, Improper commands, Access Control List Ethernet protocols • Deep Packet Inspection: Modbus TCP/UDP, IEC-61850 • Quick Automation Profiles: EtherNet/IP, Modbus/TCP, IEC 60870-104, IEC-61850, FTP, SSH, Telnet, HTTP, IPsec, L2TP, PPTP, RADIUS Throughput: Max. 10000 packets per second (Max. 100 Mbps)		
		3	The firewall should have minimum of 8 x 10/100BASE-TX RJ-45 Ports		
		4	The firewall should support SNMP V1, V2 & V3		
		5	The firewall should have functionality of standard Layer 3 mode of configuration		
		6	The firewall must provide NAT functionality, including dynamic and static NAT		
		7	The firewall should support VLAN tagging (IEEE 802.1q)		
		8	The firewall should be capable of upgrading to new versions/products in case a new feature is released by the OEM.		
		9	The firewall should be configurable and manageable using Command Line Interface & Web Interface		

		10	The firewall should focus on Service Control, Direction Control, User Control and Behavior Control		
		11	The administration software must provide a means of viewing, filtering and managing the log data		
		12	Power Input: 24V DC / 48V DC with \pm 15% tolerance and should have redundant power supply		

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 TPSODL's specifications:

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

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

Seal of the Bidder:

Signature:

Name:

ANNEXURE IV

Schedule of Commercial Specifications

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

S. No.	Particulars	Remarks
1.	Prices firm or subject to variation (If variable indicate the price variation clause with the ceiling if applicable)	Firm / Variable
1a.	If variable price variation on clause given	Yes / No
1b.	Ceiling	----- %
1c.	Inclusive of GST	Yes / No (If Yes, indicate % rate)
1d.	Inclusive of transit insurance	Yes / No
2.	Delivery	Weeks / months
3.	Guarantee clause acceptable	Yes / No
4.	Terms of payment acceptable	Yes / No
5.	Performance Bank Guarantee acceptable	Yes / No
6.	Liquidated damages clause acceptable	Yes / No
7.	Validity (90 days) (From the date of opening of bid)	Yes / No
8.	Inspection during stage of manufacture	Yes / No
9.	Rebate for increased quantity	Yes / No (If Yes, indicate value)
10.	Change in price for reduced quantity	Yes / No (If Yes, indicate value)
11.	Covered under Small Scale and Ancillary Industrial Undertaking Act 1992	Yes / No (If Yes, indicate, SSI Reg'n No.)

Seal of the Bidder:

Signature:

Name:

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

Bidder has to mandatorily fill in the checklist mentioned below: -

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

Seal of the Bidder:

Signature:

Name



NIT No.: TPSODL/OT/2021-22/019

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, TPSODL intends to use the reverse auctions as an integral part of the entire tendering process. All the bidders who are found as technically qualified based on the tender requirements shall be eligible to participate in the reverse auction event.

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

1. TPSODL 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. TPSODL will make every effort to make the bid process transparent. However, the award decision by TPSODL would be final and binding on the supplier.
3. The bidder agrees to non-disclosure of trade information regarding the purchase, identity of TPSODL, 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 TPSODL.
6. In case of intranet medium, TPSODL shall provide the infrastructure to bidders. Further, TPSODL has sole discretion to extend or restart the auction event in case of any glitches in infrastructure observed which has restricted the bidders to submit the bids to ensure fair & transparent competitive bidding. In case of an auction event is restarted, the best bid as already available in the system shall become the start price for the new auction.
7. In case the bidder fails to participate in the auction event due any reason whatsoever, it shall be presumed that the bidder has no further discounts to offer and the initial bid as submitted by the bidder as a part of the tender shall be considered as the bidder's final no regret offer. Any offline price bids received from a bidder in lieu of non-participation in the auction event shall be out-rightly rejected by TPSODL.
8. The bidder shall be prepared with competitive price quotes on the day of the bidding event.
9. The prices as quoted by the bidder during the auction event shall be inclusive of all the applicable taxes, duties and levies and shall be FOR at TPSODL site.
10. The prices submitted by a bidder during the auction event shall be binding on the bidder.
11. No requests for time extension of auction event shall be considered by TPSODL.
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 & Seal of the Bidder

ANNEXURE VII
SCOPE OF WORK / SERVICE LEVEL AGREEMENT

Brief:

This specification covers design, manufacture, assembly, testing at the manufacturer's works, supply, delivery, erection, site testing and commissioning of

- a) Automation Equipment along with all required accessories: RTU/Data Concentrator, Switches, Multi-Function Meter (MFM).
- b) Relays / BCPUs / Master trip relay
- c) Outdoor Kiosk to house Control & Relay panels and RTU panels

Scope for RTU/Data Concentrator.

1. Design.
2. Manufacturing.
3. Panel Testing at manufacturer's works.
4. IFAT: All the BCPU files should be configured and integrated with RTU to carry out the IFAT activity as per TPSODL requirements. TPSODL shall share the IP and signal list to BA.
5. Packing and Transportation.
6. Delivery and Loading / unloading of entire material at site/store.
7. Panel Shifting/ Lifting from one place to another i.e., Ground floor to First floor (RTU Location) is in the scope of Vendor.
8. RTU Panel erection/mounting at Specified Location, Activities such as Preparing Base (Civil Work Require Cement, concrete etc.), welding, Cutting, Earthing, AC and DC supply Connections. All installation activities are in the scope of Vendor.
9. Dismantling the Existing RTU/Control Panel with Shifting of existing infra without Damage to new panels i.e., Switch, converter and cable etc. and sending to TPSODL store.
10. Integration, Testing and Commissioning is in Scope of Vendor.
11. Supply and Laying of Cable such as CAT6, Serial cable, RJ45 Connector, OFC and Power cable (AC and DC) is under vendor Scope.
12. Supply of Pin Type, U-Type, Ring Type Lugs & Sleeves with Printed Ferrules
13. Supply of any miscellaneous accessories required for commissioning.
14. Supply and Laying of GI flexible conduit for laying CAT5/6 and Fiber Cable.
15. Remote terminal unit / data concentrator including all works required for successful integration with all IED's including new (BCPU) and existing IEDs, Such as meters, BCPU, BCU etc. on bay level for 11KV/33KV/66KV & Testing with ADMS (SCADA).
16. Vehicle arrangement for daily job such as carrying Material, human, tool kits, testing kits to various sites is in scope of Vendor.
17. Technical requirements of RTU/DC are detailed in the specification, refer 'Annexure-II'.

Note: The scope of this specification covers the GSAS requirement for BCPU, Relay and RTU of 33KV / 11KV power system. This specification will be applicable to all 33/11 kV panels in the new grids/New Bays/Retrofitting work

Scope of Work Ethernet Switch installation and Commissioning.

1. Supply of Industrial Grad Ethernet Switches with IEC-61850 Compliance.
2. Supply and Laying of CAT-5/6 Cable/ RJ45 Connector from Ethernet Switch to RTU/DCU and C&R Panels 33KV and 66KV.
3. Supply and Mounting of Double Pole DC MCB of suitable rating for each Ethernet Switch.
4. Supply and Laying of 1.5 sq.mm. Control Cables and Terminal Blocks.
5. Supply of Pin Type, U-Type, Pin Type Lugs & Sleeves with Printed Ferrules.
6. Installation of Switch in the Panels preparation of Cut out fixing of switch in the cut out is in scope of vendor, also covering the unused cut out with Metal sheet is in scope of vendor.
7. Integration and configuration of Ethernet Switch such as IP, SNMP and cyber security is in scope of vendor.
8. Supply of any miscellaneous accessories required for commissioning is in scope of vendor.
9. Technical requirements of Ethernet switch are detailed in the specification, refer '**Annexure-II**'

Configuration of Switches:

Configuration of Parameters (any other parameters also as per TPSODL Requirement) mentioned below is in scope of Vendor

1. IP address assignment, Multi-level user passwords, SSH/SSL, Enable/Disable ports, Port Filtering, VLAN, SNMP, SNTP, Port Mirroring, Port Configuration, Port Statistics, Event/Alarms etc.

Scope of work for 33/11 KV Relays / BCPU's and Transformer differential relays

1. Dismantling of existing BCU/BCPU/Relay & Handing over to TPSODL Without any damage.
2. Installation and mounting of new BCPU/Relay, including making cutouts wherever required, complete wiring of relay from CT, PT and DC aux power requirement, extending power supply with proper cabling and wiring including proper dressing of wiring.
3. Blocking the Left out Cut outs with metal sheets of color similar to existing C&R Panels. Blocking of all the openings on the bottom plane for rodent and vermin proofing to be ensured.
4. Cat-6/RJ45/Fiber Optic cables (Double Run) from CR panels till Ethernet Switch in GI Flexible Conduit. Loop cables among Ethernet switches installed in 66/33/11 KV Bays and the Ethernet Switches installed in RTU Panel.
5. Creation of PRP Network architecture and Supply of RED BOX (at Location)
6. Double Pole DC MCB OF Suitable ratings (For Each BCPU)
7. Terminal Blocks including disconnecting type TB's for CT's, PTs and DC voltage of Elmex make KLTD -M4 of 1.1kV class to be considered for SCADA status/alarm and control

requirement. 2.5 Sq mm cable to be considered for CT wiring. This shall be considered for all cabling from all cores of CTs.

8. Pin Type, U-Type, Ring Type Lugs, & sleeves with Printed feruling
9. 1.5 & 2.5 Sq mm cable for whole activity
10. Testing includes primary injection and secondary injection (having three phase double Source arrangement) and also all testing equipment would be provided by Vendor.
11. Integration of relays/BCPUs with RTU/DC shall be in bidder's scope. Approval of configuration shall be taken prior to loading in relay/BCPU.
12. Point to point as well as configuration logic testing from links to relay as well as from relay to RTU, network Switches and SCADA is in the bidder's scope.
13. Submission of As-built drawing within 15 days after successful completion of the respective Sub Station job.
14. Any Miscellaneous accessories required for Commissioning.
15. In case of space constraint in the panel vendor need to supply and mount an additional box for installation of relay.

Technical requirements of Relays/BCPUs are detailed in the specification, refer '**Annexure-II**'

Scope of work for MFM-

1. Dismantling of existing MFMs and handing over to TPSODL
 - a. Without any damage.
 - b. Blocking the Left out Cut outs with metal sheets of color similar to existing C&R Panels
2. Mounting of the new MFM and extending power supply cables and wiring inside panel, CT & PT wiring along with separate terminal blocks with disconnecting type links for CT & PT wiring.
3. RS 485 cables from CR panels till Data Concentrator through Conduit.
4. Terminal Blocks including TBs for CTs, PTs and DC as mentioned above in BCPUs/relay scope.
5. Pin Type, U-Type, Ring Type Lugs, & sleeves with Printed feruling
6. 1.5 & 2.5 Sq. mm cable for whole activity
7. Submission of As-built drawing within 15 days after successful completion of the Respective Grid Station jobs.
8. Any Miscellaneous accessories required for Commissioning.
9. In case of space constraint in the panel vendor need to supply and mount an additional box for installation of MFM/Relay
10. All other requirement

Technical requirements of MFM are detailed in the specification, refer '**Annexure-II**'.

Scope of work for Kiosk

Bidder shall offer outdoor kiosks suitably located in switchyard, housing various IEDs such as Bay Control Units (BCUs) in Protection Panels and RTU panels.

One kiosk will be considered for housing Maximum 20 panels in two rows. In case of incomplete or partial supply, the kiosk will have necessary space for accommodating the future panels. Future

provision for Air Conditioning equipment to be included in design. The layout of equipment/panels will be subject to Purchaser's approval. The kiosk will be provided with fire alarm system with at least two detectors and temperature & humidity sensors which will be monitored through SCADA. Control cables from switchyard equipment such as CT, PT, Breaker etc. will be connected to respective IEDs located in kiosks. Ethernet or Fiber optic cables will be connected from CRP panels to RTU panels for data exchange. Different routes will be adopted for laying cables. Technical requirements of outdoor kiosks are as per specification, refer '**Annexure-II**'. Civil work is excluded from bidder's scope.

SLA / Delivery Terms/ Period of contract:

The supply of material shall be completed within 60 days from the date of award, subject to availability of clearance provided by TPSODL.

The work of relay replacement / retrofitting and installation & commissioning of supplied RTU & Relay of substation, shall be done within 5 days per substation.

Kiosk installation shall be completed within 7 days including electrical works, ventilation system.

The site / substation clearance / equipment outage requirement for above requirements shall be provided by TPSODL engineer in charge.

Overall contract period shall be 5 months from the date of issuance of Work Order.

Complete BOQ for the SOW will be as follows:

Circle Wise- BOQ for Scada Implementation at TPSODL											
S. N O.	Items Name	Item Specification Details	Unit	Circle						Spare Qty (Only Supply)	REMARKS
				CIT Y	AS KA	BEH A MPU R	JEY PO RE	RAY A GAD A	TOT AL		
1	RTU		EA	9	1	4	4	4	22	2	
2	Ethernet SWITCH for RTU	16 Port for RTU per PSS	EA	18	2	8	8	8	44	2	Considering PRP, redundant ethernet switches at 11kV & 33kV C/R panel and RTU Panel
3	Ethernet SWITCH for Control Panel (IED)	24 Port for IED Per PSS	EA	36	4	16	16	16	88	15	

												to be provided
4	MFM/MFT Incl. BC	SCADA Compatible	EA	114	16	48	62	66	306	5		To be mounted on existing panels
5	Relay / BCPU	OC/EF Relay	EA	38	1	18	23	22	102	5		To be mounted on existing panels
		Differential Relay		9	0	4	5	3	21	1		
6	Master Trip Relay		EA	38	1	18	23	22	102	5		To be mounted on existing panels
7	Kiosk	CRP & RTU panel housing	EA	0	0	0	3	2	5	0		Spare not to be considered

BOQ breakup for Kiosk (point-7 in above table)

S No.	Description	Overall Quantity in Nos
1	Supply of Kiosk of size 10mx5mx 5m, comprising of PPGI 0.6mm Inner & 0.8mm Outer. Panel Thickness 80mm. ISMB 150 x 75mm. Providing Secondary roof with proper slope AC & Roxtec cutout finish with flashing and staircase 2 nos. for both exits.	5
2	Internal Electricals (Includes all cabling, one SPNDB, 2 nos. 4pole MCB with box, one switch board, lug, PVC tape, switchboard with 1 no. 6 pin 5/15A, 240V socket, 1 no. telephone socket), Smoke Detector - 2 Nos., Temperature detector - 1 no. Provision for earthing the kiosk from two sides.	5
3	Ventilation system with fresh air fans and exhaust fans for 20 no Control and Relay panels to be housed in Kiosk (Provision for future AC system to be kept.)	5
4	Temperature and humidity monitoring system with Modbus connectivity, to be integrated with SCADA.	5

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1.0 ORGANIZATIONAL VALUES

The Tata Group has always been a value driven organization. These values continue to direct the Group's growth and businesses. The Six core Tata Values underpinning the way we do business are:

Integrity - We must conduct our business fairly, with honesty and transparency. Everything we do must stand the test of public scrutiny.

Understanding - We must be caring, respectful, compassionate and humanitarian towards our colleagues and customers around the world and always work for the benefit of India.

Excellence - We must constantly strive to achieve the highest possible standards in our day to day work and in the quality of goods and services we provide.

Unity - We must work cohesively with our colleagues across the group and with our customers and partners around the world to build strong relationships based on tolerance, understanding and mutual co-operation.

Responsibility - We must continue to be responsible and sensitive to the countries, communities and environments in which we work, always ensuring that what comes from the people goes back to the people many times over.

Agility - We must work in a speedy and responsive manner and be proactive and innovative in our approach.

2.0 ETHICS

In our effort towards Excellence and in Management of Business Ethics at TPSODL, an Ethics Management Team is constituted.

The main objective of the Ethics Management Team is to:

1. Record, address and allay the issues and concerns on ethics raised by different stakeholders like employees, consumers, BAs, associates etc. by initiating immediate corrective actions.
2. Ensure proper communication of the ethics policies and guidelines through prominent displays at all offices of TPSODL and through printed declarations in all concerned documents where external stakeholders are involved.
3. Ensure proper framework of policies as preventive measures against any ethics violation recorded by them.
4. Prepare and submit MIS of all issues and concerns, corrective and preventive actions on monthly basis to the top management for their information.
5. All Associates and Stakeholders are requested to register any grievance on ethics violation on TPSODL website www.tpsouthernmodisha.com

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3.0 CONTRACT PARAMETERS

3.1 Issue/Award of Contract

TPSODL awards the contract to the Associate in writing in the form of Purchase order or Rate Contract (RC) hereafter referred as Contract, through in any or all of following modes-physical handover / post / e-mail / web document / fax with all the attachments/enclosures which shall be part of the contract document

On receipt of the contract, the associate shall return to TPSODL copy of the contract document duly signed by legally authorized representative of associate, within two days of Effective Date of Contract for contracts having contract execution time less than 30 days and within five days for all other contracts.

3.2 Contract Commencement Date

The date of issue/award of contract shall be the Effective Date of Contract or Contract Commencement date.

3.3 Contract Completion Date

The date of expiry of Guarantee Period (detailed in section 12 of this document) shall be deemed as the Contract Completion Date.

3.4 Contract Period/Time

The period from Contract Commencement Date to Contract Completion Date shall be deemed as the Contract Period/Time.

3.5 Contract Execution Completion Date

The stipulated date for completing the execution of all items in the schedule of quantities (Supply, Service and or both as applicable) shall be deemed as the Contract Execution Completion Date.

3.6 Contract Execution Period/Time

The Period from Contract Commencement Date to Contract Execution Completion Date shall be the Contract Execution Period/Time. Timely Completion of Works/Timely Delivery of Materials is the essence of the contract. The period from effective date of contract to the date stipulated for completion of delivery of all items/completion of all the works/services, as per schedule of quantities of the contract is defined as contract execution completion time. The Delivery of Materials /The Completion of Works, as applicable, should be achieved in all respects as per schedules of quantities and all the terms and conditions of the contract, in the contract execution time.

Any revision/amendment in the originally stipulated contract execution time has to be approved by authorized representative of TPSODL.

3.7 Contract Price /Value

The total all inclusive price/value mentioned in the LOI/PO/RC of the contract document is the Contract Price/Value and is based on the quantity, unit rates and prices quoted and awarded and shall be subject to adjustment based on actual quantities supplied/actual measurement of work

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done and accepted and certified by the authorized representative of the company unless otherwise specified in schedule of quantities or in contract documents.

3.8 Contract Document

The Contract Document shall mean and include but not limited to the following:

- NIT/Tender Enquiry, QR, Instruction to Bidders, Special Condition of Contract (SCC) of tender, GCC, Technical & Commercial Specifications including relevant annexure and attachments).
- Bids & Proposals Received from Associate including relevant annexure/attachments.
- Letter of Intent (LOI/RC/PO) with agreed deviations from the tender/bid documents.
- All the Inspection and Test reports, Detailed Engineering Drawings.
- Material Dispatch Clearance Certificate (MDCC).
- Minutes of Meeting (MoM)

3.9 Contract Language

All documents, instructions, catalogues, brochures, pamphlets, design data, norms and calculations, drawings, operation, maintenance and safety manuals, reports, labels, on deliveries and any other data shall be in English Language.

The Contract documents and all correspondence between the TPSODL, Third Parties associated with the contract, and the Associate shall be in English language.

However, all signboards required indicating "Danger" and/or security at site and otherwise statutory required shall be in English, Hindi, and local languages.

3.10 Reverse Auction

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

4.0 SCOPE OF WORK

All the activities that are to be undertaken by the Associate to realize the contractual deliverables in completeness form Scope of Work. Following clauses list, but not limited to, major requirements of the scope of work.

The associate shall satisfy himself and undertake fully the technical/commercial requirements of items to be supplied as listed in the Schedule of Quantities together with the tests to be performed /test reports to be furnished before dispatch, arrangement of stage and final inspections during manufacturing as per terms and conditions of contract, technical parameters & delivery terms and conditions including transit insurance to be met in order to fully meet TPSODL's requirements.

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Completeness: Any supplies and services which might have not been specifically mentioned in the Contract but are necessary for the scope mentioned in Special Terms & Conditions and/or completeness of the works at the highest possible level, including any royalties, license fees & compensation to be paid, whether incurred by the associates or by a third party for the work covered in the scope, regardless of when incurred, shall be supplied/provided by the associate without any extra cost and within the time schedule for efficient, smooth and satisfactory operation and maintenance of the works at the highest possible level under Indian conditions (but according to international standards for facility of this type), unless expressly excluded from the scope of supplies and services in this Contract.

TPSODL have the right, during the performance of the Contract, to change the scope and/or technical character of the Project and/or of the supplies and services stipulated in the Contract by submitting a request in writing to the Associate. The Associate shall, within fifteen days of receipt of such request from the TPSODL, provide Purchaser with a reasonably detailed estimate of the cost of the change outlined in the request.

In the event, TPSODL requests a change, the Contract price and time shall be adjusted upwards or downwards, as the case may be and shall be mutually agreed to. The associate shall not be entitled to any extension of time unless such changes adversely affect the time schedule.

The Associate shall not proceed with the changes as requested till adjustment of contract price and time schedule where so applicable in terms of or otherwise directed by the TPSODL.

4.1 Technical Evaluation

TPSODL reserves the right to assign scores to different parameters including but not limited to the following while evaluating the bids. TPSODL reserves the right to change the parameters and score without prior information to the associates:

S. No.	Evaluation Parameter	Max. Score
A	Bidders already Registered with TPSODL	100
	Quality of the Products & Services	
	a. <u>For Supply Part:</u> No Material Rejections in last 2 years Deduction of 3 marks for each PO/ RO (for same product category) with major rejections in last 2 years. (Major rejection shall be considered when material is taken back by the BA for rectification and the quantity of rejected material is more than 10%).	12
A.1.	b. <u>For Service Part:</u> No violation of statutory compliances in last 1 year. Deduction of 2 marks for each instance of violation in last 1 year.	12
	c. <u>Safety</u> Deduction of 2 marks for each instance of safety violation in last 1 year. Deduction of 4 marks for each reported Non-Fatal Accident in last 1 year. In case of any reported fatal accident: ZERO MARKS	16

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S. No.	Evaluation Parameter	Max. Score
A.2.	Timely Execution of Contracts Total Achieved Score = {30 – 3 x (Avg. %age LD deductions in last 2 years)}	30
A.3.	Legal Issues with TPSODL Zero instances of Arbitration procedures / Court Cases / PBG forfeitures in last 2 years: 30 marks else 'Zero' marks	30
B	Bidders new to TPSODL	100
B.1.	Visits <u>For Supply Part:</u> Factory Visit and Evaluation. <u>For Service Part:</u> Client Site Visit where the bidder is providing similar services. The visits as above shall be arranged by the bidder. However, all costs towards conveyance, lodging, boarding etc. shall be borne by TPSODL. The score assigned by TPSODL based on the above visits shall be final and binding on the bidder.	30
	Safety: Score achieved against the BA safety Management System questionnaire.	20
B.2.	Client Referrals At least 3 nos. Customer References for similar products/ services in last 3 years. All customer references shall be either of the following: <ul style="list-style-type: none"> ▪ Govt. Organizations/ PSUs/ Power Distribution Utilities. ▪ Private Organizations with an annual turnover of >= 500 cr. PO copies or Completion Certificates are admissible. Each reference: 10 marks	30
B.3.	Blacklisting Information Not blacklisted by any reputed organization / utility in last 2 years: 20 marks else 'Zero' marks.	20

- Bidder shall be considered as technically qualified if they are able to achieve a technical score of >70 marks on the above parameters. 'A' or 'B'.
- The bidder must have the PF and ESI registration. In case it is not there (provided the bidder is not exempted from the PF and ESI), bidder shall not be evaluated on the above parameters and will be considered as disqualified.

4.2 Indemnity

Associates shall undertake to fully indemnify TPSODL (also referred to as the Company in the GCC) against all kinds of liabilities or damages, of whatsoever nature, including compensation arising from any accident to the person or property of those in Associate's employment or to any other person or properties including those of TPSODL, arising due to reasons attributable to any, act, omission or negligence of the Associate the Associates, for the entire period of contract including period of guarantee.

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Within 7 days of award of work, the Associates shall submit Indemnity Bond in the format as per Annexure-E to Order Issuing Authority.

Contract having value more than Rs 2 Cr per Annum, Associates shall submit Indemnity Bond on Rs 100/- Non Judicial Stamp Paper in the format as per Annexure- E to Order Issuing Authority.

4.3 Display of Notice Boards at Work Sites

The Associate shall put up display notice board at each project site where the works are in progress indicating the information given below:

- Name of the Project.
- Estimated Cost of Project.
- Date of Commencement.
- Expected date of completion.
- Name of Associate and his telephone number.
- Name of Engineer-in-Charge and his telephone number.

4.4 Disposal of Waste at Site

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

The associates shall follow the below criteria for disposal of waste at site during the execution of project.

- Associate shall ensure that the detailed project plan include the waste management, segregation of all designated waste material (Recyclable/ Non-Recyclable), collecting, storing, disposing and transferring the same to pre-arranged facility/destination in timely and safe manner as per environmental legislations during the execution of project. The project plan shall also include the innovative construction practice to eliminate or minimize waste, protect surface/ground water, control dust and other emissions to air and control noise during the execution of project. The copy of same shall be given to EIC before the commencement of project.
- The purchase policy of BA shall encourage the procurement of material with recycled and minimum packaging of goods during delivery. Associate shall provide the appropriate means for site to site transportation of materials to avoid damage and litter generation.
- Associate shall educate and inform to its project team about the requirement and responsibilities for waste minimization and disposal in general and provide training of practices that support this. Waste management should be treated like a safety program.
- In the event that area of contaminated or biological hazard is identified, Associate shall ensure that plant, equipment, personnel and any activity associated with the work is carried out in consultation with EIC of TPSODL.

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- Associate shall ensure that the residents living near the site are kept informed about proposed working schedule and shall informed timings and duration of any abnormal noise full activity that is likely to happen.
- Associate shall ensure the regular maintenance and monitoring of vehicles and equipment for efficient fuel use so that emissions and noise are within acceptable limits to avoid air pollution.

4.5 Deployment of Work Force

Associate shall deploy adequate labour as considered necessary by TPSODL for execution of the contract including Sundays and Holidays whenever required to do so with no extra cost to TPSODL. However, prior permission shall be taken from the site Engineer to carry out the work beyond normal working hours or on Sundays and Holidays. Female employees shall not be deployed beyond normal working hours/days and no child labour shall ever be deployed. Associate shall depute full time qualified and experienced engineers to supervise the work at site. All such staff shall be maintained from commencement to completion of all works to the entire satisfaction of the Engineer-in-Charge. Associate's employees deployed for the works under this contract will not be considered in Company's employment at any time. Associate shall continue to be responsible for all such employees, their safety, all types of statutory compliances related thereto and in any other manner whatsoever. The company will stand indemnified by the Associate in respect of all the above. At the same time Company upon noticing any breach or default on any statutory compliances, may at their sole discretion, decide to act in a manner as deemed fit at the risks and costs of the Associate.

TPSODL shall have the right to instruct the Associate to change the Sub- Associates or skilled /unskilled workers in case the conduct, the workmanship or speed of the work is not satisfactory.

Associates shall submit duly signed undertaking regarding engagement of competent staff / employee commensurate to the nature of job to Engineer-in-charge in the format attached as Annexure – H.

4.6 Damages to Properties

The Associates shall take necessary steps to ensure that the equipment and installations of the Company, third parties, including other utility services like water supply pipelines; open drains telephone cables etc. are not damaged during execution of the works. The Associates shall be responsible for all such damages and shall have to repair/ replace and/or compensate for the entire claims in respect of such damages at its own cost.

4.7 Issuance of Material

The material issued to the Associate shall be in the custody of the Associates who shall be fully responsible for the same. After completion of the works, the Associates will reconcile the material. Any cost of material which is short or damaged/lost will be deducted from Associate bill/ deposits.

4.8 Company's Right To Use Works

If Taking Over Certificate is delayed for any reason, for which TPSODL's decision shall be final and binding upon the Associate, the Company shall be entitled to use the works or portion thereof without affecting Associate's responsibility and liability to complete the balance works as per

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company's directives from time to time, though Associate shall be afforded reasonable opportunity by the company to enable Associates to complete all balance works required for issuance of 'Taking Over Certificate' by the company.

4.9 Rights of TPSODL to vary the scope work

TPSODL shall have the right, during the performance of the Contract, to change the scope and/or technical character of the Project and/or of the supplies and services stipulated in the Contract by communicating the intent to do so in writing to the Associate. On receipt of such communication the Associate shall, within the time frame specified in the contract shall provide TPSODL with a reasonably detailed estimate of the cost of the change in scope outlined in the TPSODL communication. The change in the Contract price and time shall be revised upwards or downwards, as the case may be, and shall be mutually agreed to. The Associate shall not be entitled to any extension of time unless such changes adversely affect the time schedule.

The Associate shall not proceed with the changes in the scope of work till such time revision of Contract price and time schedule are approved and communicated to the associate by TPSODL.

Any change in the Scope of Work and/or Terms & Conditions of the order shall be intimated by TPSODL through an amendment to the contract. The amendment shall be treated valid only if signed by the authorized signatory of the original contract.

5.0 PRICES/ RATES/ TAXES

5.1 For Supply part of Contract

Unless specified elsewhere in the contract document, the prices/rates are inclusive of cost of finished product for which MDCC will be issued by TPSODL, packaging and forwarding charges, freight and transit insurance charges covering loading at Associate's works, transportation to TPSODL store/site & unloading & delivery at TPSODL stores/TPSODL site, cost of documentation including all the relevant test certificates and other supportive documents to be furnished.

The Prices/Rates are inclusive of all taxes, levies, cesses and duties, particularly Goods and Services Tax as applicable. All government levy / taxes shall be paid only when the invoice is submitted according to the relevant act.

The prices/rates shall remain firm till actual completion of entire supply of goods/material/equipment as per contract is achieved and shall remain valid till the completion of the contract.

The prices shall remain unchanged irrespective of TPSODL making changes in quantum in all or any of the schedules of items of contract.

5.2 For Service part of Contract

The Prices and Rates are inclusive of cost of materials supplied as per contract terms and for which MDCC is issued by TPSODL and to the extent required for completion of works, cost of

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service executed as per schedule of quantities, cost of testing as per contract terms, cost of documentations including all relevant test certificates and other supportive documents to be furnished as per contract terms. The rates shall remain firm till actual completion of contract.

The Prices/Rates are inclusive of all taxes, levies, cesses and duties, particularly Goods and Services Tax as applicable. All government levy / taxes shall be paid only when the invoice is submitted according to the relevant act.

The prices shall remain unchanged irrespective of TPSODL making changes in quantum in all or any of the schedules of items of contract.

5.3 Changes in Statutory Tax Structure

If rate of any or all of the statutory taxes and duties applicable to the contract changes, such changes shall be incorporated by default if the changes occur within the contract execution time and shall be applicable if the contract is executed by the Associate within the Contract Execution Time.

For execution of contracts beyond contract execution time, where the delay is not attributable to TPSODL no upward revision in tax /duties shall be considered irrespective of changes in the statutory tax structure either within the contract execution time or beyond. However, in such cases, benefits due to any downward revisions in statutory tax rates shall be passed on to TPSODL.

6.0 TERMS OF PAYMENT

- A. 5% of the Release Order/ Purchase Order price shall be paid as initial interest free advance on fulfillment of the following by the Associate:
 - a) Acceptance of PO/ LOI.
 - b) Submission of advance payment BG of 15% of the Release Order/ Purchase Order price which shall remain valid till the advance is fully adjusted.
 - c) Submission of Contract Performance Bank Guarantee of 5/10% of the RC/ PO price valid till 30 days after taking over of the works.
- B. 10% of the Release Order/ Purchase Order price shall be paid as interest free advance against approval of drawings under Category-1 of major drawings, Quality Plans, Pert Chart, Field Quality Plan, posting of Project Manager and commencement of the first mile stone of the work mutually agreed including C-3 Form, and submission of a true copy of 'Erection All Risk Insurance Policy' taken for the awarded jobs. The drawing list shall be mutually agreed at the time of award of work.
- C. 50% on account payment of the total of item wise cost of material Release Order/ Purchase Order shall be paid against receipt of material at site in good condition and certification by TPSODL along with bills complete in all respects viz. MDCCs etc.
- D. 20% on account payment of the actual executed value shall be paid against mechanical completion of erection on prorata basis against monthly bills and 70% on account of the actual executed value shall be paid against the service line item including composite line

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item. In case this milestone is not completed beyond 120 days for reasons attributable to TPSODL, the payment corresponding to supply part shall be released subject to submission of BG of equivalent amount by the BA valid for a period of further 12 months. If required, it shall be extended by the BA on request of TPSODL.

- E. 15% payment of the actual executed Release Order/ Purchase Order shall be paid after completion of acceptance test and Taking Over of the complete systems specified in the enquiry, including clearance of Electrical Inspection, compliance of final punch point and after reconciliation & adjustment of payments, if any, towards Quantities of materials issued from purchaser's stock and consumed by the contractor for expeditious completion of the job. In case this milestone is not completed beyond 120 days beyond schedule for reasons attributable to TPSODL, the payment corresponding to supply part shall be released subject to submission of BG of equivalent amount by the BA valid for a period of further 12 months. If required, it shall be extended by the BA on request of TPSODL.

The Contractor shall submit all Operation & Maintenance manuals and "As Built Drawings" etc. and shall also submit Equipment Warranty Bank Guarantee (EWBG) equivalent to 5/10% of actual executed contract price before the release of this last payment and return of CPBG. The validity of EWBG shall be for a period of 15 months from the date of taking over of the works or specified guarantee period in drawing/tender/technical specification documents etc. whichever is later. The associate shall also submit 'No Demand Certificate' at the time of receipt of full and final payment.

6.1 Pre-Requisites for Payment

- Associate should have completed execution of that part of contract, for which payment is sought, to the satisfaction of TPSODL's Engineer-in-Charge responsible for the contract and obtained certification for execution of the work.
- Associate has undertaken joint measurement of the work executed along with TPSODL's Engineer-in-charge
- Associate's bills/invoices submitted have been certified by Engineer-In-Charge.

6.2 Bills & Invoices

Unless specified otherwise in the special conditions of contract, Associate shall raise not more than one invoice/contract per month for the services rendered in the prescribed Tax Format and the invoice shall be submitted within 15 days of the following month at Bill Inward Receipt Desk (BIRD) Receipt Desk / Invoice Desk / Office of CFO, TPSODL located at TPSODL Corporate Office, Kamapally, Courtpeta, Berhampur, District Ganjam, Odisha, India – 760 004

All Bills shall be supported by joint measurement of work done, quality test report and a copy of wage sheet, if applicable (showing proof of having disbursed wages as per applicable law) and a copy of statement substantiating that statutory payments having been affected.

Bills/ invoices shall mention Associate's 'Sales, Service, WCT Tax Registration Number, PAN number as applicable.

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Final bill submission after completion of project or execution of job must be within 30 days from the actual date of completion/execution of work awarded.

6.3 Payment & Statutory Deductions

Payment shall be released within 30 days from the submission of the bills. The associate shall submit "No Demand Certificate" in the format as per Annexure-D at the time of receipt of full and final payment. In case any non-compliance to contract conditions comes to TPSODL's notice, TPSODL will be entitled to deduct 30% of estimated wages plus 20% of wages as TPSODL's overheads. Associates would be obliged to provide the copy of monthly wage sheet in any case, failing which no payment shall be made. TPSODL at their sole discretion may deposit the PF etc. with statutory authorities. TPSODL will deduct the amounts of TDS as per statutory requirement under the income tax act and the DVAT Act and certificates (wherever applicable) will be issued to associate accordingly.

In case of non-submission of PAN No TDS @ 20% shall be deducted from all payable amounts for which no TDS certificate shall be issued. TDS once deducted as above shall not be revised in any condition.

6.3.1 Statutory Deductions

TPSODL will deduct the amounts of TDS, TCS as per statutory requirement under the income tax act, the Goods and Services tax act, BOCW Act, or any other applicable tax act and certificates (wherever applicable) will be issued to associate accordingly. For consumption of TPSODL's Water and Electricity by Associate for execution of Contract, Associate shall pay 0.5% & 1.0% respectively of contract value and it shall be deducted from the running bills. The Engineer-in-Charge as stated in the Order shall be responsible for certification of the work executed and the bills. Bills (including original) shall be submitted in triplicate at Bill Inward Receipt Desk (BIRD) / Invoice Desk / Office of CFO, TPSODL located at TPSODL Corporate Office, Kamapally, Courtpeta, Berhampur, District Ganjam, Odisha, India – 760 004

6.4 Guidelines for Raising Running/Final Bills

Contract Value Up to 5 Lakhs	One Final Bill
Contract Value More than 5 lakhs	Monthly Running Bill & One Final Bill

All Bills shall be processed only when all bank Guarantees are in place and before payments of Final Bill Associate have to furnish NDC.

6.5 Quantity Variation

Payment will be made on the basis of actual quantity of supplies/actual measurement of works accepted by TPSODL and not on the basis of contract quantity.

6.6 Full and Final Payment

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Full & Final Payment in all contracts shall be made subject to the associate submitting “No Demand Certificate” in the format as per Annexure-D.

7.0 MODE OF PAYMENT

Payment shall be made through RTGS mode for which Business Associated shall submit the details of Bank Account and other details as per annexure K. Further, for any payments made, TPSODL is not responsible for any consequences/disputes Associate have among the owners channel partners, sub-Associates and all such dispute/concerns shall be settled solely by the Associate.

The quantities of items indicated are estimated and preliminary. However, payments shall be made on the basis of actual quantity of work carried out and measured jointly by the Company and the Associate. Associates shall be responsible to organize joint measurements of works with TPSODL Engineer-in-Charge before raising any bill of work done. In the event Associate fails to do so, TPSODL at their sole discretion, may take measurements of work done and proceed as deemed fit and in such an event Associate’s right to lodge any subsequent claim shall stand forfeited.

8.0 SECURITY CUM PERFORMANCE DEPOSIT

Associates shall submit within 15 days from the effective date of issue of PO/RC, Security cum Performance Guarantee (SPBG) in the format as per Annexure B of this document from banks acceptable to TPSODL for:

- (a) 5% of the PO value if purchase order value is more than Rs 5 Crores.
 - (b) 10% of the PO value if purchase order value is less than Rs 5 Crores.
- This shall remain valid till the end of the Guarantee Period of contract, plus one month.
- (c) 5% of the RC value in case of Rate Contract. This shall remain valid till the Guarantee period plus one month.
 - For PO/RC values less than Rs. 5 lacs, Associate may request for deduction of amount equivalent to SPBG value from their first invoice. Such amount shall be withheld by TPSODL while processing the invoice and shall be released after completion of Guarantee Period plus one month.
 - For PO/RC values less than Rs. 3 lacs, the clause (8.0) for Security cum Performance Bank Guarantee (SPBG) shall not be applicable.
 - In case of RC (Rate Contract) after the expiry of RC validity, Associate shall have to submit SPBG. However, the Associate has the option to re-submit the SPBG as per actual RO (Release Order) value issued against the RC, valid for Guarantee Period plus one month. The Guarantee Period shall be considered as per the last RO issued against the said RC. The original SPBG as submitted against the RC shall be released on submission of the new SPBG to TPSODL. Alternatively, Associate may extend the validity of original SPBG only till the requisite period, i.e. Guarantee Period plus one month.

9.0 STATUTORY COMPLIANCE

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9.1 Compliance to Various Acts

Associate should ensure adherence to all applicable laws, rules and regulation applicable under this contract from time to time. In case of violation any risk, costs etc shall be in associates account and keep TPSODL indemnified always till completion of contracts.

9.2 Social Accountability

TPSODL expects its Associates to follow guidelines of best practices on the following aspects

1. Child Labour
2. Forced or Compulsory Labour
3. Health & Safety
4. Freedom of Association & Right to Collective Bargaining
5. Discrimination
6. Disciplinary Practices
7. Working Hours
8. Remuneration
9. Management System

9.2 Affirmative Action

TPSODL appreciate and welcome the engagement/employment of persons from SC/ST community or any other deprived section of society by their business associates.

Relaxation in Contract Clauses under Affirmative Action for SC/ ST Business Associates**

TPSODL believes that inclusive growth is the key to sustainable development, and to promote the same Policy on Affirmative Action for Scheduled Caste & Scheduled Tribe Communities has been adopted across the company.

Under the same pre-text, and to promote entrepreneurship among SC/ST community TPSODL has taken initiative by proposing relaxations in contract clauses as per below:

S. No.	Initiative	for SC/ ST BA's	Guideline Document
1	Tender Fees	100% waiver for SC/ST community	All Open Tenders
2	Earnest Money Deposit	50 % relaxation of estimated EMD value	All limited and Open Tenders
3	Performance Bank Guarantee	25% relaxation in PBG for order value above 50 lacs else 50% relaxation	All limited and Open tenders
4	Turnover	25% relaxation in company turnover under qualifying requirement criteria	All Open Tenders

****Classification of BAs under SC/ST shall be governed under following guidelines:**

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- Proprietorship/ Single Ownership Firm: Proprietor of the firm should be from SC/ST community. Governing document shall be duly audited balance Sheet for the last FY bearing the name of proprietor.
- Partnership Firm: Only such firms shall qualify which have SC/ST partners holding equal to or more than 50% of the total ownership pattern of the firm. Governing document shall be Partnership Deed and audited balance sheet/ ITR for last FY.
- Private limited company: Only such firms shall qualify which have SC/ST directors holding equal to or more than 50% of the total ownership pattern of the firm. Governing document shall be Memorandum of Understanding (MoU) and/or Article of Association (AoA).

Certification from SC/ST commission shall be required for deciding upon SC/ST status of a person.

9.4 Compliance to Labour Laws

Bidder needs to ensure compliance to applicable labour laws including timely disbursement of wages. In case wages are not disbursed as per the stipulated timelines, then TPSODL shall pay the wages to BA employees on behalf of BA. Apart from deducting the amount of wages paid, TPSODL shall deduct an additional service charge equivalent to 25% of the wages paid from the payment due to BA.

9.5 Compliance to Construction and Demolition Waste Management Rules & Environment (Protection) Amendment Rules

BA is liable to follow the Construction and Demolition Waste Management Rules- 2016, Environment (Protection) Amendment Rules- 2018 and Guidelines on dust mitigation measures in handling construction material and C&D wastes issued by CPCB.

Following are some main points of above Rules/Guidelines for Construction work, cable laying jobs etc.

1. Barricading to be provided at site to cover complete area.
2. Construction material and waste should be inside the closed area made by using barricading.
3. Water sprinkling/fine spray from nozzles to be done to suppress the dust.
4. The board of Dust mitigation measures shall be displayed at site for public viewing with required details.
5. Loose sand or soil and construction material that causes dust shall be covered.
6. Transport material that are easily wind borne need to be covered by a sheet made of either jute, tarpaulin, plastic or any other effective material.
7. All areas for storing C&D waste/construction material to be demarcated and preferably barricaded particularly those materials that have potential to be dust borne.
8. Grinding and cutting of building materials in open area shall be prohibited.
9. Construction material and waste should be stored only within earmarked area and roadside storage of construction material and waste shall be prohibited.
10. No uncovered vehicles carrying construction material and waste shall be permitted.

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11. Construction and demolition waste processing and disposal site shall be identified and required dust mitigation measures to be notified at the site.

10.0 QUALITY

10.1 Knowledge of Requirements

The Associate shall be deemed to have carefully examined and to have knowledge of the equipment, the general and other conditions, specifications, schedules, drawings, etc. forming part of the Contract and also to have satisfied himself as to the nature and character of the work to be executed and the type of the equipment and duties required including wherever necessary of the site conditions and relevant matters and details. Any information thus procured or otherwise obtained from TPSODL/Consultants shall not in any way relieve the Associate from his responsibility and executing the works in accordance with the terms of contract.

10.2 Material/Equipment/Works Quality

The items / works under the scope of the Associate shall be of the best quality and workmanship according to the latest engineering practice and shall be manufactured from materials of best quality considering strength and durability for their best performance and, in any case, in accordance with the specifications set forth in this Contract. All material shall be new. Substitution of specified material or variation from the process of fabrication/construction/manufacture may be permitted but only with the prior written approval of the TPSODL.

10.3 Adherence to Rules & Regulations

The Associate shall procure and/or fabricate/erect all materials and equipment in accordance with all requirements of Central and State enactment, rules and regulations governing such work in India and at site. This shall not be construed as relieving the Associate from complying with any requirement of TPSODL as enumerated in the Contract which may be more rigid than and not contrary to the above mentioned rules, nor providing such construction as may be required by the above mentioned rules and regulations. In case of variance of the Technical Specification from the laws, ordinance, rules and regulations governing the work, the Associate shall immediately notify the same to the TPSODL. It is the sole responsibility of the Associate, however, to determine that such variance exists. Wherever required by rules and regulations, the Associate shall also obtain the statutory authorities' approval for the plant, machinery and equipment to be supplied by the Associate.

10.4 Specifications and Standards

The Associate shall follow all codes and standards referred in the Contract Document. Codes and standards of other may be followed by the Associate with the prior written approval of TPSODL, provided materials, supplies and equipment according to the standard are equal to or better than the corresponding standards specified in the Contract.

Brand names mentioned in the Contract documents are for the purpose of establishing the type and quality of products to be used. The Associate shall not change the brand name and qualities

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of the bought out items without the prior written approval of the TPSODL. All such products and equipment shall be used or installed in strict accordance with original manufacturer's recommendations, unless otherwise directed by the TPSODL. In any circumstances the codes, specimen and standards prescribed by any government agency should not be violated.

11.0 SAFETY

All Associates shall strictly abide by the guidelines provided in TPSODL's Contractor Safety Management System (CSMS) as applicable at all stages during the contract period. Associate shall execute the contracts ensuring the following in and as order of priority:

- Safety of Human Beings.
- Safety of equipment/Assets.
- Timely Completion of Contract.

Safety related requirements as mentioned in our Contractor Safety Management System is attached as annexure L and is an integral part of this GCC.

12.0 INSPECTION/PARTICIPATION

12.1 Right to Carry Out Inspection

TPSODL reserves the right to send its representatives for inspection or participation at various stages of contract execution listed below, applicable as per contract construction.

- During basic design and detail engineering of material/ Equipment carried out by Associate /Outsourced Agencies.
- During manufacturing stages of the product at Associate's/Associate's Outsourced Agency's Plant/Facility.
- During Pre-dispatch Inspection and Testing of finished/manufactured product at Associate's/Associate's outsourced Agency's Plant/Facility.
- During Installation & Commissioning Activities/Stages.
- Prior to Clearing of the completed installation for commissioning.
- Any other stage as find appropriate by TPSODL during contract execution time.

All inspections and participations shall be carried out within maximum of two weeks of TPSODL giving written intimation to the Associate or receiving appropriate advance written inspection call from the Associate, unless otherwise specified elsewhere in the contract document.

12.2 Facilitating Inspection

The Associate shall provide all opportunities and information to TPSODL's engineers to get acquainted with the technical know-how and the methods and practices adopted by the Associate

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in basic and detail engineering. The Associate shall provide documents, drawings, calculations etc. as may be required by TPSODL's Engineers.

The Associate shall provide free of charge office accommodation, office facilities, secretarial services, communication facilities, general and drawing office stationery, etc. as may be reasonably required by the TPSODL's engineers. Similarly, facilities shall also be provided by Associate's outsource agencies/partners/authorized dealers (collectively termed as sub-associates) if such basic and detail engineering activities are carried out in the design offices of sub-Associates.

The Associate shall be responsible for the safety of employees of TPSODL/Third Party Agency when they are at the Associate's /Associate's outsource agency's plant or facility for carrying out/witnessing inspection/testing. All statutory safety precautions as applicable shall be followed by the Associate during Inspection Testing. If TPSODL inspectors are not satisfied with the safety arrangements at the plant, TPSODL have the right to call off inspection till such time corrective action is taken by the Associate.

Before raising the call for pre-dispatch final inspection and testing, the Associate shall conduct all the tests—type tests, routine tests etc.-as specified in the contract document and submit copies of the test certificates to TPSODL along with the inspection call, for scrutiny of TPSODL .

The Associate and TPSODL shall jointly document all the observations, comments and action points after completion of inspection and it shall be binding on the Associate to provide compliance on all the points requiring compliance and furnish the compliance report to the designated authority of TPSODL for receiving clearance for dispatch of materials.

12.3 Third Party Nomination

TPSODL also may nominate a third party for the purpose of carrying out the inspection and such an agency shall be entitled to all the rights and privileges of TPSODL as far as conducting the inspection.

12.4 Waiver of Inspections

TPSODL on its own discretion shall chose to waive off any inspection and ask the Associate to submit all the test reports as applicable as per contract specifications, related to inspection and testing of the goods ordered for scrutiny and clearance for dispatch.

12.5 Incorrect Inspection Call

In case it is observed that the material offered for inspection is not ready at the time of TPSODL inspection visit rendering it as futile, all costs towards such inspection shall be recovered from the BA. Taxes as applicable on such recoveries shall be borne by the BA.

13.0 MDCC & DELIVERY OF MATERIALS

13.1 Material Dispatch Clearance Certificate

Associate shall deliver material/goods/equipment against Supply Contracts or Supply Part of Composite/Service Contracts only after receiving Material Dispatch Clearance Certificate (hereafter termed as MDCC) issued by designated authority of TPSODL. Material delivered at

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TPSODL stores or at project site without a valid MDCC issued by the designated official of TPSODL shall be rejected. MDCC shall be issued to associate furnishing compliance report on the action points documented during pre-dispatch inspection and testing at Associate's/ Sub-Associate's plant/ facility. In case Pre-dispatch inspection is waived at the discretion of TPSODL, then, MDCC shall be issued on receiving all the test reports-routine& type-from the Associate and finding them in order.

The associate shall include and provide for securely protecting and packing the materials so as to avoid loss or damage during handling and transport by air, sea, rail and road or any other means.

All such packing shall allow to the extent possible for easy removal and checking at Site. The associate shall take special precautions to prevent rusting of steel and iron parts during transit by sea. Gas seals or other materials shall be utilized by the associate for protection against moisture during transit of all Plant and Equipment.

Each Equipment or parts of Equipment shall be tagged with reference to the assembly drawings and corresponding part numbers. Each bale or package shall contain a packing note quoting specifically the name of the associate, item description, quantity, item / package identification.

All packing cases, containers, packing and other similar materials shall be new and supplied free by the associate and it shall not be required to be returned to the associate.

Notwithstanding anything stated in this clause, the associate shall be entirely responsible for loss, damage or depreciation or deterioration to the materials and supplies due to faulty and/or insecure packing or otherwise during transportation to the Site until otherwise provided herein.

In case of the consignments dispatched by road, the associate shall ensure that it or its sub-contractors:

- i) Identify and obtain the correct type of trucks/trailers, keeping in view the nature of consignments to be dispatched.
- ii) Take such actions as may be necessary to avoid all possible chances of damages during transit and to ensure that all packages are firmly secured.

Timelines for inspection and MDCC is as below:

S. No.	Inspection	MDCC issuance time including inspection time (max.)
1	Outside Berhampur	12 days
2	Within Berhampur	5 days
3	Waiver*	3 working days

* Associate is expected to raise the inspection call assuming that Inspection shall be carried out by TPSODL. The decision for waiver of inspection shall be on sole discretion of TPSODL.

13.2 Right to Rejection on Receipt

Goods/Material/Equipment delivered in condition physically damaged & incomplete as a product ordered, or not packed and transported as per the terms and conditions of the contract is liable to

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be rejected. Such item shall be lifted back by Associates within 15 days from receipt of rejection note from TPSODL and have to supply back the material within next 30 days or within the timeframe mutually decided by Associate and TPSODL.

If delivery of the material is beyond the agreed time, Liquidated damage clause, mentioned in this GCC separately shall be applicable; but the period for levy of LD shall be considered as per the original delivery schedule and not from the agreed timelines for material rectification.

13.3 Consignee

Unless otherwise specified in the Contract Document / Purchase Order/ Release Order, Materials/Goods/Equipment shall be consigned to “Stores-In-Charge”, TPSODL Berhampur

13.4 Submission of mandatory documents on Delivery

Following documents shall be mandatorily submitted by BA along with supply of material to TPSODL stores/site:

S. No.	Documents	Requisite
1	Invoice copy in original	With all consignments
2	LR copy	Wherever required
3	Packing list	With all consignments
4	MDCC	With all consignments
5	Purchase order / Release order	Signed copy
6	Test certificates	With all consignments
7	Inspection/JVR report	In case pre-dispatch inspection is conducted
8	Device data in CD as per template for metering items	Wherever applicable

13.5 Dispatch and Delivery Instructions

S. No.	Instructions
1	Purchase order/ Release order no. shall be mentioned on invoice and on material
2	TPSODL material code and material description shall be mentioned in invoice and on material.
3	“Property of TPSODL” shall be embossed on material.
4	The material shall be properly sealed and packed in standard packing as per purchase order terms & conditions.
5	The weight and quantity of material shall be mentioned wherever applicable
6	The material supplied shall be co-related with the packing list.
7	The name plate detail on equipment shall include Material code, Material description, specification detail of material [as applicable], Serial No. Year of

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S. No.	Instructions
	manufacturing, PO/RO no. and date, "PROPERTY OF TPSODL, Berhampur", Guarantee period and Associate's name.
8	In case of manual unloading, supplier / transporter shall deploy sufficient Labour for unloading the material at TPSODL Southern store. For heavy item(s), crane will be provided by TPSODL [unloading cost will be recovered from the associate].
9	The driver should have valid License and one helper in truck. All the documents of truck like registration papers, PUC etc. should be available in Truck.
10	BA representative should accompany the material and get it unloaded / stacked in his presence wherever possible.

14.0 GUARANTEE

14.1 Guarantee of Performance

Associates shall stand guarantee that the equipment and material supplied/service or work rendered under the contract is free from design, manufacturing, material, construction, erection & installation and workmanship & quality defects and is capable of its due, rated and intended quality performance, as an integrated product delivered under the contract. for a specific period termed as Guarantee Period (as elaborated elsewhere in this clause) The Associate should also guarantee that the equipment/material is new and unused except for the usage required for the tests and checks required as part of quality assurance.

14.2 Guarantee Period

The Guarantee Period will be equipment/service/work specific and shall be as specified in the Standard Specifications of TPSODL for the equipment/material/service/work and where standard specifications are not part of contract documents or guarantee period is not specified in the standard specifications,, the guarantee period shall be as per the Special Terms and Conditions of the Contract. In case of no mention of the guarantee period in standard specifications or SCC, Guarantee Period will be 15 Months from the Date of Commissioning or 24 months from the date of delivery of final lot of supplies made, whichever is earlier.

14.3 Failure in Guarantee Period (GP)

If the equipment and material supplied/service or work rendered under the contract fails to perform its due, rated & intended quality performance, during the Guarantee period, the associate is liable to undertake repair/rectify/replace the equipment and material supplied/service or work rendered under the contract within time frame specified in the SCC or elsewhere in the contract documents at associate's cost to make the equipment and material supplied/service or work rendered under the contract of performing its due, rated and intended quality performance. If Associate fails to repair/rectify/replace the equipment or material supplied/service or work rendered under the contract, failed in Guarantee Period, TPSODL will be at liberty to get the same done at Associate's risks and costs and recover all such expenses plus the TPSODL's own charges (@ 20% of expenses incurred), from the Associate or from the "Security cum Performance Deposit" as the case may be.

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If during the Warranty/ Guarantee period some parts of the supplies are replaced owing to the defects/ damages under the Warranty, the Warranty period for such replaced parts shall be until the expiry of twelve months from the date of such replacement or renewal or until the end of original Guarantee period, whichever is later.

Any repairs during the Guarantee Period shall be carried out by the Associate within 30 days of reporting the issue to Associate by TPSODL. However, if replacement of the Equipment is required, Associate shall notify the same to TPSODL within 7 days of reporting the issue by TPSODL. Thereafter, the total time for supply of new equipment/ material shall be equal to the original delivery period of that equipment/ material as specified in the Contract. In case the Associate is not able to rectify/ replace the faulty equipment/ material within the stipulated timelines as mentioned above, penalty shall be levied as per the Liquidated Damages clause mentioned in this document. The penalty amount shall be recovered from the payment due to the BA or by encashment of the SPBG as the case may be.

14.4 Cost of repairs on failure in GP

The cost of repairs/rectification /replacement, apart from the actual cost of repairs/rectification/replacement is also inclusive of all associate costs of required transportation, site inspection /mobilization/dismantling and re-installation costs as applicable, to be borne by the Associate. The Associate has to ensure that the interruption in the usage of intended purpose of the equipment is minimized to the maximum extent In lieu of the time taken for repairs/rectification/replacement.

14.5 Guarantee period for Goods Outsourced

If the Associate outsources partly equipment/materials/services from third party as mutually agreed upon at the pre award stage of contract, TPSODL shall have the benefit of any additional guarantee period if provided by the third party for the part supplied/executed by them.

14.6 Latent Defect

Hidden defects in manufacturing or design of the product supplied and which could not be identified by the tests conducted but later manifested during operation of the equipment are termed as latent defects. Associates 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 Company.

14.7 Support beyond the Guarantee Period

The Associate shall ensure availability of spares and necessary support for a period of at least 10 years post completion of guarantee period of equipment supplied against the contract.

15.0 LIQUIDATED DAMAGES

Liquidated damages @1% of the total executed contract value per week or part thereof, for the period of delay in integrated completion, subject to maximum 10% of the value of the contract

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shall become leviable without prejudice to other rights of the TPSODL. This amount shall be recoverable from any amount due or becoming due to the Business Associates under this or any other contract. In specific cases, TPSODL reserves the right to apply LD only on the unexecuted portion of the supply and works for standalone use, provided full quantity is executed within a maximum 30% additional time. Deduction of LD shall be on landed cost i.e. contract value inclusive of taxes and in pursuant statutory compliance GST would be applicable at the stipulated rate and the same shall be borne by Business Associate. In case of LD deduction, a GST invoice shall be issued by TPSODL as a proof of deduction/ recovery.

15.1 LD Waiver Request

Any request of LD waiver shall be submitted within thirty (30) days of deducting LD. Request submitted beyond the timeline shall not be entertained.

15.2 Material Recovery

In case of any recoveries for materials or services (for material free issued by TPSODL and not reconciled by BA or for services claimed and paid in excess at the time of running bills), the total cost which shall be recovered from the BA, shall be the gross amount of material or services (i.e. including taxes) plus applicable taxes as prevailing at the time of such recoveries.

16.0 ASSIGNMENT OR SUBCONTRACTING

Associates shall not assign/subcontract/outsource the schedule of activities of contract TPSODL enters with the associate, in part or full, without TPSODL's prior written approval. However, outsourcing of materials/equipment/services by Associate to make the integrated product for which TPSODL's has placed the contract with the associate from suppliers, makes and agencies which have been mutually agreed upon during contract pre-award stage is permitted subject to following conditions.

In such cases where outsourcing is done by the Associate

- Shall ensure that outsourced suppliers comply with the technical and financial qualification requirements specified by TPSODL in the contract document
- Shall furnish all particulars about the proposed outsourcing agencies and the details of the goods/services/work outsourced to the Associate while seeking approval of TPSODL for inclusion for outsourcing. The Associate shall give approval or shall refuse approval in writing within thirty (30) days of receipt of such request. However, the Associate shall not be entitled for any additional contract execution time whatsoever in lieu of the process for approval for outsourcing agencies and shall be held responsible for any delay in the project execution time.
- Shall remain jointly and severally liable for any action, deficiency, and/or negligence on the part of his outsourcing agencies. The approval extended by the Associate to outsourcing agencies recommended by the Associate shall not discharge the later from his Contract obligations.

Shall submit to the Associate unpriced copies of purchase orders with technical specifications included in the orders, placed on outsourcing agencies as soon as the respective orders have been placed by the Associate.

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17.0 UNLAWFUL ACTIVITIES

The Associate shall have to ensure that none of its employees are engaged in any unlawful activities (whether covered under the scope of the present GCC or not) subversive of the TPSODL's interest failing which appropriate action (legal or otherwise) may be taken against the Associate by the TPSODL, in accordance with the terms of the present GCC.

18.0 CONFIDENTIALITY

Associate and its employees or representatives thereof shall strictly maintain the confidentiality of various information they come across while executing the contract as detailed below.

18.1 Documents

All maps, plans, drawings, specifications, schemes and other documents or information related to the Contract/Project and the subject matter contained therein and all other information given to the Associate by the TPSODL in connection with the performance of the contract shall be held confidential by the Associate and shall remain the property of the TPSODL and shall not be used or disclosed to third parties by the Associate for any purpose other than for which they have been supplied or prepared. The Associate may disclose to third parties, upon execution of confidentiality agreements, such part of the drawings, specifications or information if such disclosure is necessary for the performance of the Work provided such third parties agree in writing to keep such information confidential to the same extent and degree as provided herein, for the benefit of the TPSODL.

18.2 Geographical Data

Maps, layouts and photographs of the unit/plant including its surrounding regions showing vital installation for national security of country or those of TPSODL shall not be published or disclosed to the third parties or taken out of the country without prior written approval of the TPSODL and upon execution of confidentiality agreements satisfactory to the TPSODL with such third parties prior to disclosure.

18.3 Associate's Processes

Title to secret processes if any developed by the Associate on an exclusive basis and employed in the design of the equipment shall remain with the Associate. TPSODL shall hold in confidence such processes and shall not disclose such processes to the third parties without prior approval of the Associate and execution by such third parties of secrecy agreements satisfactory to the Associate prior to disclosure. Upon completion of contract, such processes shall become the property of the TPSODL. Title to technical specifications, drawings, flow sheets, norms, calculations, diagrams, interpretations of test results, schematics, layouts and such other information, which the Associate has supplied to the TPSODL under the Contract shall be passed on to the TPSODL. The TPSODL shall have the right to use these for construction, erection, start-up, Trial Run, operation, maintenance, modifications and/or expansion of the works including for the manufacture of spare parts.

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18.4 Exclusions

The provision of Clauses 16.1 to 16.3 shall not apply to information:

- Which at the time of disclosure are in the public domain which later on become part of public domain through no fault of the party concerned, or
- Which were in the possession of the party concerned prior to disclosure to him by the other party, or
- Which were received by the party concerned after the time of disclosure without restriction on disclosure or use, from a third party who did not acquire such information directly or indirectly from the other party or has no obligation of confidentiality for such information.

18.5 Violation

In case of violation of this clause, the Associate is liable to pay compensation and damages as may be determined by the competent authority of TPSODL.

19.0 INTELLECTUAL PROPERTY RIGHTS

If, in the course of performance of its functions and duties as envisaged by the scope of the present GCC, the Associate acquires or develops, any unique knowledge or information which would be covered, or, is likely to be covered within the definition of a trademark, copyright, patent, business secret, geographical indication or any other form of intellectual property right, it shall be obliged, under the terms of this present GCC, to share such knowledge or information with the TPSODL. All rights, with respect to, or arising from such intellectual property, as afore mentioned, shall solely vest in TPSODL.

Moreover, the Associate undertakes not to breach any intellectual property right vesting in a third party/parties, whether by breach of statutory provision, passing off, or otherwise. In the event of any such breach, the Associate shall be wholly liable to compensate, indemnify or make good any loss suffered by such third party/parties, or any compensation/damages arising from any legal proceeding/s, or otherwise. No liability of TPSODL shall arise in this respect, and any costs, damages, expenses, compensation payable by TPSODL in this regard to a third party/parties, arising from a legal proceeding/s or otherwise, shall be recoverable from the Associate.

20.0 INDEMNITY

The Associate shall at all times indemnify, keep indemnified and hold harmless the TPSODL and its officers, directors, employees, affiliates, agents, successors and assigns against all actions, claims, demands, costs, charges and expenses arising from or incurred by reason of any infringement of patent, trade mark, registered design, copy rights and/or industrial property rights by manufacture, sale or use of the equipment supplied by the Associate whether or not the TPSODL is held liable for by any court judgement. In this connection, the TPSODL shall pass on all claims made against him to the Associate for settlement.

The Associate assumes responsibility for and shall indemnify and save harmless the TPSODL from all liability, claims, costs, expenses, taxes and assessments including penalties, punitive

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damages, attorney's fees and court costs which are or may be required to be paid by the TPSODL and its officers, directors, employees, affiliates, agents, successors and assigns arising from any breach of the Associate's obligations under the Contract or for which the Associate has assumed responsibilities under the Contract including those imposed under any local or national law or laws, or in respect to all salaries, wages or other compensation for all persons employed by the Associate or his Sub-Associates or suppliers in connection with the performance of any work covered by the Contract. The Associate shall execute, deliver and shall cause his Sub-Associate and suppliers to execute and deliver, such other further instruments and to comply with all the requirements of such laws and regulation as may be necessary there under to conform and effectuate the Contract and to protect the TPSODL.

The TPSODL shall not be held responsible for any accident or damages incurred or claims arising, due to the Associate's error there from prior to completion of work. The Associate shall be liable for such accidents and after completion of work for such accidents as the case may be due to negligence on his part to carry out Work in accordance with Indian laws and regulations and the specifications set forth herein.

21.0 LIABILITY & LIMITATIONS

21.1 Liability

Except for any specific liability which may be identified in the Contract and which may be payable hereunder, Associate shall not be liable for any special, incidental, indirect, or consequential Damages or any loss of business Contracts, revenues or other financial loss (or equivalents thereof no matter how claimed, computed or characterized) arising out of or in connection with the Performance of the Work or supply of Goods ***unless caused by Associate's negligence, willful misconduct or breach of contract***

TPSODL shall have no liability or any special, incidental, indirect or consequential Damages for any loss of Business Contracts, revenues or other financial loss arising out of this Contract.

21.2 Limitation of Liability

The total liability of Associate against any contract shall be limited to the Total All Inclusive Contract Value.

22.0 FORCE MAJEURE

Force Majeure applies if the performance by either Party ("the Affected Party") of its obligations under Contract is materially and adversely affected.

"Force Majeure" shall mean any event or circumstance or combination of events or circumstances referred below and their consequences that wholly or partly prevents or unavoidably delays any Party in the performance of its obligations under this Agreement, but only and to the extent that such events and circumstances are not within the reasonable control, directly or indirectly, of the Affected Party and could not have been avoided even if the Affected Party had taken reasonable care:

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- Act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, embargo, blockade, revolution, riot, bombs, religious strife or civil commotion, etc.
- Politically motivated sabotage, or terrorism, etc.
- Action or Act of Government or Governmental agency for which remedy is beyond the control of the affected parties.
- Any act of God.

Note: Causes like power breakdown/ shortages/fire/strikes, accidents etc. do not fall under Force Majeure.

Time being the essence of the Contract, if either party is prevented from the performance of its obligations in whole or in part due to an event of Force Majeure, then provided Notice of happening of any event by the Affected Party is given to the other party within seven (7) days from the date of occurrence of such event, which DIRECTLY has impact on works and submitted details and quantum of resulting effect, but at the same time had made all possible efforts to mitigate and overcome effects thereof, the Affected Party's performance under this Contract shall be suspended until such event ceases and the Scheduled Completion shall be delayed accordingly.

If Force Majeure event(s) continue for a period of more than three months, the parties shall hold consultation to discuss the further course of action.

Neither party shall be considered to be in default or in breach of its obligation under the Contract to the extent that performance of such obligation by either party is prevented by any circumstances of Force Majeure which arise after effective date of Contract.

Neither party can claim any compensation from the other party on account of Force Majeure.

23.0 SUSPENSION Of CONTRACT

23.1 Suspension for Convenience

TPSODL may, at any time and at its sole option, suspend execution of all or any portions of the schedule of items of contract to be supplied/work to executed by Associate under the contract by providing to the Associate at least two business days written notice for contracts having contract completion period less than sixty days and at least seven business days' notice for all other contracts.

Upon receipt of any such notice, the Associate shall respond as follows as applicable as per contract construction.

- Immediately discontinue further supply of material/goods specified in the suspension notice for supply contracts
- Immediately discontinue further service/work and supply of materials of those services/materials/work specified in the suspension notice for service /composite contract

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- Promptly make every reasonable effort to obtain suspension, upon terms satisfactory to TPSODL, of all orders, outsourcing arrangements, and rental Contracts to the extent that they relate to performance of the portion of Work suspended by the notice.
- Protect and maintain the portion of the service/Work already completed, including the portion of the Work suspended hereunder, unless otherwise specifically stated in the notice.
- Continue delivering/carrying out the supply/service/work items as per contract conditions, which do not fall under purview of the suspension notice.

On receipt of resumption notice from TPSODL, the Associate shall resume execution of contract as specified in the resumption notice, within the time frame specified in the resumption notice,

23.2 Suspension for Breach of Contract conditions .

TPSODL shall suspend execution of whole/or part thereof the contract till such time Associate complies with the conditions stipulated under section clause 27 for breach/default of contract conditions.

23.3 Compensation in lieu of Suspension

If the suspension of the contract in whole or in part is for convenience of TPSODL and not due to any breach of contract conditions by the associate, TPSODL at its discretion shall consider compensating all reasonable additional costs incurred by Associate in lieu of suspension of whole or part of contract, on representation of the Associate providing justified estimates of such additional costs and such estimates are found acceptable and approved by competent authority of TPSODL.

If the suspension of contract in whole or part thereof is due to breach of contract conditions (refer clause 24.3) by the Associate, Associate shall not be entitled for any compensation for any cost incurred in lieu of suspension of whole or part of contract and also shall be liable for compensating all the losses arising to TPSODL in lieu of suspension of contract. Resumption notice shall be subject to the Associate taking corrective action for the breach of contract conditions within the time frame and as per the terms specified in the suspension notice.

24 TERMINATION OF CONTRACTS

24.1 Termination for Default/Breach of Contract

The contract / PO shall be subject to termination by TPSODL in case of breach of the contract by the Associate which shall include but not be limited to the following:

- a. Withdrawal or intimation by the Associate of its intent to withdraw or surrender the execution / completion of the contracted work /PO or failure in ensuring adherence to any delivery schedules, in deviation of the contract/ PO.

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- b. Refusal or neglect on the part of the Associate to supply material/equipment of quantity or quality as specified by TPSODL and within the timeframe as specified in the contract document or refusal or neglect to execute the services/work in terms of the agreed standards of quantity or quality and/or within the timeframe specified in the contract/PO.
- c. Failure in any respect to perform any portion of the Work contracted with promptness, diligence, or in accordance with the terms of the contract.
- d. Failure to furnish guarantees as specified and /or failure to comply with the terms thereof.
- e. Failure to furnish such relevant documents or information within the time specified which may be necessary for due execution / completion of the works and documentation.
- f. Liquidation, bankruptcy either voluntary or involuntary OR entering into any composition or compromise with its creditors, or Insolvency.
- g. In case any reasonable information has been received by TPSODL that Associate has adopted/ or attempted to adopt any unethical conduct, action in award of the contract /PO or at any time thereafter.
- h. Failure to comply with applicable statutory provisions as contained in the contract or failure to comply with the applicable laws.
- i. Failure to comply with safety regulations/clauses stipulated in the contract or as may be generally instructed by TPSODL.

If the default or breach as specified under clause 24 (except sub clause g thereof) be committed by the associate for the first time, TPSODL shall issue, along the with notice of default or breach, a warning notice instructing the associate to take remedial/corrective action within the time frame stipulated in the warning notice and not to repeat the same in future. The timeframe for corrective action by the associate shall be specific to the nature of breach of contract and the same shall not be objected to by the Associate. If the Associate fails to comply with the instructions in the warning notice or in taking corrective action to the satisfaction of TPSODL then TPSODL may terminate the entire or part of contract at its discretion by issuing termination notice without incurring any liability on this ground.

In case the contract is terminated for any breach of the nature specified in clause 24 g stated above, TPSODL shall have the right to terminate all the contracts TPSODL is having with the Associate by issuing termination notice which shall be without prejudice to the other rights of TPSODL available to it under law.

Without prejudice to its right to terminate for breach of contract, TPSODL may, without assigning any reason, terminate the Contract in whole or in part at any time at its discretion while the contract is in force by serving a written notice of two weeks to the Associate.

In the event of TPSODL having proceeded with termination of the contract the associate shall comply and proceed further in the following manner:

- i) Associate shall discontinue the supply, on the expiry of the said period of two weeks.

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ii) Associate shall ensure that no further steps are being taken towards discharge of the obligations, terms and conditions as contained in the contract/PO. This shall include initiation of actions not limited to discontinuation of other allied and associated arrangements which the associate might have entered with third parties for due discharge of its obligations under the contract with TPSODL.

iii) The Associate shall perform thereafter such tasks as may be necessary to preserve and protect the terminated portion of the material/service/work in progress and the materials and equipment at TPSODL sites or in transit thereto. However, the associate shall continue to fulfill its contractual obligations with regard to the part of contract not terminated.

iv) It shall be open for TPSODL to conduct a joint assessment with the associate of the material ,supplies, equipment ,works or in general as to the subject matter of the contract in regard to which the associate claims having completed its obligations before or during such termination.

v) It shall be open to TPSODL to seek invocation of the performance bank guarantee or any other guarantee or other security deposit by whatever name called submitted by the associate, which shall not be objected to or protested by the associate.

In case of termination of the contract the parties agree to be governed inter alia by the following:

a) In case TPSODL exercises its right of termination as stated above the associate shall not dispute or object to the same.

b) The Associate shall be entitled to receive and claim only such payments OR sums of money from TPSODL as may be found payable to it in regard to works executed by it under the terms of the contract and no other claim of any nature whatsoever shall be made by the Associate.

c) All such provisions which the parties have agreed to survive and prevail even after termination of the contract shall remain effective despite the termination.

In the event of such termination, TPSODL may finish the Work by whatever method it may deem expedient, including the hiring of services and/or purchase of material equipment from such third parties as TPSODL may deem fit or may itself provide any labor or materials and perform any part of the Work. The associate undertakes to bear the incremental costs if any paid by TPSODL in such a case attributable to failure on the part of the associate. The Associate in such a case shall not be entitled to receive any further payments and any sums found payable to it may be adjusted by TPSODL against the amount recoverable from him on this ground. The same shall be without prejudice to other rights available to TPSODL under law against the associate.

Upon the termination of any of the contract due to occurrence of any circumstances provided in clauses stated above and constituting repeated breach or misconduct, TPSODL shall be entitled to bar the associates its agents , affiliates from undertaking any negotiation / tendering, bidding, participation activities concerning TPSODL for a period of two years from date of such termination. The same shall be without prejudice to other rights available to TPSODL.

24.2 Termination for convenience of Associate

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Associate at its convenience may request for termination of contract, clearly assigning the reason for such request. TPSODL has full right to accept, reject or partially accept such request. This convenience will be available to associate only after one year from the contract effective date. For this purpose, associate will provide a notice period of 90 days to TPSODL, Associate will have to pay TPSODL a 'termination convenience fee' equivalent to 5% of unexecuted contract value.

24.3 Termination for Convenience of TPSODL

TPSODL at its sole discretion may terminate the contract by giving 30 days prior notice in writing or through email to the Associate. TPSODL shall pay the Associate for all the supplies/ services rendered till the actual date of contract termination against submission of invoice by the Associate to that effect.

25.0 DISPUTE RESOLUTION & ARBITRATION

In case of any dispute or difference the parties shall endeavor to resolve the same through conciliatory and amicable measures within 15 Days failing which the matter may be referred by either party for resolution by the sole arbitrator to be appointed mutually by both the parties. The arbitral proceedings shall be conducted in accordance with Arbitration and Conciliation Act 1996 and the place of arbitration shall be Berhampur. The language to be used at proceedings shall be English and the award of the arbitrator shall be final and binding on the parties. The parties shall bear their respective costs of arbitration. The associate shall continue to discharge its obligations towards due performance of the works as per the terms of the contract during the arbitration proceedings unless otherwise directed in writing by TPSODL or suspended by the arbitrator. Further, TPSODL shall continue making such payments as may be found due and payable to the associate for such works.

25.1 Governing law and jurisdiction

The parties shall be subject to the jurisdiction of the courts of law in Berhampur and any matter arising here from shall be subject to applicable law in force in India.

26.0 ATTRIBUTES OF GCC

26.1 Cancellation

The Company reserves the right to cancel, add, delete at its sole discretion, all or any terms of this GCC or any contract, order or terms agreed between the parties in pursuance without assigning any reasons and without any compensation to the Associates.

26.2 Severability

If any portion of this GCC is held to be void, invalid, or otherwise unenforceable, in whole or part, the remaining portions of this GCC shall remain in effect.

26.3 Order of Priority

In case of any discrepancies between the stipulations in General Conditions of the Contract (GCC) and Special Conditions of Contract (SCC), the GCC shall stand superseded by the SCC

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to the extent stipulated hereinabove while balance portion of respective clauses of GCC shall continue to be applicable.

27.0 INSURANCE

The Associate shall arrange accident insurance policy for his foreign experts/specialists/personnel deputed to Site and Associate's/his sub-Associates' manufacturing works as well as for his Indian engineers and supervisory staff. The Associate shall also take out for his Indian workmen, where applicable, a separate policy as required under Workmen's Compensation Act.

Associates shall be responsible to suitably insure their entire work-force (to the extent of at least meeting requirements under Workmen Compensation Act) Tools, Plant, Third party liability at the project site, All Risk comprehensive insurance for the entire works (insurance for free issue items will be in TPSODL scope) for total contract (PO/RO) value or any other such risks during execution of works, till the works are handed over to the company, in consultation with TPSODL and shall submit copies of such insurances to the Engineer-in-Charge for review / acceptance before commencing the work. Engineer-in-charge must ensure compliance to insurance requirement by Associate before commencement of works. TPSODL shall stand fully indemnified in this respect.

BA shall ensure the following policies to be taken immediately post award of contract and the necessary documents to be submitted to TPSODL, for verification.

Group Personal Accident (GPA) policy coverage of ₹ 15 Lacs to be taken by the respective

Bas- It is mandatorily required to take the GPA policy coverage of ₹ 15 Lacs by the BA for his employees from a reputed insurance agency.

1. TPSODL HR department will be the overall process owner and BA shall be required to coordinate with TPSODL HR department for policy implementation immediately post receipt of LOI.

Special Covid Insurance policy of ₹ 5 lacs for the legal heir(s) of deceased BA employees (in case of death due to Covid- 19)

1. BA to take appropriate Special Covid Insurance policy from a reputed insurance agency prevailing in the market so that all the BA employees are covered under the purview of ₹ 5,00,000/- compensation, in case of death due to Covid -19.
2. If it is found that the BA employee(s) is/are not covered under the purview of Special Covid Insurance Policy, the concerned BA shall be liable to pay the entire sum of ₹ 5,00,000/-.
3. Cost of the policy shall be borne @50% each by the BA and TPSODL. BA will be reimbursed @50% of the Annual Premium based on the original money receipt and policy copy.

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28.0 ERRORS AND OMISSIONS

The Associate shall be responsible for all discrepancies, errors and omissions in the drawings, documents or other information submitted by him, irrespective of whether these have been approved, reviewed or otherwise accepted by the TPSODL or not. However, any error in design/drawing arising out of any incorrect data/written information from TPSODL will not be considered as error and omissions on part of the Associate.

29.0 TRANSFER OF TITLES

The title of ownership and property to all equipment, installations, erections, constructions materials, drawings & documents shall pass to the TPSODL after Commissioning and complete handing over-taking over.

However, such passing of title of ownership and property to the TPSODL shall not in any way absolve, dilute or diminish the responsibility and obligations of the Associate under this Contract including loss or damages and all risks, which shall vest with the Associate.

The Associate shall take all corrective measures arising out of discrepancies, errors and omissions in drawings and other information within the time schedule and without extra cost to the TPSODL.

The Associate shall also be responsible for any delay and/or extra cost if any, in carrying out engineering, and site works by other agencies arising out of discrepancies, errors and omissions stated in as well as of any late revision/s of drawings and information submitted by the Associate.

30.0 SUGGESTIONS & FEEDBACK

We welcome all our Business Associates to write to us about their experience with TPSODL; be it our Company, our services or our people. Each and every concern, issue, query and suggestion from you will help us to become a better company to work with and shall help us develop a strong bonding of trust and a long term relationship with you.

You may send your feedback by filling up our Business Associate Feedback Form enclosed herewith as Annexure-I. You can also log on to our website www.tpsouthernodisha.com to provide your feedback according to the guidelines mentioned below:

31.0 CONTACT POINTS

In case Business Associate needs information with respect to payments or has any grievances, same may be lodged by log on to our website www.tpsouthemodisha.com

32.0 LIST OF ANNEXURES

S. No.	Subject	Annexure
1.	Performa for Bid Security Bank Guarantee	A
2.	Performa for Advance Payment Bank Guarantee	B

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3.	Performa for Performance Bank Guarantee (CP cum EP)	C
4.	Performa for No Demand Certificate by Associate	D
5.	Performa for Indemnification on Statutory Compliance	E
6.	Performa For Application For Issuance of Consolidated TDS Certificate	F
7.	HR Service Level Agreement	G
8.	Under taking for competence of workmen	H
9.	Business Associate Feedback Form	I
10.	Acceptance Form For Participation In Reverse Auction Event	J
11.	NEFT or RTGS payment request form	K
12.	Contractor Safety Management System	L
13.	BA Appraisal Form	M
14.	Manufacturers Authorization Form	N

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ANNEXURE-A

PROFORMA FOR BID SECURITY BANK GUARANTEE

TP Southern Odisha Distribution Limited

Berhampur

WHEREAS, (Name of the Bidder) _____ (hereinafter called "the BIDDER") has submitted his bid dated _____ for the (Name of Contract) _____ (hereinafter called "the BID").

KNOW ALL men by these presents we (Name of the Bank) _____ of (Name of the Country) _____ having our registered office at _____ (hereinafter called "the BANK") are bound unto TP Southern Odisha Distribution Limited (TPSODL) in the sum of _____ for which payment well and truly to be made to the TPSODL the Bank binds himself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this _____ day of _____ 20_____.

The CONDITIONS of this obligation are:

- i) If the Bidder withdraws his Bid during the period of bid validity specified in the Proforma of Bid or
- ii) If the Bidder having been notified of the acceptance of his Bid by the TPSODL during the period of bid validity fails or refuses to furnish the Contract Performance Bank Guarantee, in accordance with the Instructions to Bidders.

We undertake to pay the TPSODL up to the above amount upon receipt of its first written demand, provided that in its demand the TPSODL will note that amount claimed by it is due to it owing to the occurrence of one or both conditions, specifying the occurred condition or conditions.

This Guarantee will remain in force up to and including the date (No of days as mentioned in tender enquiry) days after the closing date of submission of bids as stated in the Invitation to Bid or as extended by you at any time prior to this date, notice of which extension to the Bank being hereby waived, and any demand in respect thereof should reach the Bank not later than the above date.

DATE..... SIGNATURE OF THE BANK.....

WITNESS..... SEAL.....

(Signature, Name & Address)

(At least 2 witnesses)

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ANNEXURE-B
PROFORMA FOR ADVANCE PAYMENT BANK GUARANTEE
(On Rs.100/- Stamp Paper)

Note:

- (a) Format shall be followed in toto
- (b) Claim period of six months must be kept up
- (c) The guarantee to be accompanied by the covering letter from the bank confirming the signature to the guarantee

TP Southern Odisha Distribution Limited

Berhampur

Advance Payment B.G.No.....

Contract No.....dated.....

1. You have entered into a Contract No _____ with M/s. _____ (hereinafter referred to as "the BA") for the supply and delivery of _____ (hereinafter referred to as "the said Equipment") for the price and on the terms and conditions contained in the said contract.
2. In accordance with the terms of the said contract, you have agreed to make an advance payment of Rs. _____ (Rupees _____ only) being _____ % (_____ percent) of the total value of the contract on "the BA" furnishing you with an irrevocable, unconditional and acceptable bank guarantee to be valid till the date of receipt of "the said equipment" covered by your above mentioned contract. For this purpose you have agreed to accept our guarantee.
3. In consideration thereof, we, _____ hereby irrevocably and unconditionally guarantee to pay to you on demand but in any case before the end of five working days from the date of the claim and without demur and without reference to "the BA" such amount or amounts not exceeding the sum of Rs. _____ (Rupees _____ only) being _____ % (_____ percent) of the total value of the contract on receipt of your intimating that "the BA" has not fulfilled his contractual obligations. You shall be the sole judge for such non-fulfillment and "the BA" shall have no right to question such judgment.
4. You shall have the right to file / make your claim on us under the guarantee for a further period of One Year from the date of expiry.

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5. This guarantee shall not be revoked without express consent and shall not be affected by your granting time or any other indulgence to "the BA", which shall include but not be limited to, postponement from time to time of the exercise the same in you or any right which you may have against "the BA" and to exercise the same in any covenant contained or implied in the said contract or any other course or remedy or security available to you, and our Bank shall not be released from its obligations under this guarantee by your exercising any of your rights with reference to matters aforesaid or any of them or by reasons of any other act or forbearance or other acts of omission or commission on your part or any other indulgence shown by you or by any other matter or thing whatsoever which under the law would, but for this provision have the effect of relieving our bank from its obligation under this guarantee.
6. We also agree that you shall be entitled at your option to enforce this guarantee against our bank as a principal debtor, in the first instance, notwithstanding any other security or guarantee that you may have in relation to "the BA's" liabilities in respect of the premises
7. This guarantee shall not be affected by any change in the constitution of our Bank or "the BA" or for any other reason whatsoever.
8. Any claim / extension under the guarantee can be lodge-able at outstation banks or at Berhampur branch and claim will also be payable at Berhampur Branch (**to be confirmed by Berhampur Branch by a letter to that effect**)
9. Notwithstanding anything herein contained, our liability under this guarantee is limited to Rs. _____ (Rupees _____ only) and the guarantee will remain in force up to and including _____ (Date) and shall be extended from time to time for such period or period as may be desired by "the BA".
10. Unless a demand or claim under this guarantee is received by us in writing within one Year from _____ (expiry date) i.e. on or before _____ (claim period end date), we shall be discharged from all liabilities under this guarantee thereafter.

Dated at _____ this _____ day of _____ 200 _____

Witness

Bank's rubber stamp

1. _____ Banks full address

Designation of Signatory

2. _____ Bank official number

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ANNEXURE- C

PROFORMA FOR PERFORMANCE BANK GUARANTEE (CP cum EP)

(On Rs.100/- Stamp Paper)

Note:

- (a) Format shall be followed in toto
- (b) Claim period of one year must be kept up
- (c) The guarantee to be accompanied by the covering letter from the bank confirming the signature to the guarantee

TP Southern Odisha Distribution Limited

Berhampur

CP cum EP BG No.....

Order/Contract No.....dated.....

1. You have entered into a Contract No _____ with M/s. _____ (hereinafter referred to as "the BA") for the supply cum erection / civil work of _____ (hereinafter referred to as" the said Equipment") for the price and on the terms and conditions contained in the said contract.
2. In accordance with the terms of the said contract, "the BA" agreed to furnish you with an irrevocable, unconditional and acceptable bank guarantee for 10% of the value of contract and to be valid till the end of Guarantee period plus one month towards "Contract cum Equipment performance". For this purpose, you have agreed to accept the guarantee.
3. In consideration thereof, we, _____ hereby irrevocably and unconditionally guarantee to pay to you on demand but in any case before the end of five working days from the date of the claim and without de mur and without reference to "the BA" such amount or amounts not exceeding the sum of Rs. _____ (Rupees _____ only) being _____% (_____ percent) of the total value of the contract on receipt of your intimating that "the BA" has not fulfilled his contractual obligations. You shall be the sole judge for such non-fulfillment and "the BA" shall have no right to question such judgment.
4. You shall have the right to file / make your claim on us under the guarantee for a **further period of One year** from the date of expiry.
5. This guarantee shall not be revoked without express consent and shall not be affected by your granting time or any other indulgence to "the BA", which shall include but not be limited to, postponement from time to time of the exercise the same in you or any right which you may have against "the BA" and to exercise the same in any covenant contained or implied in the

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said contract or any other course or remedy or security available to you, and our Bank shall not be released from its obligations under this guarantee by your exercising any of your rights with reference to matters aforesaid or any of them or by reasons of any other act or forbearance or other acts of omission or commission on your part or any other indulgence shown by you or by any other matter or thing whatsoever which under the law would, but for this provision have the effect of relieving our bank from its obligation under this guarantee.

6. We also agree that you shall be entitled at your option to enforce this guarantee against our bank as a principal debtor, in the first instance, notwithstanding any other security or guarantee that you may have in relation to "the BA's" liabilities in respect of the premises
7. This guarantee shall not be affected by any change in the constitution of our Bank or "the BA" or for any other reason whatsoever.
8. Any claim / extension under the guarantee can be lodge-able at outstation banks or at Berhampur branch and claim will also be payable at Berhampur Branch (to be confirmed by Berhampur Branch by a letter to that effect in case BG is from the branch outside Berhampur)
9. Notwithstanding anything herein contained, our liability under this guarantee is limited to Rs. _____ (Rupees _____) only and the guarantee will remain in force up to and including _____ (Date) and shall be extended from time to time for such period or period as may be desired by "the BA".
10. Unless a demand or claim under this guarantee is received by us in writing within one from _____ (expiry date) i.e. on or before _____ (claim period end date), we shall be discharged from all liabilities under this guarantee thereafter.

Dated at _____ this _____ day of _____ 200__

Witness

Bank's rubber stamp

1. _____ Banks full address

Designation of Signatory

2. _____ Bank official number

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ANNEXURE-D

PROFORMA FOR “NO DEMAND CERTIFICATE” BY ASSOCIATE

(On Company’s Letter head or with Company Seal)

(To be submitted by the Associate to TPSODL Accounts Department at the time of receipt of full and final payment)

(Certificate No. CCP/002)

Name of the Project

Order/ Contract No.

Dated

Name of the Associate

Scheme No. / Job No.

We, M/s. _____ (Associate) do hereby acknowledge and confirm that we have received the full and final payment due and payable to us from TPSODL, in respect of our aforesaid Order No _____ dated _____ including amendments, if any, issued by TPSODL to our entire satisfaction and we further confirm that we have no claim whatsoever pending with TPSODL under the said contract / W.O.

Notwithstanding any protest recorded by us in any correspondence, documents, measurement books and / or final bills etc., we waive all our rights to lodge any claim or protest in future under this contract.

We are issuing this “NO DEMAND CERTIFICATE” in favor of TPSODL, with full knowledge and with our free consent without any undue influence, misrepresentation, coercion etc.

Dated

Signature

Place

Name

Designation

(Company Seal)

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ANNEXURE – E

PROFORMA FOR “INDEMNIFICATION ON STATUTORY COMPLIANCES”

(To be submitted by the successful Bidder within seven days of award of work)

(Certificate No. CCP/001)

Name of the Project

Letter of Award / Contract No.

Dated

Name of the Associate

Scheme No. / Job No.

By this confirmation we, _____
(Associate) are formally bound to M/s. TPSODL towards any sum which may be imposed, levied or hereinafter recovered by the Provident Fund Organization under the provisions of the Employees of the Provident Fund and Miscellaneous Provisions Act 1952 in respect of employees employed by us.

We well and truly bind ourselves and our heirs executors administrators and representatives jointly severally and respectively for the above payment only to be paid to M/s. TPSODL.

AND WHEREAS we, _____ (Associate) is making compliance of the Employees Provident Fund and Miscellaneous Provisions Act 1952, have entered into the above written bond for the indemnity to M/s. TPSODL against all losses from the acts or default of the said Associate in respect of compliance of the Provident Fund Act.

Similarly, we hereby confirm that we have complied with all statutory and local laws and nothing is outstanding with regard to Local Sales Tax, Labor Laws, Local Municipal dues, Electricity dues etc. We have entered into the above written bond for the indemnity to M/s. TPSODL against all losses from the acts or default of the said Associate in respect of compliance of the Local Sales Tax Laws, Local Laws, Labor Laws, Local Municipal Dues, Electricity dues etc.

NOW THE CONDITION, of the above written bond is as such that if the Associate during the period of this contract commits any default or fails to make payment of Contributions in respect of his employees to the Employees Provident Fund Organization, he shall indemnify the Principal Employer M/s. TPSODL from all and every loss and damage caused to them from any act, omissions or negligence of the said Associate in respect of compliances under the Employees Provident Fund and Miscellaneous Provisions Act, 1952.

IN WITNESS to the above written bond we have here to set our hands, with our free consent.

Dated

Signature

Place

Name

Designation (Company Seal)

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ANNEXURE-F

PROFORMA FOR APPLICATION FOR ISSUANCE OF CONSOLIDATED TDS CERTIFICATE

To be printed on the letterhead

To,

TP Southern Odisha Distribution Limited,

Berhampur

Sub: Application for issuance of Consolidated TDS Certificate for the FY _____

Dear Sir,

I / we hereby request / authorize you to issue me / us a consolidate TDS Certificate for the financial year _____ against tax deducted at source by you from my / our payments / bills during the said year from time to time under Chapter XVII – B of the Income Tax Act, 1961.

For and on behalf of

Signature

Name

Address

Contact No. (Land Line)

(Mobile)

PAN #

Assessing authority

ATTACH THE COPY OF PAN CARD

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SERVICE LEVEL AGREEMENT

(To be adhered to by Business Associates (BAs) in TPSODL on Human Resource Issues)

1.0 The following shall be adhered to by the Business Associates during his / its association with TPSODL:

Shall Abide by Tata Core Values:

- a) **Integrity** – We must conduct our business fairly, with honesty and transparency. Everything we do must stand the test of public scrutiny.
- b) **Understanding** – We must be caring, show respect, compassion and humanity to our colleagues and customers and always work for the benefit of the communities we serve.
- c) **Excellence** – We must constantly strive to achieve the highest possible standards in our day to day work and in the quality of services we provide.
- d) **Unity** – We must work cohesively with our colleagues across the group and with our customers and partners to build strong relationships based on tolerance, understanding and mutual co-operation.
- e) **Responsibility** – We must continue to be responsible and sensitive to the communities and environments in which we work and always ensuring that what comes from the people; goes back to the people many times over.
- f) **Agility**- We must work in a speedy and responsive manner and be proactive and innovative in our approach.

2.0 The Business Associate / his manager / supervisor who is responsible for managing the project site / performance contract etc. in TPSODL would also ensure adherence of these values by his employees / persons deployed by him in connection with his works undertaken in TPSODL.

3.0 The Business Associates are required to:

- a) Support and respect the protection of human rights and make sure that they are not complicit in human right abuses.
- b) Respect freedom of association and effective recognition of the right to collective bargaining.
- c) Not to resort to any form of forced and compulsory labour.
- d) Shall ensure abolition of child labour in his area of work.
- e) There is no discrimination in respect of employment and occupation in respect of his employees.
- f) Support precautionary approach to environmental challenges.
- g) Promote greater environmental responsibility by himself and his employees in his areas of work.
- h) Deploy and defuse environmental friendly technologies while carrying out the works.
- i) Work against corruptions in all its form including extortion and bribery by himself and his employees.

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4.0 The Business Associates are required to adhere to all applicable labour Laws with special reference to the following:

- a) No person below the age of 18 years and no child labour will be engaged directly or indirectly for executing the work connected with the business of TPSODL.
- b) Minimum wages along with other statutory dues like PF, ESI, etc. as applicable to the workers shall be made within the prescribed period of 7th / 10th day of the following month.
- c) Deduction / deposit / record keeping and all other requirements under Employees PF Act 1952, Employees State Insurance Act 1948 and other applicable acts (if any) shall be adhered to.
- d) Only statutorily authorized deductions (if any) shall be made in accordance with the relevant statutes.
- e) All the provisions of Contract Labour (R&A) Act 1970 shall be complied with in respect of the workers engaged for TPSODL work. The work will be commenced only after completing necessary formalities for obtaining Labour License (if applicable).
- f) Necessary registers / records, filing of returns etc. shall be maintained for verification by Statutory / TPSODL authorities.
- g) Payment of wages shall be made only in presence of and with certification of authorized representative of TPSODL or shall be made in the form of cheque / bank transfer to the employee.
- h) During the period of contract, the Business Associate will arrange for deployment of his supervisor / manager for total supervision and control of the work and their manpower. All the activities related to their manpower e.g. attendance, leave, wage disbursement etc. will be done under the supervision & control of Business Associates, while adhering to the prescribed standard / norms of production / productivity & quality. During execution of the work, Business Associate shall engage only such qualified / skilled manpower as may be envisaged / required for ensuring level of production / service into the contract / work order.
- i) Clearances as follows shall be obtained from IR & Welfare Group:
 - i. Clearance for commencement (before start of the work).
 - ii. No Objection Certificate (after completion / before final settlement).
 - iii. Copies of PF / ESI Challans shall be deposited with IR & Welfare Group every month
- j) The Business Associate shall indemnify TPSODL from any liabilities under applicable Labour Statutes.
- k) The Business Associate shall ensure safety and health of his employees and shall also maintain hygienic working environment / condition in his area of work.
- l) The Business Associate and his employee shall abide by Laws of Land and shall not violate any applicable provisions.
- m) The Business Associate appreciates with and acquiesces to the right of TPSODL as principal employer to fulfil any of his legal obligations, if he fails to do so under applicable labour laws and

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deduct the same from his running bills / final payments / encashing security deposit / Bank Guarantee as the case may be. If there is any further shortfall TPSODL has the right to recover the same from the Business Associate.

- n) The Business Associate ensures that person employed by him adhere to the moral and legal conduct and shall not violate any standard conduct envisaged in the premise of TPSODL by all such as, Transparency, Safety, Discipline, Integrity etc. The Business Associate or his employees should refrain from corrupt practices, giving or taking bribe in connection with any TPSODL business.

5.0 The 'Statutory Compliance Enforcement System' in TPSODL is detailed below for adherence by all concerned. Business Associate Cell (BA Cell) will be the process owner for implementation of the system with the help of concerned Engineer I/c or Officer I/c.

- a) Statutory Compliance being a professed value in TPSODL Code of Conduct, the concerned Engineer / Officer in charges are requested to adhere to the provisions and advise respective Business Associates in their domain to comply in letter and spirit.
- b) Immediately after issuance of letter of intent, the authorized representative of the Business Associate will report to BA Cell for completion of statutory requirements.
- c) Normally, the work will be started only after 'Clearance for Commencement of Work (CCW)' is issued by BA Cell to the Business associate. However, in exceptional exigencies in engineer I/c / Officer I/c may direct the Business Associate to start the work and inform BA Cell about the same. Statutory requirements in this case may be completed in parallel.
- d) First monthly bill will be released only after producing CCW to the finance department. Similarly closure of work and final settlement will be affected after issuance of no objection certificate from BA Cell group.

6.0 Requirements for 'Clearance for Commencement of Work' (CCW):

- a) Submission of filled up Form 'A' for database (Annexure-1).
- b) Copy of PF Code allocation letter.
- c) Copy of ESI Code allocation letter.
- d) Submission of duly filled up Form IV CL(R&A) act (In case more than or equals to 20 workers during the period of contract).
- e) Submission of duly filled up Form VI A (Notice of Commencement).
- f) Copy of insurance cover note under WC Act 1923 (if applicable).
- g) Copy of Contract Agreement.
- h) Copy of indemnity bond (if applicable).
- i) Affidavit with regard to payment of wages through cheque / bank transfer only.

7.0 Requirements during execution of work:

- a) Copy of receipt of application for license / license (if applicable).
- b) Copy of PF Challan (latest by 26th day of every Month).
- c) Copy of ESI Challan (latest by 26th day of every Month).

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- d) Copy of Wage disbursement sheet / Bank statement.
- e) Filing / Maintenance of all statutory registers / reports / returns for inspection by Statutory/ TPSODL authorities.
- f) Certification of wage disbursement by authorized representative of TPSODL.
- g) Copy of 'Labour Welfare Fund' deposit certificate / Challan.
- h) Insuring safe working practices at the workplace.

8.0 Requirements for 'No Objection Certificate' (NOC) for closure of work:

- a) Submission of duly filled up Form VI A (Notice of Completion).
- b) Copy of Half yearly / Annual return for ESI / PF / CL(R&A).
- c) Consolidated copy of wage sheet of last month indicating full & final settlement of all dues like retrenchment benefit, bonus, leave encashment etc. Copy of individual declaration by employees in Form X regarding termination of employment.
- d) Confirmation certificate regarding filling up of form for transfer / withdrawal of PF by the concerned workers.

In case any of the above are deviated / not complied with the Letter of Award/Order shall be liable to be withdrawn / cancelled.

Enclosure:

- 1) Form A
- 2) Form X
- 3) Form XI
- 4) Form VI A
- 5) Form XXIV

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FORM (A)

[To be submitted by the Business Associate to the Principal Employer within a week from LoA issuance]

A. Details of the Agency

1. Name of Agency :
2. Nature of work :
3. Local Address with Ph.No. :
(With Father's name) :
4. Permanent Address (Full) :
5. PF code no. & Place :
6. ESI Code no. & Place :
7. Name and address of :
Sub-contractor (if any)

B. Details of Work

- 8. Name of work (as specified in LOI/LOA) :**
9. LOI/LOA Nos. & Dates :
10. Period of contract (Specify Dates) :
[Including Extension period, if any] :
11. Work Area [Department / Location] :
12. Name / Cell no. of Officer I/c :
13. Maximum No. of workers and staff to be engaged on any day during the year.
 - Supervisory Staff :
 - Workers :
14. Do you have any other contract in TPSODL : Yes/No
If yes, furnish details:

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15. Details of Workmen’s compensation Policy, if applicable

Name of Insurance Company

.....Policy No Number of persons covered

..... Period of coverage: From To

If no, I hereby undertake the liability arising out of Workmen’s Compensation Act and Rules made there under.

C. Details of workers to be engaged

No. of Workers

S. No.	Unskilled*	Semi-skilled*	Skilled*	Clerical / Supervisory

*** Number to be indicated**

I/We shall fulfill all obligations arising from and under all relevant law in force from time to time. I/We undertake to keep the TPSODL indemnified against any loss or liability arising out of failure of my / our abiding the relevant laws.

The name of my / our representatives is to enter the TPSODL Premises on my behalf.

DATE:

(SIGNATURE OF THE BUSINESS ASSOCIATE
OR HIS AUTHORIZED REPRESENTATIVE)

This Business Associate is / will be engaged in TPSODL.

**(Signature and seal of
Officer I/c of the Work)**

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Form XI
Undertaking

With reference to the contract job awarded by M/s TP Southern Odisha Distribution Limited to M/s _____ vide work order No. _____ dated _____

I _____ on behalf of

M/s _____ hereby undertake:

1. that the dues in respect of the workmen/ employee(s) engaged by us for the said contract, payable as per the provisions of relevant statute pertaining to
 - i. wages/ salary
 - ii. PF & ESI, Berhampur Labour Fund
 - iii. All other statutory obligation
 has been paid /settled in full and no amount/ compliance is due/ pending.

2. That in case any dispute / claim is raised by the concerned workers i.r.o. any dues / payments, M/s _____ will settle the same on its own and such liability will be borne by M/s _____

3. That M/s _____ hereby indemnify M/s TPSODL from any future liability i.r.o. any statutory obligation in respect of said contract.

Date:

()

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Authorized Signatory

For M/s _____

FORM- VI A

Notice for Commencement /Completion of contract work

I/We, **Sh.** / M/s _____ (Name and Address of the Contractor) hereby intimate that the contract work _____ (name of work) in establishment of the _____ (name and address of the Principal Employer) for _____ which _____ License No. _____ dated _____ has been issued to me/us by the Licensing Officer _____ (name of the Headquarters), has been commenced / completed with effect from _____ date / on date.

Signature of Contractor

With Office Seal

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The Inspector

FORM XXIV

[See Rule 82(1)]

Return to be sent by the Contractor to the licensing Officer (in duplicate)

Half -Yearly Ending_____

1. Name and address of the Contractor
2. Name and address of the Establishment
3. Name and address of the Principal Employer
4. Duration of Contract: From _____ to _____
5. No. of days during the half year on which
 - (a) the establishment of the principal employer had worked
 - (b) the contractor's establishment had worked

6. Maximum No. of contract labour employed on any day during the half –year:

Men	Women	Children	Total

7. (i) Daily hours of work and spread over
 - (ii) (a) whether weekly holiday observed and on what day
 - (b) if so, whether it was paid for
 - (iii) No. of man – hours of overtime worked

8. No. of man days worked by

Men	Women	Children	Total

9. Amount of wages paid

Men	Women	Children	Total

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10. Amount of deductions from wages, if any

Men	Women	Children	Total

Whether the following have been provided –

- (i) Canteen : _____
- (ii) Rest rooms : _____
- (iii) Drinking water : _____
- (iv) Crèches : _____
- (v) First Aid : _____

Signature of contractor

Place _____

Date _____

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ANNEXURE – H
UNDERTAKING FOR COMPETENCE OF WORKMEN

Name of Associate :

Tender No. :

Item :

With reference to the tender mentioned above, I/We _____,
hereby undertake that the workmen/ employee(s) engaged by M/s
_____ for the job against said tender shall be competent in all respect,
commensurate to the nature of job.

Date: _____

()

Authorized Signatory

For M/s

Seal

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ANNEXURE-I
BUSINESS ASSOCIATE FEEDBACK FORM

With an objective to improve our internal processes and systems, and serve you better, we solicit your valuable feedback & suggestions. It is estimated that it will take about 10 minutes to complete this survey. We assure you that your feedback shall be kept confidential. Please send the duly filled feedback form in the "TPSODL addressed - attached envelop"

You are associated with us as

- OEMs Service Contractor Material Suppliers Material & Manpower Supplier

You are associated with us for

- Less than 1 year More than 1 year but less than 3 years More than 3 years

Your office is located at

- Berhampur Within 200 kms from Berhampur More than 200 kms from Berhampur

Your nearly turnover with TPSODL

- Less than 25 Lacs 25 Lacs to 1 Crore More than 1 Cr.

Additional information

Your Name	
Your Designation	
Your Organization	
Contact Nos.	
Email	

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We once again thank you for your participation in this survey. Please spare 10 minutes to give your feedback on following pages (Section A to E)

SECTION - A

(Please ✓ mark in the relevant box and give your remarks / suggestions / information for our improvement.).

S. No.	Parameters	1	2	3	4	5	Remarks/ Suggestion
		Do Not Agree	Slightly in Agreement	In Fair Agreement	Mostly in Agreement	Fully Agree	
1	You receive all relevant queries / tenders from us in timely manner.						
2	We provide you enough lead time to respond to our queries / tenders.						
3	We provide you adequate support (drawings, documents, clarifications, briefing etc.) to enable you meet our requirements.						
4	All following elements of our contract / purchase order are rational :						
4.1	Scope of Work						
4.2	Delivery / Execution Schedule						
4.3	Payment Terms						
4.4	Liquidated Damages						
4.5	Performance Guarantee						

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S. No.	Parameters	1	2	3	4	5	Remarks/ Suggestion
		Do Not Agree	Slightly in Agreement	In Fair Agreement	Mostly in Agreement	Fully Agree	
5	Our purchase orders / contracts are simple, specific & easy to understand						
6	TPSODL demonstrate willingness to be flexible in administration of Contract / Purchase Order						
7	We provide timely responses / clarifications to your queries						
8	TPSODL representative you interact / coordinate with is adequately empowered to support you in meeting contractual obligations						
9	TPSODL provide you all necessary infrastructure support for timely and quality completion of work (including AMC)						
10	TPSODL Engineer-in-Charge timely certifies the jobs executed/ material supplied						
11	TPSODL Engineer-in-Charge efficiently supervises the job execution for timely completion of job						
12	BIRD (Bill Inward Receipt Desk)* initiative has improved payment disbursement process (under development)						
13	Our approach for Inspection and Quality Assurance effective to expedite project completion?						
14	TPSODL never defaults on contractual terms						
15	In TPSODL Contracts closure is done within set time limit						

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S. No.	Parameters	1	2	3	4	5	Remarks/ Suggestion
		Do Not Agree	Slightly in Agreement	In Fair Agreement	Mostly in Agreement	Fully Agree	
16	Our material receiving procedures are well defined and efficiently deployed to reduce mutual inconvenience						
17	Bank Guarantees are released in time bound manner						
18	Our processes related to payment / account settlement are effective.						
19	You get payments on time						
20	TPSODL Employees follow Ethical behavior						

SECTION - B

(Please rate the following parameters on a scale of 1 to 5, where 1 - Minimum; 5 - Maximum)

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SN	Parameters	1	2	3	4	5	Remarks/ Suggestion
1	How do you rate courtesy/ empathy/ attitude level and warmth of TPSODL employees you interact with from following team?						
1.1	Project Engineering						
1.2	Division / Sub-Division						
1.3	Projects/HOG						
1.4	Inspection & Quality Assurance						
1.5	Stores						
1.6	Metering & Billing						
1.7	Accounts / Finance						
1.8	Administration						
1.9	IT & Automation						
2	How would you rate TPSODL in comparison to your other clients in terms of fairness of treatment and transparency with its Business Associates?						
3	How would you rate TPSODL in comparison to your other clients in terms of processes and systems to manage partnership with its Business Associates						
4	How would you rate TPSODL in comparison to your other clients in terms of building long term & mutually relationship with its Business Associates						

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SECTION-C

Please ✓ mark in the relevant box and give your remarks / suggestions / information for our improvement.

SNo	Parameters	Certainly NO	Probably NO	Probably YES	Certainly YES	Remarks/ Suggestion
1	Based on your experience with TPSODL, would you like to continue your relationship with TPSODL?					
2	If someone asks you about TPSODL, would you talk “positively” about TPSODL?					
3	Would you refer TPSODL name to others in your community, fraternity and society as a professional & dynamic organization?					

SECTION - D

If we ask you to rate us on a scale of 1 to 10, how will you rate TPSODL, that truly represents your overall satisfaction with us (please tick appropriate box) -

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

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SECTION – E

Please ✓ mark in the relevant box and give your remarks / suggestions / information for our improvement.

Please spare your thoughts for TPSODL's improvement in particular areas of weaknesses, particularly relating to some great practices, attitudes that you have seen elsewhere in Indian and International Organizations, which you recommend TPSODL to adopt. Please give your valuable salient recommendations.

Please spare your thoughts for TPSODL's improvement in particular areas of major concerns for you. We also welcome your suggestions to adopt any best practices, altitudes that you have observed / experienced elsewhere in Indian/ International organization.

Recommendation	<i>Please tick (✓) your top 5 expectations out of the following 10 points listed below -</i>	
(Please list down improvement you expect from TPSODL)	<i>Timely payment</i>	
1	<i>Flexibility in Contracts/PO</i>	
	<i>Clarity in PO,s & Contracts</i>	
2	<i>Timely response to quarries</i>	
	<i>Timely certification of works executed</i>	
3	<i>Clarity in Specs, drawings, other docs etc.</i>	
	<i>Adequate information provided on website for tender notification, parties qualified etc.</i>	

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4	<i>Timely receipt of material at site for execution</i>	
	<i>Performance Guarantee/EMD released in time</i>	
5	<i>Inspection & quality assurance support for timely job completion</i>	

We thank you for your time and courtesy!!

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ANNEXURE-J

ACCEPTANCE FORM FOR PARTICIPATION IN REVERSE AUCTION EVENT

(To be signed and stamped by the bidder prior to participation in the auction event)

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

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

- 13.** TPSODL 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).
- 14.** TPSODL will make every effort to make the bid process transparent. However, the award decision by TPSODL would be final and binding on the supplier.
- 15.** The bidder agrees to non-disclosure of trade information regarding the purchase, identity of TPSODL, bid process, bid technology, bid documentation and bid details.
- 16.** The bidder is advised to understand the auto bid process to safeguard themselves against any possibility of non-participation in the auction event.
- 17.** 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 TPSODL.
- 18.** In case of intranet medium, TPSODL shall provide the infrastructure to bidders. Further, TPSODL 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.
- 19.** 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 by TPSODL.
- 20.** The bidder shall be prepared with competitive price quotes on the day of the bidding event.
- 21.** 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 TPSODL site.
- 22.** The prices submitted by a bidder during the auction event shall be binding on the bidder.

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23. No requests for time extension of the auction event shall be considered by TPSODL.
24. 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 & Seal of the Bidder

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(You can obtain this from branch where you have your account)

:
Email Address of accounts person (to send payment information)

:
Name of the Authorized Signatory

:
Contact Person's Name

:
Official Correspondence Address

We confirm that we will bear the charges, if any, levied by our bank for the credit of NEFT/RTGS amounts in our account. Any change in above furnished information shall be informed to TPSODL well in time at our own. Further, we kept TPSODL indemnified for any loss incurred due to wrong furnishing of above information.

Thanking you,

For _____

(Authorized Signatory)

(Signature with Rubber Stamp)

Certification from Bank:

We confirm that we are enabled for receiving NEFT/RTGS credits and we further confirm that the account number (specify Bank a/c no.) of (Please mention here name of the account holder), the signature of the authorized signatory and the MICR and IFSC Code of our branch mentioned above are correct.

This also is certified that the above information is correct as per Bank record

(Manager's/ Officers Signature under Bank Stamp)

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ANNEXURE-L
CONTRACTOR SAFETY MANAGEMENT SYSTEM

1. OBJECTIVE

The objective of the Contractor Safety Management System is to lay down clear guidelines for all Business Associates (including their associates, staff and agents) which would facilitate them to observe all statutory rules and regulations, comply with applicable standards of Central Electricity Authority (Measures relating to safety and electric supply) Regulations, 2010 & (safety requirements for construction, operation and maintenance of electrical plants and electric lines) Regulations, 2011, TPSODL Safety Manual and Guidelines and thus, ensure creation of safe working environment for all stakeholders of our network.

2. SCOPE

All contracts (minor and major) will be subject to the provisions of this document.

Minor Contracts: Contracts which satisfy all the criteria listed under the head “Minor Contracts”.

Major Contracts: Contracts which satisfy any two or more criteria listed under the head “Major Contracts”

Criteria	Minor Contracts	Major Contracts
Value of Contract	< Rs. 1500000/- (less than Rs. Fifteen Lac)	>= Rs. 1500000/- (Equal or more than Rs. Fifteen Lac)
Period	Period less than 1 year	Any period
Working on energized electrical equipment	No	Yes
Working on height (above 1.8 Mtrs from ground)	No	Yes
Work involving construction activity	No	Yes
Working with hazardous goods or chemicals	No	Yes
Work involving danger to general public	No	Yes

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Note: Exceptions for major and minor contract are – in house software development, supply of material or equipment but no direct or indirect installation of the same material, administration contracts (courier, water supply, printing, security, transport, etc.), minor civil work like plastering at ground level or flooring, etc. The facility management (housekeeping) contract will always be treated as a minor contract.

3. INFORMATION REQUIRED AT TIME OF BA REGISTRATION OR BEFORE COMMENCEMENT OF CONTRACT

- 3.1 Business Associate is required to fill the Safety Management System Questionnaire as per *annexure 1* and submit along with the BA registration process / bid / tender document. The filled questionnaire will be scrutinized by Engineer In-charge / indenting group and recommend suitability of the BA with respect to safety requirements. The fulfilment of statutory requirements for BA registration pertaining to labour laws etc. shall be done by BA Cell on being referred to it.
- 3.2 Business Associate is required to take suitable risk control measures mentioned against the identified Hazards and Risk document provided for all contracts as per *annexure 2*. The primary objective of this is to evaluate the understanding of the BA towards risk mitigation and employment of safe work procedures. BA is required to conduct the Hazard identification and Risk Assessment study as per the procedure and deploy more or other measures if deemed necessary.
- 3.3 Business Associate shall comply with **Statutory Requirements related to Safety and Occupational Health** and submit the “Safety Undertaking” as per *annexure 4*.

4. GENERAL SAFETY CONDITIONS REQUIRED TO BE FULFILLED BY BUSINESS ASSOCIATES

The requirements of the contractor safety management system applicable to the minor or major contracts related to various groups are as following –

- 4.1 Maintenance of Distribution Network – *Annexure 3.1*
 - 4.2 Distribution Projects – *Annexure 3.2*
 - 4.3 EHV Projects – *Annexure 3.3*
 - 4.4 Maintenance of Sub transmission network – *Annexure 3.4*
 - 4.5 Civil / Generation Projects – *Annexure 3.5*
 - 4.6 Meter Management Group (MMG), Revenue Recovery Group (RRG), Energy Auditing Group, AMI, MRG, etc. – *Annexure 3.6*
 - 4.7 Maintenance and Operation of Street Light. – *Annexure 3.7*
1. Please note that hydra cranes used by any dept should be ACE Model No. FX 150 ACE SX 150, Escorts Model No. TRX 1550 or contemporary. Use of old generation hydra cranes like ACE 14XW or ACE 12 XW, etc are prohibited.

(Details as per Annexure attached)

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Note: For minor contracts, the BA shall assign the duties of Safety Representative to the Work Supervisor. Work Supervisor will deliver all duties and responsibilities of Safety Supervisor as detailed in this document.

The Business Associate (BA) having major contract will appointing Safety supervisor, engineer / manager for the TPSODL work. The BA shall make all necessary arrangements for getting their workforce safety trained and competency checked from the concerned official of TPSODL before deployment in the field. BA Cell shall recommend the suitability after competency checked by Engineer In-charge and SAFETY group (or his representative) of TPSODL. After getting the clearance from concerned official, BA cell and receiving temporary I-card issued by TPSODL, Business Associate shall commence the working.

Safety Representative of Business Associates will formally become the nodal point for safety concerns for TPSODL. **BA shall not frequently transfer or terminate the services of any of the safety representatives appointed for TPSODL work site. BA needs to ensure that Safety representative is available at all points of time; failing which the work being carried out in the interim (period when Safety representative is not available) shall be treated as working under improper supervision and due penal provisions shall be initiated against the BA.** BA will be required to provide all applicable infrastructure and power to ensure smooth working of the safety representative to maintain a sound safety management system. **In all contracts safety representative will not be assigned any other activity at site apart from the works related to safety management. The duties are detailed in clause 5.5 of this document.** TPSODL will be auditing the facilities provided to the BA's safety team time to time.

The Safety Representative of the BA shall be required to meet and follow the instructions of the Engineer In-charge and SAFETY Group of TPSODL. He shall be responsible for providing the MIS and/or any other relevant information, as and when desired, within the stipulated time frame as per the requirements of TPSODL. Any non-conformance to safety will lead to the negative marking or issue of safety violation challan/ tokens which shall affect the monthly evaluation and performance of BA.

All contracts where BA has to depute vehicle for their staff and equipment to move from one location to other, the BA shall ensure that vehicle complies all required statutory clearances and requirement as per The Motor Vehicle Act, 1988 as well as TPSODL Road Safety Policy and are in good & safe state of working.

5. QUALIFICATION AND EXPERIENCE OF THE SAFETY AND SITE PERSONNEL

Qualification and experience required for the safety and site personnel are as following:

5.1 Safety Supervisor: It is mandatory that educational qualification of safety supervisor be ITI (of relevant trade) / Diploma (Any branch of engineering) and he has a working experience on electrical system / relevant field of work at least 5 yrs for ITI and 3 years for Diploma holder. Having formal experience of the safety systems will be an added advantage

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5.2 Safety Engineer: It is mandatory that educational qualification of safety engineer be at least Diploma (relevant branch) and he has working experience on electrical system of at least 3 yrs. Having the formal experience of the safety systems will be an added advantage.

5.3 Safety Manager: The educational qualification of safety manager should be graduate engineer with working experience on electrical system / network of at least 3 yrs. OR Diploma in Industrial Safety with working experience of 05 years including at least 02 years on electrical network.

However, clause 5.1, 5.2 and 5.3 are not applicable for minor contracts. In such cases, BA shall assign the duties of Safety Representative to the Work Supervisor. Work Supervisor will deliver required duties of Safety Representative (as per clause 5.5) in addition to other duties without diluting the importance of safety.

5.4 Site Skilled Personnel: For all responsibility related to site activities and operations, the BA shall employ only qualified and skilled persons and shall comply the provisions of section 19 & 29 of Southern Electricity Authority (Measures relating to safety and electric supply) Regulations, 2010. Persons holding valid approvals only by any Government approved agency or a competency assessment panel or a team set up by TPSODL shall be allowed to perform the High Risk / High Hazard activities (refer page 1). The skill / qualification required for the electrician and electrical supervisor are given in *annexure 5*. The contracts related to maintenance of Distribution Network, Distribution Projects, EHV Projects, maintenance of Sub-Transmission Network, MMG & EAG, maintenance and operation of streetlights, shall preferably have at least 20 per cent of ITI qualified electricians in the first year of the contract. This figure shall preferably be incremented by 15 per cent every subsequent year.

Note: For the competency assessment may please refer the work instructions. An employee shall have to necessarily undergo the competency assessment check once in every eighteen months.

5.5 Requirements from the Safety Representative(s) of the Business Associate:

- 5.5.1 Safety training of 2 hrs/employee/month and one day of safety induction training to all new employees joining the BA will be conducted by the BA as per Safety training modules of TPSODL.
- 5.5.2 Safety Talk / toolbox talk before start of shift to BA employees.
- 5.5.3 Ensuring the availability & proper usage of the standard safety equipment (PPE)
- 5.5.4 Periodic inspection of PPE to ensure their serviceability and maintaining the 10% buffer stock of standard PPEs.
- 5.5.5 Ensuring the adherence to standard operating procedures of TPSODL as mentioned in TPSODL Safety standard and O & M and concerned function's manual.
- 5.5.6 Safety inspections / audits as per the process of TPSODL
- 5.5.7 Working in close coordination SAFETY Group of TPSODL.
- 5.5.8 Reporting of unsafe acts, unsafe conditions, near miss, incident or accident to Engineer In-Charge and SAFETY Group of TPSODL immediately after its occurrence.

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5.5.9 Regular HIRA at site and comply the control measures as stated in the detailed HIRA as per the *annexure 2*. Also, deployment of JSA based checklist shall be ensured.

5.5.10 Ensuring compliance with safety and other laws as may be applicable and providing for safety assurance.

5.6 Training and Syllabus: The BA shall not deploy any person at workplace / site or send newly recruited personnel directly to concerned official for competency assessment without Safety Induction Training.

5.6.1 All new BA employees have to necessarily undergo one and half days Safety training and Competency assessment at training centre of BA cell. This training will be conducted once in a week. After the completion of Safety training & Competency assessment I-card will be issued to all competent BA employees

5.6.2 BA is expected to initially train and judge the capability of the workman at his own end before further recommending the workman for Competency assessment. If any BA workman sent for competency assessment. In case any BA workman fails in the Competency test at concerned official, it will be deemed that BA has not imparted sufficient training at his end and actual cost of training ₹ 7500/ BA employee/ failed attempt will be recovered.

5.6.3 The workers who have imparted Safety Training and issued I-Cards of TPSODL, are not deployed at TPSODL worksites/ voluntarily left the job by workers/ used somewhere else other than TPSODL by the BA, in that case Management reserves the rights to intervene and recover the actual cost of training i.e. ₹ 7500/BA employee. (*Exempted for attrition rate of BA workers less than or equal to 10% of total workforce deployed at TPSODL*)

5.7 It is desired that Safety representative of the BA to impart the general safety training to each employee of duration 2 hrs per month. The training will be organized at BA level and the record to be sent to engineer in-charge and SAFETY group of TPSODL every month. Please refer schedule and syllabus in *annexure 6*.

List of Personal Protective Equipment (PPE) and Maintenance schedule: BA shall commence the project or any work only when the required PPE are made available to the team of employees involved in the work. Each PPE of BA shall be checked / inspected by the safety representative / supervisor at zone before the work start or as prescribed in the list. Safety representative shall regularly check the healthiness of each PPE allocated to lineman. Suitable record shall be maintained at zone. Defective PPE shall be immediately replaced or within 24 hours by the BA. In no case linemen or any other official of BA may be allowed to work with defective PPE. It is preferred that BA ensures minimum stock of each PPE at zone for immediate replacement with defective one. The PPE shall be IS / BS / CE marked and exactly as per the standard or specification mentioned in the *annexure 7*. Working without PPE / non-standard PPE shall be treated as safety violation and penalty as stated in section 6.0 of this document. If TPSODL finds that BA has not provided the adequate / appropriate PPE to their staff, TPSODL reserves the rights to stop the work and call the BA to provide appropriate PPEs at the risk. If the BA fails to provide the required PPEs at the risk then the same shall be provided by TPSODL at the actual cost of the PPE. The amount shall be charged to BA and same shall be first recovered from the current bill of BA or any future payment to be made to BA. In the event of any balance amount still left for recovery, the same shall be adjusted against retention amount or by invoking bank guarantee submitted by BA.

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5.8 Safety Audit / Inspection & HIRA: The BA shall get the required safety inspection / audit conducted by his technical team comprising of safety representative as per the *annexure 8*. The safety representative will be required to conduct the HIRA (Hazard Identification and Risk Assessment) *as per annexure 2* of the process and work undertaken at least two times in a year or every time if a new process / activity / machine is introduced or whenever an accident take place. The risk identified to be addressed suitably with –

- Engineering Control
- Management Control, and
- Personal Protective Equipment.

The safety representative of BA shall inform and educate for the identified risk and hazard control methods to employees, supervisor and engineer as well as the engineer in-charge and SAFETY group of TPSODL.

5.9 Safety Performance and Safety MIS: The BA shall maintain good practice of safety all through the contract duration. Safety shall always be of paramount importance during the contract period. Safety performance will be monitored on yearly basis throughout the period and no relaxation will be given for bad performance. BA with good track record and excellent performance will be rewarded suitably as per clause 6.0 of this document. The BA has to provide monthly “Performance Report – Safety” to engineer in-charge and SAFETY group TPSODL this shall be part of monthly bill along with training details. Performa of the report is enclosed as *annexure 9*.

5.10 Pre – Employment Medical Check-up and Fitness of employees engaged for the critical works: The BA shall submit the health fitness certificate for all those workers involved in climbing the pole or working at height for following diseases:

- 5.10.2 Epilepsy
- 5.10.3 Colour blindness
- 5.10.4 Deafness
- 5.10.5 Vertigo & height phobia

Every year BA will give an undertaking stating that all the employees are fit to work and have not developed aforesaid diseases. The Record of such medical check-ups shall be submitted to BA Cell before issue of temporary identity card. The records shall be maintained at BA Cell. All such medical check-ups shall be repeated once in a year for all workers involved in climbing the pole or working on electrical network.

6. REWARD AND PUNITIVE MEASURES

6.1 To support the enforcement of good SHE & DM practices by the Business Associate and to eliminate repeated or continuing safety violations, use of appropriate reward and punitive measures shall be made. Each unsafe act or violation of the safety guidelines as described in the Safety Manual of the TPSODL will be audit criteria of this system. Broadly the measures identified are following:

6.1.1 Working without PPE/ Safety Gadgets

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- 6.1.2 Working without proper tools and tackles, barricading, Poor condition of Crane / Hydra / Vehicle, using without certification / Licence, Incompetent driver/ Helper
- 6.1.3 Working without creation of effective safety zone
- 6.1.4 Improper Supervision at worksite, Lineman/ Supervisor working without competency
- 6.1.5 Working without adherence to PTW process or authorization/ not adherence to SOPs / W.I. of TPSODL.
- 6.1.6 Improper Working at height equal to or above 1.8 mtrs without taking proper fall protection measures/ Poor condition of Ladder

6.2 Measures of Reward and Punitive Measures

The Engineer In-Charge, NSO, SC, ASOs, CSI / SIs and SHE &DM group will conduct the surprise audits of the work / project and if any non-conformance is found the same will be booked and entered in the format "Safety Violation Record" *annexure 10*. The flow of the information is given below:

Safety Violation Escalation & Monitoring process	
Action	Responsibility
Safety Violation form has been filled and counter foil sent to SAFETY team for information. The main form is to be given to BA supervisor / Engineer in-charge. <i>(Automatically generated if Site audit done through Mobile App.)</i>	Engineer In-charge/ NSO / SC / SAFETY Group /CSI/ ASO/ Any authorised TPSODL official.
↓	
Entry of the violation in the master record and sending the information to concerned Manager, HoG, HoD, Head and Chief (O &S). <i>(Automatically generated if Site audit done through Mobile App.)</i>	SAFETY Group
↓	
Forwarding the information Centralized Account Payable (CAPS) for amount deduction from the current bill of the BA, <i>if any.</i>	Engineer In-charge
↓	
HoG (Safety – II) & HoG (Safety & Quality – Commercial) and CAPS to generate the MIS of the violations and the amount deducted.	SAFETY Group
↓	
The pool of the amount generated after the deduction to be utilized in safety welfare of BA employees.	SAFETY Group with approval of CFO/Chief (O & S) /CEO&MD

The safety violations have been rated from 1 to 5 (figure 6.3) as per the gravity of the violation. If the same violation is repeated it may escalate into a higher penalty. If a particular Business

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Associate employee violates safety norms three times, he shall not be allowed to work in TPSODL for a period of one year from the date of the 3rd violation.

6.3 Safety Violation Escalation Matrix

6.3.1

Consequence of Safety Violation Observed (Not related to Incident/ Accident)		Violation				Subsequent Violations
S.No.	Safety Violation	1st	2nd	3rd	4th	
1	Working without PPE (Helmet/Gloves/Safety Harness/ Safety Shoes etc.)	A	B	C	D	Will attract the same penalty as applicable in the 4th violation.
2	Improper Working at Height	A	B	C	D	
3	Working without proper tools and tackles	A	B	C	D	
4	Poor condition of Crane/Hydra/ Vehicle/Incompetent driver/ Helper	A	B	C	D	
5	Violation of SOP/ WI	B	C	D	E	
6	Working without adherence to PTW process or authorization/ Safety Zone	C	D	E		
Legend	Action to be taken	Responsibility	Penalty Amount (in Rs.)		The number of violations are to be calculated cumulatively over the contract period and not on monthly basis.	
A	Warning letter	Engineer Incharge	Nil			
B	Levy of Penalty	Engineer Incharge	2,000			
C	Memo to BA & Levy of Penalty	Head of Group	4,000			
D	Memo to BA & Levy of Penalty	Head of Department	10,000			
E	Memo to BA, Levy of Penalty and termination of Contract	Head of Department	1,00,000			

Figure 6.3 (1a)-Penalty Matrix for Safety violation (Applicable for Minor Contracts)

Consequence of Safety Violation Observed (Not related to Incident/ Accident)		Violation				Subsequent Violations
S.No.	Safety Violation	1st	2nd	3rd	4th	
1	Working without PPE (Helmet/Gloves/Safety Harness/ Safety Shoes etc.)	B	C	D	D	Will attract the same penalty as applicable in the 4th violation.
2	Improper Working at Height	B	C	D	D	
3	Working without proper tools and tackles	A	B	C	D	
4	Poor condition of Crane/Hydra/ Vehicle/Incompetent driver/ Helper	B	C	D	E	
5	Violation of SOP/ WI	C	D	E		
6	Working without adherence to PTW process or authorization/ Safety Zone	C	D	E		
Legend	Action to be taken	Responsibility	Penalty Amount (in Rs.)		The number of violations are to be calculated cumulatively over the contract period and not on monthly basis.	
A	Levy of Penalty	Engineer Incharge	5,000			
B	Memo to BA & Levy of Penalty	Engineer Incharge	10,000			
C	Memo to BA & Levy of Penalty	Head of Group	25,000			
D	Memo to BA & Levy of Penalty	Head of Department	50,000			
E	Memo to BA, Levy of Penalty and termination of Contract	Head of Department	1,00,000			

Figure 6.3 (1b)-Penalty Matrix for Safety violation (Applicable for Major Contracts)

Once the BA reaches the “BLACK” (color – “5”) category, i.e. highest level of safety violation, “Termination” notice to BA will be issued from the office of the Head of Department (equivalent to GM/ Sr. GM level) and further, *if required*, continuation / extension of contract will only be initiated by Functional Chief / Head of the department (equivalent to Sr. GM / Chief level) and approved by CEO & MD. Till the extension, the contract will remain suspended.

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TPSODL encourages the reportage of the safety violation during the contract work by BA. Any TPSODL employee can register a safety violation against the BA in the “Safety Violation Form” *annexure 10*. Initially the observer has to fill the form and handover the counterfoil (lower portion) of the document to the supervisor of the BA, inform the site engineer of TPSODL and send the top portion of the Safety Violation Form to SAFETY group for the further necessary action against the BA. **The cumulative nos. of Safety Violations pertaining to any particular BA shall be calculated on yearly basis.**

Safety violations resulting in incident / accident will be treated as per gravity of the injury / fatality and its impact as well as type i.e. minor or Major. Consequences of incident / accident are shown in the matrix (figure 6.3(2) for major and 6.3(3) for minor) below. In case of any accident, findings and recommendations of Accident Enquiry Committee will be final and binding and will supersede the arbitration clause of GCC.

Consequence Of an Incident / Accident (In case of MAJOR contract)		Incident / Accident				Action Required
Sl. No	Type of the injury	1st	2nd	3rd	4th	
1	Slight injury (First Aid Case)	F (Strengthening of process through continuous improvement in the work procedure)				Take risk reduction measures
2	Minor injury (No or Hospitalization less than 48 Hrs)	F	G	G	H	
3	Major injury (Bone injury or burn or Hospitalization more than 48 Hrs)	G	G	H	I	
4	Single fatality	J	K			Intolerable
5	Multiple fatalities (Two or more fatalities during one event)	K				
Legend	Action to be taken	Responsibility		Penalty (in Rs.)	<i>The number of violations are to be calculated cumulatively over the contract period and not on monthly basis.</i>	
F	Memo to BA and levy of penalty	Engineer Incharge		5,000/-		
G	Memo to BA and levy of penalty	Head of Group		20,000/-		
H	Memo to BA and levy of penalty	Head of Group		50,000/-		
I	Memo to BA and levy of penalty	Head of Department		2,00,000/-		
J	Memo to BA and levy of penalty	Head of Department		5,00,000/-		
K	Memo to BA, levy of penalty, termination of contract and black listing of BA	Functional Head		10,00,000/-		

Figure 6.3 (2) - Penalty Matrix for Incident / Accident in Major Contracts

(For example: In major contracts, if there is first incidence of major injury say bone injury (Cat. 3) where worker was hospitalized for more than 48 hrs then a penalty of amount Rs.20000/- will be deducted from the current bill produced for the payment. This penalty will be similar for first two incidents. However, it will increment to next higher category i.e. Rs. 50,000/- on subsequent incidents as per the above matrix)

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Consequence Of an Incident / Accident (In case of <u>MINOR</u> contract)		Incident / Accident				Action Required
Sl. No	Type of the injury	1st	2nd	3rd	4th	
1	Slight injury (First Aid Case)	L (Strengthening of process through continuous improvement in the work procedure)				Take risk reduction measures
2	Minor injury (No or Hospitalization less than 48 Hrs)	L	M	M	N	
3	Major injury (Bone injury or burn or Hospitalization more than 48 Hrs)	M	M	N	O	
4	Single fatality	P	Q			Intolerable
5	Multiple fatalities (Two or more fatalities during one event)	Q				
Legend	Action to be taken	Responsibility	Penalty (in Rs.)	<i>The number of violations are to be calculated cumulatively over the contract period and not on monthly basis.</i>		
L	Memo to BA and levy of penalty	Engineer Incharge	5,000/-			
M	Memo to BA and levy of penalty	Engineer Incharge	10,000/-			
N	Memo to BA and levy of penalty	Head of Group	25,000/-			
O	Memo to BA and levy of penalty	Head of Department	1,00,000/-			
P	Memo to BA and levy of penalty	Head of Department	3,00,000/-			
Q	Memo to BA, levy of penalty, termination of contract and black listing of the BA	Functional Head	5,00,000/-			

Figure 6.3 (3) - Penalty Matrix for Incident / Accident in Minor Contracts

(For example: In minor contracts, if a worker meets with a non-fatal accident say bone injury (Cat 3) where he was hospitalized for more than 48 hrs then a penalty of amount Rs. 10,000/-, will be charged from the current bill produced for the payment. This penalty will be similar for first two incidents. However, it will increment to next higher category i.e. Rs. 25,000/- on subsequent incidents as per the above matrix.)

In case of single or multiple fatalities described under legends J&K of 6.3(2) and P&Q of 6.3(3), the concerned BA may be debarred from extension of contract or participate in new contract. In such event the approval of Chief (O & S) will be necessary for extension or award of new contract to concerned BA.

6.3.2 COMPENSATION FOR BA PERSONNEL

In the event of any untoward incident/ accident, the Business Associate shall ensure prompt medical assistance such as treatment, sickness benefit, etc. is provided to the victim(s) as per the Employees' Compensation Act, 1923 or Employees' State Insurance Act, 1948, as applicable. Also, the BA will be required to take adequate measures for compensating the victim(s) or his/her/their kin as follows:

I. For Death or Permanent / Total Disablement

The BA shall take an insurance coverage of at least Rs. 15 lakhs for each engaged employee, to cover any incidence of Death or Permanent / Total Disablement (Permanent/Total Disability shall

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be considered as defined under Employees' Compensation Act, 1923). In the event of any such unfortunate incident, the BA would ensure that adequate compensation is paid immediately to the family of the victim(s) from his own resources. This compensation shall be covered under the insurance policy subscribed by the BA mentioned earlier and the arrangement should be such that it would get reimbursed to the BA by the insurance agency subsequently.

II. For Permanent Partial Disablement and Temporary Total Disablement

The compensation in this case will be as per provisions of the Employees' Compensation Act, 1923 or Employees' State Insurance Act, 1948, as applicable.

Accordingly, the BA shall obtain a suitable Insurance Policy on award of Contract and submit documentary evidence of the policy to the BA Cell before commencement of work. The BA shall ensure that the Insurance policy is active at all times and all employees are covered in all respects till the conclusion of contract period or till working with TPSODL. The BA shall submit a copy of the policy after periodic renewals to the BA Cell.

However, on occurrence of such unfortunate incident, if it is found that the victim(s) is/are not covered under any insurance policy, the BA shall be liable to pay the entire sum of Rs. 10 lakhs from his own resources.

Further, in case of an accident resulting in Death or Permanent / Total Disablement while on duty, the appointed BA Nodal Officer will ensure that the BA complies with all statutory provisions and benefits i.e. PF, Compensation, Gratuity etc., and that all these are made available to the employees' nominee(s) as per the stipulated timelines.

6.3.3 TPSODL rewards the BA with good track record of safety management. It is proposed that BA complying with Contractors Safety Management, Safety Manual and Safety process will be rewarded suitably as per the procedure, rule and regulations of the TPSODL. In any case major accident is reported during an assessment period BA will not be eligible for this reward scheme. Assessment of contracts will be once in year. Generally, the assessment cycle is calendar year and guidelines will be declared time to time.

Abbreviations Used in the Document

TPSODL	TP Southern Odisha Distribution Limited
BA	Business Associate
HIRA	Hazard Identification & Risk Assessment
JSA	Job Safety Analysis
EHV	Extra High Voltage
SAFETY	Safety, Occupation Health, Environment & Disaster Management
MMG	Meter Management Group
EAG	Energy Audit Group

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PPE	Personal Protective Equipment
SOP	Standard Operating Procedures
CSI/SI	Circle Safety In-charge / Safety In-charge
ASO	Area Safety Officer
NSO	Nodal Safety Officer
SC	Safety Coordinator
HoG / HoD	Head of Group / Head of Department
AGM / GM / VP	Assistant General Manager / General Manager / Vice President
CFO / Chief (O & S)/ CEO & MD	Chief Finance Officer / Chief (Operating & Safety) / Chief Executive Officer & Managing Director
COS	Corporate Operation Services
CAP	Centralized Account Payable System
PTW	Permit To Work
GCC	General Conditions of Contract.

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Annexure 1 (Refer Para 3.1)

Business Associate Safety Management System Questionnaire

Certification					
The information provided in this questionnaire is a summary of the company's occupational health and safety management system.					
Company Name:					
Turnover and experience:		Name of top officer:			
Date:		Position			
Contract Details					
Contract Name		Contract Number:			
Business Associates Safety Management System Questionnaire		Marks	Yes	No	Score achieved
<i>Safety Policy and Management</i>					
- Is there a written company Safety policy? - If yes provide a copy of the policy, if No please refer Note 1.		1			
- Does the company have an Safety Management system - If yes provide details, if No please refer Note 1.		1			
- Is there a company Safety Management System manual or plan? - If yes provide a copy of the content page(s), if No please refer Note 1.		2			
- Are Safety and occupational health responsibilities clearly identified for all levels of Management and staff? - If yes provide details, if No please refer Note 1.		2			

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Certification				
<i>Safe Work Practices and Procedures</i>				
- Has the company prepared safe operating procedures or specific safety instructions relevant to its operations and relevant work as per contract?	1			
- If yes provide a summary listing of procedures or instructions, if No please refer Note 2.				
- Comments				
<i>Safety Training</i>				
- Describe how occupational health and safety training is conducted in your company	2			
If No please refer Note 1.				
- Is a record maintained of all training and induction programs undertaken for employees in your company?	1			
- If yes provide examples of safety training records, if No please refer Note 2.				

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Certification				
- Are regular safety inspections / audits are undertaken at worksites? -If yes provide details (formats), if No please refer Note 3.	1			
- Is there a procedure by which employees can report hazards at workplaces? - If yes provide details if No please refer Note 1.	1			
<i>Safety Monitoring</i>				
- Is there an officer / supervisor responsible for monitoring workplace / worksite safety? - If yes provide details	1			
<i>Safety Performance Monitoring</i>				
- Are employees regularly provided with information on company health and safety performance? - If yes provide details	1			
- Has the company ever been convicted of an occupational health and safety offence? - If yes provide details	NO Marks (Negative mark ONE for each case)			
- Has there been any major accident of employee at TPSODL site in past	NO Marks (Negative			

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Certification				
	<i>mark ONE for each case</i>			
<ul style="list-style-type: none"> - Has there been any fatal accident of employee at TPSODL site in past. - (Note: Bid evaluation committee has to take cognizance of the incident and shall evaluate the bid only after formal approval of competent authority i.e. CTO. - In case of yes please refer Note 4. 	NO Mark (Negative mark FIVE for each case)			
Minimum of 75% marks is required for qualification.		Total Marks achieved		
<i>Company Reference</i>				
<ul style="list-style-type: none"> 1. <i>Name of company</i> 2. <i>Name of company</i> 				

Note

1: If company does not have formal procedure on Safety Management System than BA may submit proposed Safety road map along with safety action plan and brief safety policy on his letter head signed by head of the organization.

2: The BA may submit the same in the Safety Action Plan.

3: The BA may utilize the same format of TPSODL or on request SAFETY group will assist the BA in developing the audit system. For other points also BA may take the assistance of SAFETY group for development of Safety management system.

4: The BA may submit the Safety Improvement Plan and Safety Action Plan for his employees based on following points.

- i. *Action plan for enhancing safety awareness*
- ii. *Action plan for safety training of employee*
- iii. *Action plan for increasing safety audit in field*
- iv. *Action plan for provision and utilization of safety PPE.*
- v. *Action plan for fatality reduction.*
- vi. *Action plan for enhanced supervision at site*
- vii. *Action plan for making employee more responsible and accountable for safety.*
- viii. *Action plan for availability and utilization of all required tool and equipment.*

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- ix. *Safety Improvement done in last two years, specially highlighting those which have been taken after the fatal accident along with results.*
- x. *Safety initiatives planed or started recently.*
- xi. *Any other point.*

Based on above points and documentary evidences BA will be required to submit a detailed report in support of his bid. The bid evaluation committee and competent authority will scrutinize the facts and the evidence submitted. If found satisfactory competent authority i.e. CTO may accord his approval for bid opening otherwise his tender shall be disqualified.

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Annexure 2 (Refer Para 3.2 and 5.8)

Risk Assessment Form

Business Associate:
Scope of the work:
BA's Representative:
Telephone:
Signature:
Date:

Specific Task/Activity	Potential Hazards/Consequences	Class of Risk	Control Measures
Working at Height	Fall from height	2	<ol style="list-style-type: none"> 1. Mandatory usage of JSA checklist prior to start of work 2. Use appropriate ladder 3. Use full body safety harness having double lanyard. 4. Use Electrical Safety Shoes if working on electrical network otherwise use safety shoes. 5. Use Safety helmet. 6. Use PPE as per the annexure 7 of this CSM document 7. Refer Work instruction related to Working at Height for other details 8. Use of metal scaffold to be ensured in height work (cup lock type) 9. Deploy competent workforce who are medically fit

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Specific Task/Activity	Potential Hazards/Consequences	Class of Risk	Control Measures
Working on electrical equipment / network	Electric flash / electrocution	3	<ol style="list-style-type: none"> 1. Mandatory usage of JSA checklist prior to start of work 2. Use Electrical Safety Shoes while working on electrical network. 3. Use Electrical Safety gloves of appropriate voltage rating. 4. Use face shield / visor attached with helmet. 5. Use Safety helmet. 6. Use PPE as per the annexure 7 of this CSM document 7. Mandatory usage of Insulated tools & tackles on electrical system 8. Mandatory compliance for Lock Out & Tag out system. Refer Work instruction related to Working on electrical equipment / network for other details
Excavation / Civil work	Collapse of soil, fall in excavated pit leading to Injury	2	<ol style="list-style-type: none"> 1. Use safety shoes. 2. Use Safety helmet. 3. Use PPE as per the annexure 7 of this CSM document 4. Hard Barricading of the worksite. 5. Refer Work instruction related to excavation / civil work for other details

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Specific Task/Activity	Potential Hazards/Consequences	Class of Risk	Control Measures
Material lifting & Mechanical Erection work	Fall of material/object, Topple of crane,	2	<ol style="list-style-type: none"> 1. Mandatory compliance of crane checklist 2. Visual condition check of lifting tools and tackles such as wire rope sling, belt sling, chain, pulley block, D-shackles, etc. shall be ensured. 3. The operator's physical fitness and alertness should be judged by sup. / EIC. 4. Use PPE as per the annexure 7 of this CSM document 5. Refer Work instruction related to Material lifting & Mechanical Erection work
Road Safety	Road Accidents	3	<ol style="list-style-type: none"> 1. Mandatory compliance of TPSODL Road Safety policy

Note: This information for the general indication purpose. The detailed risk assessment shall be conducted before start of the work by the authorized representative of the BA. The report of same shall be submitted to engineer in-charge along with annexure 4 of the CSM document.

Guidelines for filling the Risk Assessment Form

- *Specific Task/Activity* - The documentation of each major task associated with the contract.
- *Potential Hazards* - The identification of hazards associated with each activity or task to be carried out.
- *Class of Risk* - Each hazard should be evaluated as a level of risk, described as Risk Class 1, 2 or 3 defined above.
- *Control Measure* - The identification and documentation of actions required to eliminate or reduce the hazards that could lead to accident or injury.

Hazard / Risks shall be classified according to the following schedule:

- Class 1: Potential to cause injury treatable with first aid
- Class 2: Potential to cause death or permanent injury
- Class 3: Potential to cause more than one or more lost time injuries.

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Annexure 3.1 (Refer Para 4.0)

General Safety Conditions for the Maintenance of Distribution Network Contracts:

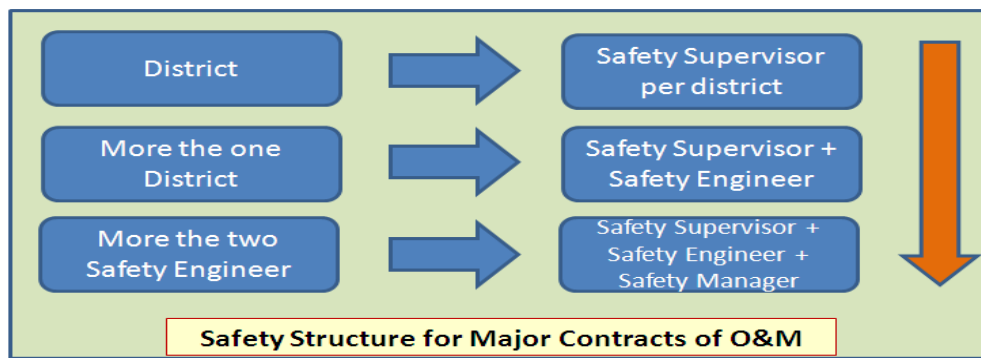
A BA awarded a contract (O&M) work of maintenance of distribution network will be required to fulfil the following conditions:

- BA shall provide Safety Policy and safety objectives of their company.
- BA shall comply with all statutory requirements like applicable acts, regulations, codes of practice, OHSAS Standards, etc.
- BA shall provide the filled safety management questionnaire as per Annexure 1
- BA shall conduct a job risk assessment and provide information as per Annexure 2
- BA shall abide by Safety manuals, guidelines of TPSODL.
- BA shall provide its organisation structure & responsibilities in terms of Safety Management to TPSODL.
- BA shall document the work practices and procedures in terms of Safety Management.
- BA shall ensure safety training and induction program for the employees
- BA shall conduct safety audits & inspections as per TPSODL procedures provided by SAFETY group.
- BA shall provide and ensure the proper usage of the safety equipment (PPE) as per the TPSODL approved list in *annexure 7*.
- BA shall ensure periodic inspection of PPE to ensure its serviceability as per the specification given by TPSODL.

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- BA shall ensure the adherence to standard operating procedures or guidelines laid down by TPSODL.
- BA shall ensure reporting of any unsafe act, unsafe conditions, near miss, incident or accident to engineer in-charge and SAFETY team of TPSODL.
- BA shall provide safety performance and Safety MIS (*annexure 9*) to engineer in-charge and SAFETY group periodically. Based on any non-confirmation to the safety procedures and guidelines, BA is liable to be negatively marked for his performance and suitable penalty will be imposed.
- BA shall ensure to depute a Safety Supervisor for managing a complete safety management system in a district. In case the BA has been awarded work in more than one district, then the following safety structure will be adopted.



Annexure 3.2 (Refer Para 4.0)

General Safety Conditions for the Distribution Projects Major Contracts:

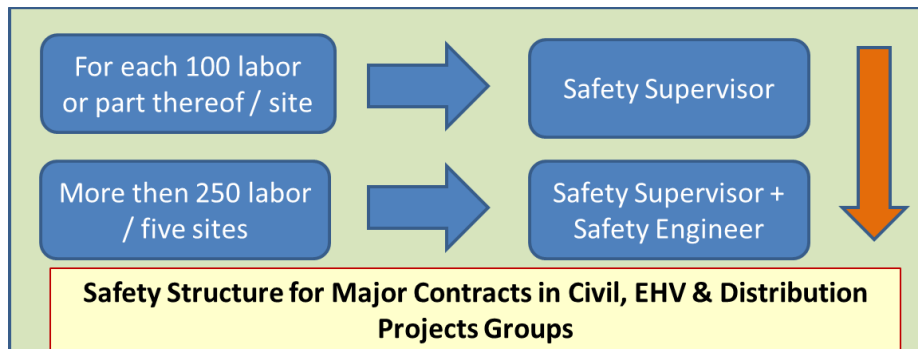
A BA awarded a major contract work of TS&P in area of a circle will be required to fulfil the following conditions:

- BA shall provide Safety Policy and safety objectives of their company.
- BA shall comply with all statutory requirements like: applicable acts, regulations, codes of practice, OHSAS Standards, etc.
- BA shall provide the filled safety management questionnaire as per Annexure 1.
- BA shall conduct a job risk assessment and provide information as per Annexure 2
- BA shall abide by Safety manuals, guidelines of TPSODL.
- BA shall provide its organisation structure & responsibilities in terms of Safety Management to TPSODL.
- BA shall document the work practices and procedures in terms of Safety Management.
- BA shall ensure safety training and induction program for the employees

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- BA shall conduct safety audits & inspections as per TPSODL procedures provided by SAFETY group.
- BA shall provide and ensure the proper usage of the safety equipment (PPE) as per the TPSODL approved list in annexure 7.
- BA shall ensure periodic inspection of PPE to ensure its serviceability as per the specification given by TPSODL.
- BA shall ensure the adherence to standard operating procedures or guidelines laid down by TPSODL.
- BA shall ensure reporting of any unsafe act, unsafe conditions, near miss, incident or accident to engineer in-charge and SAFETY team of TPSODL.
- BA shall provide safety performance and Safety MIS (*annexure 9*) to engineer in-charge and SAFETY group periodically. Based on any non-confirmation to the safety procedures and guidelines, BA is liable to be negatively marked for his performance and suitable penalty will be imposed.
- BA shall ensure to depute a Safety Supervisor for managing a complete safety management system in the area. In case the BA has been awarded work in more than one circle, then the following safety structure will be adopted.



Annexure 3.3 (Refer Para 4.0)

General Safety Conditions for the major EHV Projects Contracts:

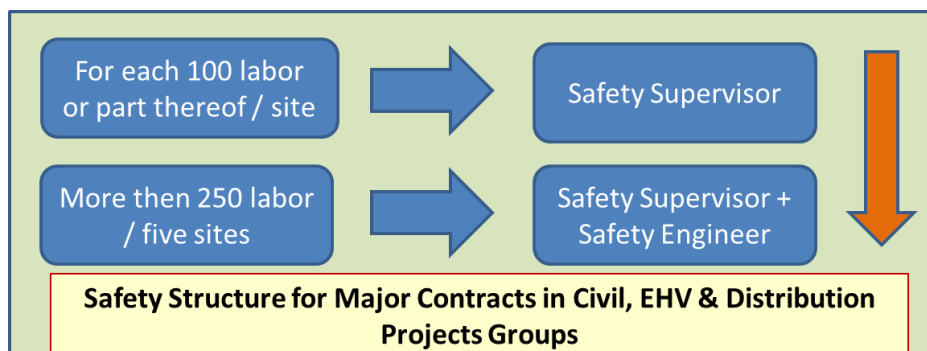
A BA awarded a major contract work of EHV projects will be required to fulfil the following conditions:

- BA shall provide Safety Policy and safety objectives of their company.
- BA shall comply with all statutory requirements like applicable acts, regulations, codes of practice, OHSAS Standards, etc.

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- BA shall provide the filled safety management questionnaire as per Annexure 1
- BA shall conduct a job risk assessment and provide information as per Annexure 2
- BA shall abide by Safety manuals, guidelines of TPSODL.
- BA shall provide its organisation structure & responsibilities in terms of Safety Management to TPSODL.
- BA shall document the work practices and procedures in terms of Safety Management.
- BA shall ensure safety training and induction program for the employees
- BA shall conduct safety audits & inspections as per TPSODL procedures provided by SAFETY group.
- BA shall provide and ensure the proper usage of the safety equipment (PPE) as per the TPSODL approved list in annexure 7.
- BA shall ensure periodic inspection of PPE to ensure its serviceability as per the specification given by TPSODL.
- BA shall ensure the adherence to standard operating procedures or guidelines laid down by TPSODL.
- BA shall ensure reporting of any unsafe act, unsafe conditions, near miss, incident or accident to engineer in-charge and SAFETY team of TPSODL.
- BA shall provide safety performance and Safety MIS (*annexure 9*) to engineer in-charge and SAFETY group periodically. Based on any non-confirmation to the safety procedures and guidelines, BA is liable to be negatively marked for his performance and suitable penalty will be imposed.
- BA shall ensure to depute a Safety Supervisor for managing a complete safety management system in the area. In case the BA has been awarded work in more than one circle, then the following safety structure will be adopted.
- BA shall refer Construction Safety Manual in TPSODL Safety Manual for details.



Annexure 3.4 (Refer Para 4.0)

General Safety Conditions for the Maintenance of Sub – Transmission Network Contracts:

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A BA awarded a major contract work of maintenance of sub – transmission network in area of a power system will be required to fulfil the following conditions:

- BA shall provide Safety Policy and safety objectives of their company.
- BA shall comply with all statutory requirements like: applicable acts, regulations, codes of practice, OHSAS Standards, etc.
- BA shall provide the filled safety management questionnaire as per Annexure 1
- BA shall conduct a job risk assessment and provide information as per Annexure 2
- BA shall abide by Safety manuals, guidelines of TPSODL.
- BA shall provide its organisation structure & responsibilities in terms of Safety Management to TPSODL.
- BA shall document the work practices and procedures in terms of Safety Management.
- BA shall ensure safety training and induction program for the employees
- BA shall conduct safety audits & inspections as per TPSODL procedures provided by SAFETY group.
- BA shall provide and ensure the proper usage of the safety equipment (PPE) as per the TPSODL approved list in annexure 7.
- BA shall ensure periodic inspection of PPE to ensure its serviceability as per the specification given by TPSODL.
- BA shall ensure the adherence to standard operating procedures or guidelines laid down by TPSODL.
- BA shall ensure reporting of any unsafe act, unsafe conditions, near miss, incident or accident to engineer in-charge and SAFETY team of TPSODL.
- BA shall provide safety performance and Safety MIS (*annexure 9*) to engineer in-charge and SAFETY group periodically. Based on any non-confirmation to the safety procedures and guidelines, BA is liable to be negatively marked for his performance and suitable penalty will be imposed.
- BA shall ensure to depute a Safety Coordinator for managing a complete safety management system in the area. In case the BA has been awarded work in more than one area power system, then the following safety structure will be adopted.



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Annexure 3.5 (Refer Para 4.0)

General Safety Conditions for the major contract work in Civil / Generation Projects:

A BA awarded a major contract work of / in civil or Generation project will be required to fulfil the following safety conditions:

- BA shall provide Safety Policy and safety objectives of their company.
- BA shall comply with all statutory requirements like: applicable acts, regulations, codes of practice, OHSAS Standards, etc.
- BA shall provide the filled safety management questionnaire as per Annexure 1
- BA shall conduct a job risk assessment and provide information as per Annexure 2
- BA shall abide by Safety manuals, guidelines of TPSODL.
- BA shall provide its organisation structure & responsibilities in terms of Safety Management to TPSODL.
- BA shall document the work practices and procedures in terms of Safety Management.
- BA shall ensure safety training and induction program for the employees
- BA shall conduct safety audits & inspections as per TPSODL procedures provided by SAFETY group.
- BA shall provide and ensure the proper usage of the safety equipment (PPE) as per the TPSODL approved list in annexure 7.
- BA shall ensure periodic inspection of PPE to ensure its serviceability as per the specification given by TPSODL.
- BA shall ensure the adherence to standard operating procedures or guidelines laid down by TPSODL.
- BA shall ensure reporting of any unsafe act, unsafe conditions, near miss, incident or accident to engineer in-charge and SAFETY team of TPSODL.
- BA shall provide safety performance and Safety MIS (*annexure 9*) to engineer in-charge and SAFETY group periodically. Based on any non-confirmation to the safety procedures and guidelines, BA is liable to be negatively marked for his performance and suitable penalty will be imposed.
- BA shall ensure to depute a Safety Supervisor (for workforce up to 100 at site) / a safety engineer (for workforce up to 250 at site) / safety manager (for more than two safety engineers) for managing a complete safety management system at the project site. In case the BA has been awarded more than one major contracts, then the following safety structure will be adopted.
- BA shall refer Construction Safety Manual in TPSODL Safety Manual for details.

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Annexure 3.6 (Refer Para 4.0)

General Safety Conditions for the major contract work in Commercial Department like - MMG, RRG, EAG, etc.:

A BA awarded a major contract work in meter management group & energy auditing group will be required to fulfil the following safety conditions:

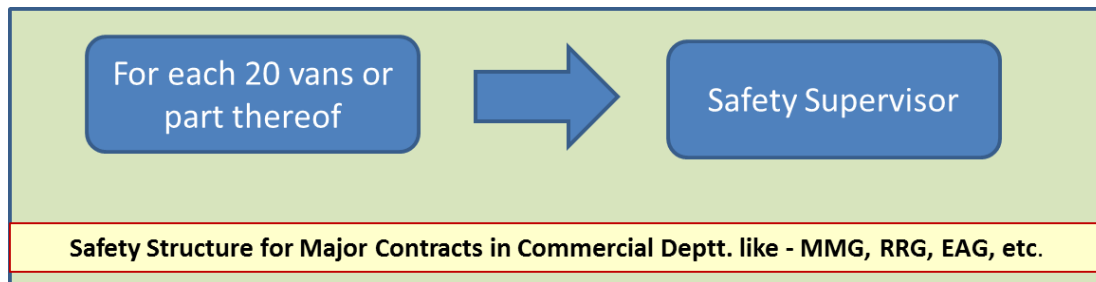
- BA shall provide Safety Policy and safety objectives of their company.
- BA shall comply with all statutory requirements like applicable acts, regulations, codes of practice, OHSAS Standards, etc.
- BA shall provide the filled safety management questionnaire as per Annexure 1
- BA shall conduct a job risk assessment and provide information as per Annexure 2
- BA shall abide by Safety manuals, guidelines of TPSODL.
- BA shall provide its organisation structure & responsibilities in terms of Safety Management to TPSODL.
- BA shall document the work practices and procedures in terms of Safety Management.
- BA shall ensure safety training and induction program for the employees
- BA shall conduct safety audits & inspections as per TPSODL procedures provided by SAFETY group.
- BA shall provide and ensure the proper usage of the safety equipment (PPE) as per the TPSODL approved list in annexure 7.
- BA shall ensure periodic inspection of PPE to ensure its serviceability as per the specification given by TPSODL.
- BA shall ensure the adherence to standard operating procedures or guidelines laid down by TPSODL.
- BA shall ensure reporting of any unsafe act, unsafe conditions, near miss, incident or accident to engineer in-charge and SAFETY team of TPSODL.
- BA shall provide safety performance and Safety MIS (*annexure 9*) to engineer in-charge and SAFETY group periodically. Based on any non-confirmation to the safety procedures and

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guidelines, BA is liable to be negatively marked for his performance and suitable penalty will be imposed.

- BA shall ensure to depute a Safety Supervisor for managing a complete safety management system for the work as per the following safety structure.
- The BA for the RRG work shall depute one Safety supervisor.



Annexure 3.7 (Refer Para 4.0)

General Safety Conditions for the major contract work in O&M of street light group:

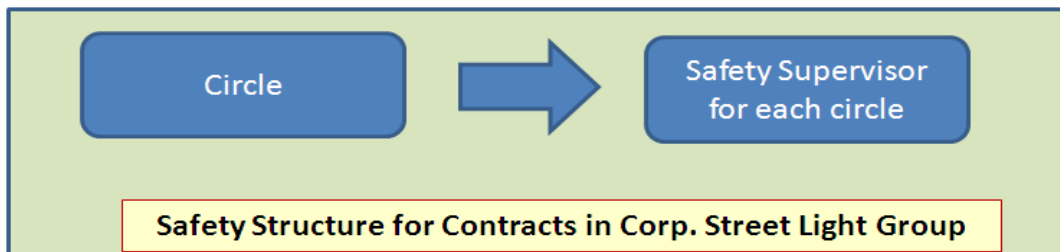
A BA awarded a major contract work in operation and maintenance of street light group will be required to fulfil the following safety conditions:

- BA shall provide Safety Policy and safety objectives of their company.
- BA shall comply with all statutory requirements like applicable acts, regulations, codes of practice, OHSAS Standards, etc.
- BA shall provide the filled safety management questionnaire as per Annexure 1
- BA shall conduct a job risk assessment and provide information as per Annexure 2
- BA shall abide by Safety manuals, guidelines of TPSODL.
- BA shall provide its organisation structure & responsibilities in terms of Safety Management to TPSODL.
- BA shall document the work practices and procedures in terms of Safety Management.
- BA shall ensure safety training and induction program for the employees
- BA shall conduct safety audits & inspections as per TPSODL procedures provided by SAFETY group.
- BA shall provide and ensure the proper usage of the safety equipment PPE as per the TPSODL approved list in annexure 7.
- BA shall ensure periodic inspection of PPE to ensure its serviceability as per the specification given by TPSODL.
- BA shall ensure the adherence to standard operating procedures or guidelines laid down by TPSODL.

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- BA shall ensure reporting of any unsafe act, unsafe conditions, near miss, incident or accident to engineer in-charge and SAFETY team of TPSODL.
- BA shall provide safety performance and Safety MIS (*annexure 9*) to engineer in-charge and SAFETY group periodically. Based on any non-confirmation to the safety procedures and guidelines, BA is liable to be negatively marked for his performance and suitable penalty will be imposed.
- Each BA shall ensure to depute a Safety Supervisor for managing a complete safety management system for the work awarded as per the below structure.



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Annexure 4 (Refer Para 3.3)

Safety Undertaking by way of Affidavit

I _____ s/o _____ R/o _____ (AUTHORIZED REPRESENTATIVE/PARTNER/DIRECTOR/PROPRIETOR) of M/S _____ (name of company/firm)___ having its office at (Complete address of Company), authorized vide power of attorney dated -----/Board resolution dated----/letter of authority dated----, hereinafter referred to as **Contractor [or Business Associate (BA)]** which expression shall, unless it be repugnant to or inconsistent with the meaning or context thereof, be deemed to include its heirs, executors, administrators, and assigns do hereby affirm and undertake as under :

1. The present undertaking shall remain in force from the date of execution of contract awarded by TPSODL and shall be valid till the date of termination of the said contract by either parties. The undertaking is binding on me (contractor) as well as my sub-contractor and its employees, representatives etc.
2. That I(the contractor) will be responsible and liable to comply and abide by all the safety rules, instructions and regulations as may be specified and laid down by The TP Southern Odisha Distribution Limited (TPSODL) so as enable TPSODL to achieve its goal of Zero On site incidences.
3. That the Contractor shall be fully responsible for ensuring occupational health and safety of its employees, representatives, agents as well as of its subcontractor's employees, at all times during the discharge of their respective obligations under the contract including any methods adopted for performance of their tasks / work.
4. That Contractor shall ensure ,at its own expense to arrange for and procure, implement all requisite accident prevention tools, first aid boxes, personal protective equipment, fire extinguisher, safety training, Material Safety Data Sheet, pre-employment medical test, etc. for operations & activities including as & when so specified by TPSODL specifically. , failing which TPSODL shall be entitled, but not obliged, to provide the same and recover the actual cost thereof from the Contractor's payments.
5. That the Contractor shall engage adequate and competent Safety – Supervisor / Engineer / Manager / Skilled persons at site as per the Para 5 (Qualification and experience of safety personnel) and Annexure 3 of Contract Safety Management.

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6. That the Contractor shall engage the competent Site – Supervisor with each group of workers for safe and correct workmanship, proper co-ordination of material and site work as per contract.
7. That the Contractor shall immediately replace supervisor in case it is found to be not up to the level of skill and experience required as in skill and experience required in *annexure 5* of this document, but any such replacement shall be only with the prior concurrence of TPSODL .
8. That the Contractor and its subcontractors shall abide by all the safety guidelines as per Safety Manual, Contract Safety Management and other guidelines issued from time to time by TPSODL during the contract period.
9. That in case the Contractor and/or any of its Subcontractor fail to ensure the compliance as required in terms of this undertaking the Contractor shall keep and hold TPSODL / its directors / officers / employees indemnified against any / all losses / damage / expense / liability / fines / compensation / claims / action / prosecutions or the like which might be suffered by TPSODL or to which TPSODL might get exposed to as a result of any breach /wilful negligence /deliberate default on the part of the Contractor /Subcontractor in complying with the same. Contractor shall also furnish any press release, clarification etc. if sought by TPSODL for any near miss or safety violations, accidents, which are attributable to fault of Contractor.

DEPONENT VERIFICATION

Verified at Berhampur on this _Day of _____20__ that the contents of the above affidavit are true and correct and nothing material has been concealed therefrom

DEPONENT

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Annexure 5 (Refer Para 5.4)

SKILL / QUALIFICATION REQUIRED FOR ELECTRICIAN AND ELECTRICAL SUPERVISOR

Skill / Qualifications Required for Electrician (*Certificate of Competency Class-II*):

1. Formal education in ITI – Wireman/ Electrician trade.

OR

2. Working experience of minimum three years of practical wiring.

OR

3. Have completed three years apprenticeship course through Apprenticeship Advisor, Govt. of Odisha / other state Govt. in the trade of Lineman / Wireman / Electrician.
4. A candidate must have attained the age of Eighteen years.

Skill / Qualifications Required for Electrical Supervisor (*Certificate of Competency Class-I*):

1. Have at least five years' experience of practical wiring after passing the certificate of competency class-II i.e. electrician.

OR

2. Recognized Degree or Diploma or equivalent qualification in Electrical Engineering from any Technical institute / College or University recognized by the Board.

AND

Must have completed the training/job in rectifying the common defects in electrical line and power installation for a period of one and three years after passing Degree or Diploma respectively

OR

3. Possessing the valid certificate of certificate of competency class – 1 (Electrical Supervisor)

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Annexure 6 (Refer Para 5.6)

Training Module for BAs Worker & Supervisor

Training for BA Supervisor

Duration – 02 Hrs / Month

Methodology: Lecture and Practical Demonstration of Safety Zone Creation

Session: 1

Topic: Electrical Safety Aspects

Sub Topics:

1. Learning specifics of HT & LT Network of zone
2. Major type of HT / LT / service lines / street light maintenance works
3. Understanding the need of Safety
4. Understanding the safe process of maintenance:
 - Planning of the maintenance job
 - Availability of men, material & machine, PPEs, Safety gear and approved PTW
 - Briefing of the job by the supervisor of the TPSODL
 - Identification of Risks associated with the maintenance work and planning for controlling measures by TPSODL supervisor
 - Creation of safety zone by TPSODL supervisor and satisfying that the network is dead – Use of Neon Tester, Shorting Chain and Safety Tagging
 - Start of the work – Right person for the right job
 - Alert supervision
 - Completion of the job – Check points
 - Energization of network
 - Actions to be taken in case of some accident

Session: 2

Topic: Use of Electrical Testing Equipment

Methodology: Lecture and Practical Demonstration

Sub Topics:

1. Meggar, Hi Pot, Clamp On Meter, Neon Tester, Discharge Rod, Line tester etc.

Session: 3

Topic: Awareness of Electrical Safety Aspects

- A. Understanding the need of this Training and Safety
- B. Learning specifics of HT & LT Network
- C. Major type of work to be carried out in zones
- D. Switching Operations (Do's & Don'ts) including Street Light Switching
- E. Working on Height (*practical demo also*)
- F. Understanding the Safe Process of Maintenance / Working:
 - Planning of the job

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- Availability of men, material & machine, PPEs, Safety gear and approved PTW
- Briefing of the job by the supervisor
- Permit to Work
- Safety Tagging and Lock Out Tag out
- Identification of Risks associated with the work to be carried out and planning for controlling measures by proper supervision
- Concept of “**Safety Zone**”
- Identification and use of Neon Tester, Shorting Chain, Clamp on Meter, Hi Pot, Meggar etc.
- Completion of the job – Check points
- Accident Theory & Incident Reporting
- Actions to be taken in case of some accident

Session: 4

Topic: Identification, Demonstration and Usages of Tools, PPEs and other Safety Gears and demonstration of working on HT pole

Session: 5

Topic: Practical demonstration of Safety Zone creation

FREQUENCY

Regular Safety Training Program

- It will be conducted for all field & supervisor staff of BA in such a manner that all BA Personnel attend at least two hours safety training during every month.

One Day Induction Safety Training Programs:

- This training will be for the new BA's personnel, who have been cleared by the Cross Functional Panel to undergo Safety training and who are likely to be deployed at various work sites of TPSODL by the BA, as a part of AMC / Work Contract.

Duration / Periodicity:

- Duration and periodicity has been defined above. However, this is subject to change at the discretion of TPSODL.

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Annexure 7 (Refer Para 5.7)

LIST OF PERSONAL PROTECTIVE EQUIPMENT AND TESTING FREQUENCY

Sl. No.	Name of PPE	IS / EN Standard	Testing Frequency	Remarks	Ref Brand & Model
01	Leather Safety Shoes (Color – Black) with PU toe cap.	IS:15298 (Part-2)	Monthly and visual check every day for any crack or damage in the leather or sole.		BATA (Model No.- Endura L/C) Liberty (Model No. – 7198-01 HT Barton Black – Warrior)
02	HDPE Safety helmet with chin strap and ratchet type for adjustment.	IS:2925-1984	Monthly and visual check every day for any crack in shell.		Karam (PN Safetech) Joseph Leslie Accent Industries Honeywell
03	Full body harness (Safety belt)	EN 361	Monthly and visual check every day of the bends and the harness.		Karam (PN Safetech) Joseph Leslie Accent Industries
04	Electrical Safety Gloves	EN: 60903 CE marked	Weekly and visual check for any crack and blow test before every work.	Manufactured not beyond 12 months.	Make Sparian / Sumitech / CATU supplied with inner cotton glove with over glove of split leather.
05	Full face visor with safety helmet	EN: 166 CE marked (Visor)	Monthly and visual check every day for any crack in shell.	Clear acrylic visor attached with safety helmet.	Karam (PN Safetech) Joseph Leslie

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					Accent Industries Honeywell
06	Fireproof jacket for chest protection		Monthly and visual check every day.		
07	Safety Chain for shorting cum earthing.	As per TPSODL standard	Weekly and visual check before every work.	Made of brass, Total length – 5.5 meters and made of 12 SWG.	

Note:





1. Any other Personal Protection Equipment required beyond above list will be according to BIS or EN Standards.
2. All Personal Protection Equipment will be checked by the engineer in-charge or SAFETY group of TPSODL.
3. Safety Representative of the BA has to maintain the record of the availability, condition and checking of the PPEs.
4. All tools required as per the contract must be according to respective IS / EN standards.
5. TPSODL may revise or add the above list of PPE and their specifications as and when feel necessary. The information about new specifications /models will be circulated by the Engineer In-charge (EIC), which shall adhere by the business associated in the shortest possible time. The EIC shall issue a memo / instruction to BA with timeline for implementation. Any delay will be treated as non-compliance / safety violations. Refer picture of each PPE given in next page.

Pictures of PPE for reference purpose.

Sl. No.	Name of PPE	IS / EN Standard	Picture
01	Leather Safety Shoes (Color – Black) with PU toe cap.	IS:15298(Part-2) and with test report of electrical resistance.	



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02	<p>HDPE Safety helmet with chin strap and ratchet type for adjustment.</p>	IS:2925-1984	
03	<p>Full body harness (Safety belt)</p> <p>The straps at shoulder and thigh shall have full pad for comfort. The back shall be so designed that harness straps do not tangle with each other.</p>	<p>EN 361:2002</p> <p>EN 358: 2000</p> <p>IS: 3521:1991/2002</p>	
04	<p>Electrical Safety Gloves – Composite type Soft electrical gloves as per size of individual.</p>	EN: 60903 CE marked	
05	<p>Full face visor with safety helmet</p>	EN: 166 CE marked (Visor)	

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06	Fireproof jacket for chest protection		
07	Safety Chain for shorting cum earthing.	As per TPSODL standard	
08	Reflective jacket to each workman	As per TPSODL standard	

Note: Picture shown are for indicative purpose only. Actual product may differ.

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Annexure 8 (Refer Para 5.8) LIST OF AUDITS TO BE CONDUCTED

Audits	Responsibility	Freq.	Ref. Doc.
Permit to Work & Field Audit	BA Safety Representative	Weekly	F04 (COR P - 12)
Tool Bag & PPE's Audit		Weekly	F06 (COR P - 12)
First Aid Box Maintenance Record		Fortnightly	F08 (COR P - 12)
Fire Extinguisher Record <i>(Applicable for the BA involved in major construction works and have storage of flammable material at worksite)</i>		Monthly	F09 (COR P - 12)
Safety Talk Register		Weekly	F18 (COR P - 12)
Site Safety Audit		Daily	F29A (COR P - 12)

Note:

1. (BA Safety Representative has to use the formats as per Safety process COR – P– 12 of TPSODL)

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Annexure 9 (Refer Para 5.9)

PERFORMANCE REPORT – SAFETY

FOR THE MONTH OF.....

Name of BA:

Name of the Project and Purchase order No:

Date of commencement of work:

Man Hour Worked in this month (No. of employees X 8 Hrs + Overtime):

Cumulative Man Hour worked:

Total Number of Minor Injury (this month): Minor Injury (Total)

Major Injury (this month): Major Injury (Total):

Detail of the Incident / Sub Standard Acts and Condition

Activity	This Month	Cumulative (Total)	Day Lost (this month)	Days Lost (Cumulative)
No. of the Incident				
No. of lost time injuries				
No. of dangerous occurrences				
No. of near miss reported				
Substandard Act/Conditions observed			Attach details of observation of this month	
Safety Violation Notice received (from TPSODL) (both in numbers and in Rs.)	No.	No.	No. of violation letter received and compliance report for the TPSODL.	
	Rs.	Rs.		

Note: Cumulative means total from date of commencement of work according to the contract.

Detail of the Accident / Near Miss Incidents:

Date and Time	Type of the incident	Name of Employee	Brief Description	Corrective and Preventive actions recommended

Details of the Safety Violations:

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Date and Location	Brief Description	Name of employee involved	Action Taken

Detail of the Safety Talk / Toolbox Talk / Safety Training

Date and Location	Topic (s)	Total Number of employees (Worker / Supervisor)	Number of participants (Worker / Supervisor)

Detail of the Safety Meeting

Date and Location	Number of participants	Topics discussed	Major Observations / Innovation

Detail of the Safety Inspection /Audit: (as per TPSODL site audit checklist F29A(COR-P-12))

Date	Area / Location	Major Observations	Recommendations	Action Taken

Any other Safety, Occupational Health, Environment & Disaster Management Promotional Activity (During this month):

Date	Location	Activity	Level of Participation	Number of participations

Signature of the BA Safety Representative

Signature of ZM / HoG

Name, E. No. and Date

Name, E. No. Date.

Note: The original form to be deposited with Engineer in-charge and a copy to SAFETY group on or before 5th of every month along with bill. List of training of the current month and status of PPE to be also mentioned individual wise.

BA may include additional lines if required. The TPSODL may revise the format as and when deemed required.

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ANNEXURE-M

BA APPRAISAL FORM

TO BE SUBMITTED BY BA (To be filled as applicable)			
BA:			
1.0	DETAILS OF THE FIRM		
	1.1	NAME (IN CAPITAL LETTERS)	:
	1.2	TYPE OF CONCERN (PROPRIETARY) Partnership, Pvt. Ltd., Public Ltd. etc.	:
	1.3	YEAR OF ESTABLISHMENT	:
	1.4	LOCATION OF OFFICE POSTAL ADDRESS TELEGRAPHIC ADDRESSES, TELEX NO. FAX NO.	:
	1.5	LOCATION OF MANUFACTURING UNITS	:
		i) UNITS 1	:
		ii) OTHER UNITS	:
2.0	PRODUCTS MANUFACTURED		:
3.0	TURNOVER DURING THE LAST 3 YEARS (TO BE VERIFIED WITH THE LATEST PROFIT & LOSS STATEMENT).		:
4.0	VALUE OF FIXED ASSETS		:
5.0	NAME & ADDRESS OF THE BANKERS		:
6.0	BANK GUARANTEE LIMIT		:
7.0	CREDIT LIMIT		:
8.0	TECHNICAL		
	8.1	NO. OF DESIGN ENGINEERS (INDICATE NO. OF YEARS EXPERIENCE IN RELATED FIELDS)	:
	8.2	NO. OF DRAUGHTSMEN	:

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	8.3	COLLABORATION DETAILS (IF ANY)	:
		8.3.1 DATE OF COLLABORATION	:
		8.3.2 NAME OF COLLABORATOR	:
		8.3.3 RBI APPROVAL DETAILS	:
		8.3.4 EXPERIENCE LIST OF COLLABORATORS	:
		8.3.5 DURATION OF AGREEMENT	:
	8.4	AVAILABILITY OF STANDARDS / DESIGN PROCEDURES / COLLABORATOR'S / DOCUMENTS (CHECK WHETHER THESE ARE LATEST/CURRENT)	:
	8.5	TECHNICAL SUPPORT, BACK-UP GUARANTEE, SUPERVISION, QUALITY CONTROL BY COLLABORATOR (WHEREVER ESSENTIAL). (THIS CLAUSE IS RELEVANT WHEN BA'S EXPERIENCE IS INADEQUATE)	:
	8.6	QUALITY OF DRAWINGS	:
	9.0	MANUFACTURE	
	9.1	SHOP SPACE, LAYOUT LIGHTING, VENTILATION, ETC.	:
	9.2	POWER (KVA)	:
		MAINS INSTALLED	:
		UTILISED	:
		STANDBY POWER SOURCE	:
	9.3	MANUFACTURING FACILITIES (ATTACH LIST OF EQUIPMENT AS APPLICABLE)	:
		9.3.1 MATERIAL HANDLING	:
		9.3.2 MACHINING	:
		9.3.3 FABRICATION	:
		9.3.4 HEAT TREATMENT	:

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		9.3.5 BALANCING FACILITY	:
		9.3.6 SURFACE TREATMENT PRIOR TO PAINTING/ COATING, POLISHING, PICKLING, PASSIVATION, PAINTING, ETC.	:
	9.4	SUPERVISORY STAFF	:
	9.5	ADEQUACY OF SKILLED LABOURS (MACHINISTS, WELDERS, ETC.)	:
	9.6	NO. OF SHIFTS	:
	9.7	TYPE OF MATERIAL HANDLED (SUCH AS CS, SS, ETC.)	:
	9.8	WORKMANSHIP	:
	9.9	MATERIAL IN STOCK AND VALUE	:
	9.10	TRANSPORT FACILITIES	:
	9.11	CARE IN HANDLING	:
10.0	INSPECTION / QC / QA / TESTING		
	10.1	NUMBER OF PERSONNEL (INDICATE NO. OF YEARS OF EXPERIENCE)	:
	10.2	INDEPENDENCE FROM PRODUCTION	:
	10.3	AVAILABILITY OF PROCEDURAL WRITE UP/QUALITY PLAN	:
	10.4	INCOMING MATERIAL CONTROL AND DOCUMENTATION	:
	10.5	RELIABILITY/REPUTATION OF SUPPLY SOURCES	:
	10.6	STAGE INSPECTION AND DOCUMENTATION	:
	10.7	SUB-ASSEMBLY & DOCUMENTATION	:
	10.8	FINAL INSPECTION AND DOCUMENTATION	:
	10.9	PREPARATION OF FINAL DOCUMENTATION PACKAGE	:
	10.10	TYPE TEST FACILITIES	:
	10.11	ACCEPTANCE TEST FACILITIES	:

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	10.12	CALIBRATION OF INSTRUMENTS AND GAUGES (WITH TRACEABILITY TO NATIONAL STANDARDS) (ATTACH LIST)	:
	10.13	STATUTORY APPROVALS LIKE BIS, IBR, ETC. (AS APPLICABLE)	:
	10.14	SUB-BA APPROVAL SYSTEM AND QUALITY CONTROL	:
	10.15	DETAILS OF TESTS CARRIED OUT AT INDEPENDENT RECOGNISED LABORATORIES	:
		i) FURNISH LIST OF TESTS CARRIED OUT AND THE NAME OF THE LABORATORY WHERE THE TESTS WERE CONDUCTED	:
		ii) CHECK AVAILABILITY OF CERTIFICATES AND REVIEW THESE WHEREVER POSSIBLE	:
11.0		EXPERIENCE (INCLUDING CONSTRUCTION / ERECTION / COMMISSIONING) TO BE FURNISHED IN THE FORMAT INDICATED IN APPENDIX)	:
12.0		SALES, SERVICE AND SITE ORGANISATIONAL DETAILS	:
13.0		CERTIFICATE FROM CUSTOMERS (ATTACH COPIES OF DOCUMENTS)	:
14.0		POWER SITUATION	:
15.0		LABOUR SITUATION	:
16.0 *		APPLICABILITY OF SC/ST RELAXATION (Y/N) IF YES, SUPPORTING DOCUMENTS TO BE ATTACHED	:
17.0		ORGANIZATIONAL DETAILS 1. PF NO 2. ESI NO 3. INSURANCE FOR WORK MAN COMPENSATION ACT NO 4. ELECTRICAL CONTRACT LIC NO 5. ITCC / PAN NO 6. SALES TAX NO 7. WC TAX REG. NO	:
18.0		DOCUMENTS TO BE ENCLOSED: 1. FACTORY LICENSE 2. ANNUAL REPORT FOR LAST THREE YEARS 3. TYPE TEST REPORT FOR THE ITEM 4. PAST EXPERIENCE REPORTS 5. ISO CERTIFICATE –QMS, EMS, OHAS, SA 6. REGISTRATION OF SALES TAX 7. COPY OF TIN NO.	:

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	8. COPY OF SERVICE TAX NO. 9. REGISTRATION OF CENTRAL EXCISE 10. COPY OF INCOME TAX CLEARANCE. 11. COPY OF PF REGISTRATION 12. COPY OF ESI REGISTRATION 13. COPY OF INSURANCE FOR WORK MAN COMPENSATION ACT NO 14. COPY OF ELECTRICAL CONTRACT LIC NO 15. COPY OF PAN NO 16. COPY OF WC TAX REGISTRATION 17. DOCUMENTS IN SUPPORT OF SC/ST RELAXATION AT S.NO.16.0 18. GST Registration No	
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* **Classification of BA s under SC/ST shall be governed under following guidelines:**

- **Proprietorship/ Single Ownership Firm:** Proprietor of the firm should be from SC/ST community. Governing document shall be Proprietorship Deed.
- **Partnership Firm:** Only such firms shall qualify which have SC/ST partners holding equal to or more than 50% of the total ownership pattern of the firm. Governing document shall be Partnership Deed.
- **Private Limited Company:** Only such firms shall qualify which have SC/ST directors holding equal to or more than 50% of the total ownership pattern of the firm. Governing document shall be Memorandum of Understanding (MoU) and/or Article of Association (AoA).

NOTE: Certification from SC/ST Commission shall be required for deciding upon SC/ST status of a person.

ANNEXURE-N

MANUFACTURER AUTHORIZATION FORM

(To be submitted on OEM's Letter Head)

Date:

Tender Enquiry No.:

To,
 Chief (Procurement & Stores)
 TP Southern Odisha Distribution Limited,
 Berhampur

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Sir,

WHEREAS M/s. *[name of OEM]*, who are official manufacturers of having factories at *[address of OEM]* do hereby authorize M/s *[name of bidder]* to submit a Bid in relation to the Invitation for Bids indicated above, the purpose of which is to provide the following Goods, manufactured by us

.....

and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with the Special Conditions of Contract or as mentioned elsewhere in the Tender Document, with respect to the Goods offered by the above firm in reply to this Invitation for Bids.

We hereby confirm that in case, the channel partner fails to provide the necessary services as per the Tender Document referred above, M/s *[name of OEM]* shall provide standard warranty on the materials supplied against the contract. The warranty period and inclusion / exclusion of parts in the warranty shall remain same as defined in the contract issued to their channel partner against this tender enquiry.

Yours Sincerely,

For

Authorized Signatory