

Procedure for Participating in Tender

Tender Enquiry No	Work Description	EMD (Rs. Lacs)	Tender Participation Fee (Rs)	Last date and time for Payment of Tender Participation Fee
TPNODL/OT/2021-22/091	Supply, Installation, Testing and Commissioning Of 1ph meter testing bench & 3ph meter testing bench	2 Lac	5000	08.11.2021 15:00 hrs

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

Procedure to Participate in Tender.

Following steps to be done before “Last date and time for Payment of Tender Fee” as mentioned above:

1. Eligible and Interested Bidders to submit duly signed and stamped letter on Bidder's letter head indicating
 - a. Tender Enquiry number
 - b. Name of authorized person
 - c. Contact number
 - d. E-mail id
 - e. Details of submission of Tender Fee
 - f. GST Registration No
2. Non-Refundable Tender 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/ Enquiry Number –

Beneficiary Name – TP Northern Odisha Distribution Limited

Bank Name – Union Bank of India

Branch Name – Balasore Branch

Account No – 500601010280332

IFSC Code – UBIN0550060

E-mail with necessary attachment to be sent to kartikchandra.behera@tpnodl.com before last date and time for payment of Tender Fee.

Interested bidders to submit Tender Fee and Authorization letter before Last date and time as indicated above, after which link from TPNODL E-Tender system (Ariba) will be shared for further communication and bid submission.

Please note all future correspondence regarding the tender, bid submission, bid submission date extension, Pre-bid query etc. will happen only through TPNODL E-Tender system (Ariba). User manual to guide the bidders to submit the bid through E-Tender system (Ariba) is also enclosed.

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

Also, it may be strictly noted that once date of “Last date and time for Payment of Tender Participation Fee” is lapsed no Bidder will be sent link from TPNODL E-Tender System (Ariba). Without this link BA will not be able to participate in the tender. Any last moment request to participate in tender will not be entertained.

Any payment of Tender Fee / EMD by Bidder who have not done the prerequisite will not be refunded.

Also all future corrigendum to the said tender will be informed on Tender section on website www.tpnodl.com

OPEN TENDER NOTIFICATION

FOR

Supply, Installation, Testing and Commissioning Of 1ph meter testing bench & 3ph meter testing bench as per specification

Tender Enquiry No.: TPNODL/OT/2021-22/091
Due Date for Bid Submission: 12.11.2021 15.00 hrs

TP NORTHERN ODISHA DISTRIBUTION LIMITED

(A Tata Power & Odisha Government Joint Venture)

Registered & Corporate Office: Januganj, Remuna Golei, Balasore – 756 019, Odisha, India

Phone: +91 6782 244865, Email: contactus@tpnodl.com, Website: www.tpnodl.com

CIN: U40106OR2021SGC035951

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1.0 Event Information

1.1 Scope of work

Open Tenders are invited in e-tender bidding process from interested and eligible Bidders for entering into Contracts as defined below:

S. No.	Description	EMD Amount (Rs.)	Tender Fee (Rs.)
1	Supply, Installation, Testing and Commissioning Of 1ph meter testing bench & 3ph meter testing bench	2,00,000.00	5000

1.2 Availability of Tender Documents

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

Bidders are requested to visit TPNODL website www.tpnodl.com regularly for any modification / clarification to the bid documents.

1.3 Calendar of Events

(a)	Date of sale/ availability of tender documents from TPNODL Website	From 28.10.2021 onwards
(b)	Date by which interested and eligible vendors to pay tender fee and confirm participation in accordance with "Procedure for participating in tender"	08-11-2021 15:00 hrs
(c)	Date & Time of Pre-Bid Meeting (If any)	Not applicable due to COVID- 19. Queries to be answered through e-mail / TPNODL Tender Website.
(d)	Last Date of receipt of pre-bid queries, if any	08.11.2021: 15:30 Hrs
(e)	Last Date of Posting Consolidated replies to all the pre-bid queries as received	10.11.2021: 18:00 Hrs
(f)	Last date and time of receipt of Bids	12.11.2021: 15:00 Hrs
(g)	Date & Time of opening technical bids & EMD (Envelope-1 & 2)	12.11.2021: 15:30 Hrs
(h)	Date & Time of opening of Price of qualified bids	Will be notified to the successful bidders through our website / e-mail.

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 TPNODL, Balasore office the last date of submission of bids and date of opening of bids will be the following working day at appointed times.

1.4 Mandatory documents required along with the Bid

- 1.4.1 EMD of requisite value and validity
- 1.4.2 Tender Fee 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 (In case any of these documents is not available with the bidder, same to be explicitly mentioned in the 'Schedule of Deviations')
- 1.4.9 **Sample Submission/Demonstration:** TPNODL Reserves the right to seek samples and/or demonstration of offered item during Technical Evaluation. Samples/demonstration will be sought by Technical team doing Technical Evaluation. The same may have to submitted/arranged on urgent basis at TPNODL location at, Odisha. Bidder not able to submit sample/perform demonstration in time, may get technically rejected.

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:-

- 1.6.1 EMD of requisite value and validity
- 1.6.2 Tender fee of requisite value
- 1.6.3 Price Bid as per the Price Schedule mentioned in Annexure-I
- 1.6.4 Necessary documents against compliance to Qualification Requirements mentioned at Clause 1.7 of this Tender Document.
- 1.6.5 Filled in Schedule of Deviations as per Annexure III
- 1.6.6 Filled in Schedule of Commercial Specifications as per Annexure IV
- 1.6.7 Receipt of Bid within the due date and time

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

1.7 Qualification Criteria

Bidder should the following minimum qualifications to submit a Proposal:

1. The bidder should have average annual turnover of Rs.5 Crore in last three years (FY 17-18, FY 18-19 and FY 19-20). (Audited balance sheet and profit and loss statement from the statutory auditors of the company to be submitted).
2. The bidder should have supplied at least 5 nos. of Single / Three Phase or better meter testing systems during last 5 years. (Copy of work order / completion certificate to be submitted).
3. Bidder shall submit at least 2 performance certificates showing satisfactory operation for more than 01 year from NABL accredited laboratory / Utilities / Govt. Dept. of India / Any reputed organization. The work against these issued certificates should be completed in last five years from the date of bid submission.

In case the bidder has a previous association with Tata Power for similar products and services, the performance feedback for that bidder by Tata Power's User Group, shall only be considered irrespective of performance certificates issued by any third organization. (Please note that Performance Certificate should not be older than 5 years from due date of submission of bids).

4. The bidder should have at least 5 years of experience in design and manufacturing of similar or better meter test equipment. (Bidder should submit the undertaking in this regard).
5. The bidder must have permanent office set up in India for troubleshooting and technical support. (Self-undertaking to be submitted).

Indian subsidiary of global companies / authorized dealers / distributors of OEM, are also eligible to bid if the qualification requirements stated above are met independently or in combination with parent company / OEM. (Copy of agreement / self-undertaking with supporting document / authorization letter from OEM to be submitted).

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

2.0 Evaluation Criteria

- The bids will be evaluated technically on the compliance to tender terms and conditions.
- The bids will be evaluated commercially on the overall all-inclusive lowest cost on line-item basis as calculated in Schedule of Items [Annexure I]. TPNODL however, reserves right to split the order line item wise and/or quantity wise among more than one Bidder. Hence all bidders are advised to quote their most competitive rates against each line item
- Bidder has to mandatorily quote as per Schedule of Items [Annexure-I]. Failing to do so TPNODL may reject the bid

NOTE: In case of a new bidder new to TPNODL, factory inspection and evaluation shall be carried out to ascertain bidder's manufacturing capability and quality procedures. However TPNODL

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 TPNODL 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.

3.0 Submission of Bid Documents

3.1 Bid Submission

Bidders are requested to submit their offer in line with this Tender document. TPNODL shall respond to the clarification raised by various bidders and the replies will be sent to all participating bidders through e-mail.

Bids shall be submitted in 3 (Three) parts:

FIRST PART: "EMD" of Rs. **2, 00,000/- (Rupees Two Lacs only)** shall be submitted. The EMD shall be valid for 210 days from the due date of bid submission in the form of BG / Bankers Pay Order favouring "The TP Northern Odisha Distribution Limited". The EMD has to be strictly in the format as mentioned in General Condition of Contract, failing which it shall not be accepted and the bid as submitted shall be liable for rejection. A separate non-refundable tender fee of stipulated amount also needs to be transferred online through NEFT / RTGS in case the tender document is downloaded from our website.

TP Northern Odisha Distribution Limited Bank Details for transferring Tender Fee and EMD is as below:

Account Name: The TP Northern Odisha Distribution Limited.
Bank Name: Union Bank of India, Balasore
Bank Account No. : 500601010280332
IFSC Code: UBIN0550060

In case of submission of EMD in shape of Bank Guarantee, original hard copy shall be sealed in separate envelope clearly indicating Tender Reference Number, Name of Tender and Name of Business Associate and shall be addressed to:

HOD (Contracts)
The TP Northern Odisha Distribution Limited,
Januganj, Balasore- 756019, Odisha.

SECOND PART: "TECHNICAL BID" shall contain the following documents:

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

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

THIRD PART: "PRICE BID" shall contain only the price details and strictly in format as mentioned in Annexure I along with explicit break up of basic prices, Taxes & duties, Freight etc. In case any discrepancy is observed between the item description stated in Schedule of Items mentioned in the tender and the price bid submitted by the bidder, the item description as mentioned in the tender document (to the extent modified through Corrigendum issued if any) shall prevail. Price Bids have to be mandatorily submitted only through e-procurement portal of TPNODL. Bids submitted through any other form / route shall not be admissible. The interested bidders are requested to obtain user name and password for purpose of bid submission through e-procurement portal of TPNODL, Balasore.

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

Communication Details:

Name: Mr. Kartik Chandra Behera
Contact No: 8908972132
E-Mail ID: kartikchandra.behera@tpnodl.com

HOD (Contracts):

Name: Mr. Vipin Chauhan
Contact No.: 9717393121
E-Mail ID: vipin.chauhan@tpnodl.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 TPNODL. 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.

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 TPNODL 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)

The bidder shall furnish, as part of its bid, an EMD amounting as specified in the tender. The EMD is required to protect the TPNODL against the risk of bidder's conduct which would warrant forfeiture. The EMD shall be denominated in any of the following form:

- Online transfer of requisite amount through NEFT / RTGS.
- Bank Guarantee valid for 210 days after due date of submission.

The EMD shall be forfeited in case of:

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

Or

- b) The case of a successful bidder, if the Bidder does not
- i) accept the purchase order, or
 - ii) furnish the required performance security BG

3.9 Type Tests (if applicable)

The type tests specified in TPNODL 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 TPNODL.

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

4.2 Technical Bid Opening

Bids shall be opened as per the schedule mentioned in Calendar of Events. In case of limited tenders, the bids shall be opened internally by TPNODL. Owing to COVID Scenario, in case of Open Tenders also, the bids shall be opened internally by TPNODL. Technical bid must not contain any cost information whatsoever.

First the "EMD" will be checked. 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. The salient particulars of the techno commercial bid will be read out at the sole discretion of TPNODL.

4.3 Preliminary Examination of Bids/ Responsiveness

TPNODL 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. TPNODL 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, TPNODL 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 TPNODL and/or the TPNODL 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, TPNODL may, at its discretion, ask the Bidder for a clarification on its Bid for any deviations with respect to the TPNODL 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 TPNODL. After all techno commercial issues are clarified, the date of price bid opening will be intimated to the technically accepted bidders and same shall also be notified at TPNODL website.

4.5 Price Bid Opening

Price bids will be opened at the stipulated date and time. The EMD of the bidder withdrawing or substantially altering his offer at any stage after the technical bid opening will be forfeited at the sole discretion of TPNODL without any further correspondence in this regard.

4.6 Reverse Auctions

TPNODL 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 and reserves the rights to conduct the manual negotiation with the BA who is declared L1 after Reverse Auction.. 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.

5.0 Award Decision

TPNODL 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 4.3 above. The decision to place purchase order/LOI solely depends on TPNODL on the cost competitiveness across multiple lots, quality, delivery and bidder's capacity, in addition to other factors that TPNODL may deem relevant.

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

In case any service provider is found unsatisfactory during the contract period, the award will be cancelled and TPNODL reserves the right to award other service provide who are found fit.

6.0 Order of Preference/Contradiction:

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

1. Schedule of Items (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. Inspection Test Plan (Annexure VIII)
7. Acceptance Form for Participation in Reverse Auction (Annexure VI)
8. General Conditions of Contract (Annexure IX)

7.0 Post Award Contract Administration

7.1 Special Conditions of Contract

- After finalization of tender, Order shall be issued to successful bidder. Prices shall remain firm.
- Business Associate (BA) shall submit applicable Performance Bank Guarantee as per GCC within 15 days of issuance of order. PBG applicable shall be 10% of Order Value. PBG submitted, shall be released after completion of applicable guarantee period plus one month.
- Guarantee applicable shall be as per technical specifications.
- BA shall submitted the GTP/ drawing within 7 days from date of issuance of order/ RC. Total time for TPNODL for approval of GTP/ drawing after first submission shall be 7 days from the date of submission and 4 days from the date of subsequent submission in case drawings/ GTP are required to be resubmitted. In case BA does not submit the drawing as per above timelines, then TPNODL reserve the right to cancel issued contract / PO and also reserve the right to forfeit EMD / PBG
- Warranty period shall be 60 months from date of commissioning.
- Any change in statutory taxes, duties and levies during the contract period shall be borne by TPCODL.
- All the terms and conditions of TPCODL General Conditions of Contract shall be applicable

7.2 Drawing Submission & Approval

The relevant drawings and GTPs need to be submitted as per special condition of contract mentioned in point no. 7.1.

7.3 Delivery Terms

Supply, Installation, Testing and Commissioning of Test Benches shall be completed within 60 days at TPNODL – Odisha, from the placement of PO/LOI. TPNODL reserves the right to depute their representative for stage inspection before dispatch. An advance written notice of two weeks for proposed stage inspection date / readiness of material shall be given to enable TPNODL to depute their representative for such inspections. No material shall be dispatched without written Material Dispatch Clearance Certificate (MDCC) from TPCODL. Testing shall be done as per technical specification and relevant IS applicable

7.4 Warranty Period

Guarantee/Warranty Period of the supplied material shall be as per technical specification attached separately with this tender.

7.5 Payment Terms

On completion of the installation work of the materials in good condition and certification of acceptance by TPNODL, BA shall submit the Bills / Invoices in original in the name of TPNODL to Invoice Desk. Payment shall be released, within 30 days of submission of error free Invoice duly certified by EIC/Site in charge.

7.6 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.

7.7 Ethics

- TPNODL is an ethical organization and as a policy TPNODL 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.
- TPNODL 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 GCC attached at Annexure IX for more information.

Any ethical concerns with respect to this tender can be reported to the following e-mail ID: sunil.bhattar@tpnodl.com

8.0 Specification and standards

Attached separately with tender.

9.0 General Condition of Contract

Any condition not mentioned above shall be applicable as per GCC for Supply attached along with this tender at Annexure IX.

10.0 Safety

Safety related requirements as mentioned in our safety Manual put in the Company's website which can be accessed by:

<http://www.tpnodl.com>

All Associates shall strictly abide by the guidelines provided in the safety manual at all relevant stages during the contract period.

ANNEXURE I
Schedule for Items

S. No	Item Description	Qty	UoM	HSN Code	Unit Price (Rs.)	GST (Rs.)	All incl. Unit Price (Rs.)	All incl. inclusive Total value (Rs.)
1	SITC Twenty Position Meter Test Bench for Single Phase Meters	2	EA					
2	SITC Twenty Position Meter Test Bench for Three Phase Meters	1	EA					

NOTE:

- The quantity mentioned above is for evaluation purpose only and may vary during the execution.
- The unit price with GST in column no. 7, is landed price FOR TPNODL Odisha Locations. Exact delivery location shall be specified in the Order.
- The bidders are advised to quote prices strictly in the above format. 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.
- The prices shall inclusive of packaging/F&I/loading/unloading and FOR TPNODL Locations.

Annexure II

Technical Specifications attached separately with the tender.

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 TPNODL'S specifications:

Technical Deviations:-

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

Commercial Deviations:-

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	----- %
1f.	Inclusive of transit insurance	Yes / No
2.	Delivery	Weeks / months
3.	Guarantee clause acceptable	Yes / No
4.	Terms of payment acceptable	Yes / No
5.	Performance Bank Guarantee acceptable	Yes / No
6.	Liquidated damages clause acceptable	Yes / No
7.	Validity (180 days) (From the date of opening of technical 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.)

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 RFQ	
3	Company profile/organ gram	
4	Signed copy of this RFQ as an unconditional acceptance	
5	Duly filled schedule of commercial specifications (Annexure IV)	
6	Sheet of commercial/technical deviation if any (Annexure III)	
7	Balance sheet for the last completed three financial years; mandatorily enclosing Profit & loss account statement	
8	Acknowledgement for Testing facilities if available (duly mentioned on bidder letter head)	
9	List of Machine/tools with updated calibration certificates if applicable	
10	Details of order copy (duly mentioned on bidder letter head)	
11	Order copies as a proof of quantity executed	
12	Details of Type Tests if applicable (duly mentioned on bidder letter head)	
13	All the relevant Type test certificates as per relevant IS/IEC (CPRI/ERDA/other certified agency) if applicable	
14	Project/supply Completion certificates	
15	Performance certificates	
16	Client Testimonial/Performance Certificates	
17	Credit rating/solvency certificate	
18	Undertaking regarding non blacklisting (On company letter head)	
19	List of trained/untrained Manpower	

Annexure VI

Acceptance Form for Participation In Reverse Auction Event

(To be signed and stamped by the bidder)

In a bid to make our entire procurement process more fair and transparent, TPNODL 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:

1. TPNODL 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. TPNODL will make every effort to make the bid process transparent. However, the award decision by TPNODL would be final and binding on the supplier.
3. The bidder agrees to non-disclosure of trade information regarding the purchase, identity of TPNODL, 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 TPNODL.
6. In case of intranet medium, TPNODL shall provide the infrastructure to bidders. Further, TPNODL 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 TPNODL.
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 TPNODL 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 the auction event shall be considered by TPNODL.
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

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- 3.0 CLIMATIC CONDITIONS OF THE INSTALLATION**
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1.0	SCOPE	<p>This Specification covers the technical requirements of design, engineering, manufacturing, testing at manufacturer's works, packing, forwarding, supply, unloading and commissioning of Fully Automatic Modular Twenty Position Meter Test Bench for Single Phase Meters at site/store. The following types of Sub Standard Meter of Accuracy Class 0.05, 0.1, and electricity meters of class 0.2, 0.5, 1 and 2.0 available with utility can be tested (electronic and electromechanical type).</p> <p>The test bench should consist of Static voltage and current source, a high accuracy class Reference standard meter of 0.02 class, supply source, 20 nos. optical sensor(photo electric probe), computer system with meter test software resident on it and energy meter mounting rack.</p> <p>In addition to above, bidder shall also be required to provide:</p> <ul style="list-style-type: none"> i. Operations & Maintenance Manuals including drawings. ii. Training to at least two personnel from TPNODL personals on all aspects of operation, maintenance and trouble shooting. iii. Continued technical support during warranty period 																		
2.0	APPLICABLE STANDARDS	<p>The equipment covered by this specification shall conform to the requirements stated in latest editions of relevant Indian/ IEC Standards and shall conform to the regulations of local statutory authorities.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: center;">a</td> <td style="width: 25%;">IS 12346: 1999</td> <td>Specifications for testing equipment for A.C. Electrical energy meter</td> </tr> <tr> <td style="text-align: center;">b</td> <td>IS 15707: 2006</td> <td>Testing Evaluation Installation and maintenance of AC Electricity Meters – Code of practices</td> </tr> <tr> <td style="text-align: center;">c</td> <td>IEC 60736</td> <td>Testing equipment for electrical energy meters</td> </tr> <tr> <td style="text-align: center;">d</td> <td>IEC 62052-11</td> <td>Electricity metering equipment (AC) General requirements, tests and test conditions Part 11: Metering equipment</td> </tr> <tr> <td style="text-align: center;">e</td> <td>IEC 62053-11,21,22,23</td> <td>Electricity metering equipment (AC) Particular requirements- Static meter for active energy(Class 1 and 2)</td> </tr> <tr> <td style="text-align: center;">f</td> <td>IEC 61010</td> <td>Safety requirements for electrical equipment for measurement, control, and laboratory use</td> </tr> </table>	a	IS 12346: 1999	Specifications for testing equipment for A.C. Electrical energy meter	b	IS 15707: 2006	Testing Evaluation Installation and maintenance of AC Electricity Meters – Code of practices	c	IEC 60736	Testing equipment for electrical energy meters	d	IEC 62052-11	Electricity metering equipment (AC) General requirements, tests and test conditions Part 11: Metering equipment	e	IEC 62053-11,21,22,23	Electricity metering equipment (AC) Particular requirements- Static meter for active energy(Class 1 and 2)	f	IEC 61010	Safety requirements for electrical equipment for measurement, control, and laboratory use
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3.0	CLIMATE CONDITIONS OF THE INSTALLATION	<ul style="list-style-type: none"> a) Max. Ambient Temperature : 50 deg.C b) Max. Daily average ambient temp. : 40 deg.C c) Min Ambient Temp : 0 deg C d) Maximum Humidity : 95% e) Minimum Humidity : 10% f) Average No. of thunderstorm days per annum : 50 g) Maximum Annual Rainfall : 1450 mm h) Average No. of rainy days per annum : 60 i) Rainy months : June to Oct. j) Altitude above MSL not exceeding : 1000 meters k) Wind Pressure : 150 kg/sq m up to an elevation at 10 m. <p>The atmosphere is generally laden with mild acid and dust in suspension during the dry months and is subjected to fog in cold months. The design of equipment and accessories shall be suitable to withstand seismic forces corresponding to an acceleration of 0.3 g.</p>																		

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4.0	GENERAL TECHNICAL REQUIREMENTS	
4.1	APPLICATION	To provide facilities for carrying out routine, acceptance and certification test on all types of Electronics, Ferrari, electromechanical single phase whole current energy Meters & Reference meters in Active and Reactive Mode.
4.2	OPERATING CONDITIONS	The meter test system shall be suitable for giving an uninterrupted service in following Conditions: <ul style="list-style-type: none"> a. Mains voltage shall be 240V ± 10% for Single phase supply. b. Frequency 50Hz ± 5 %. c. Ambient temperature (-) 10°C to (+) 45°C for operation and from (-) 10°C to (+) 60°C for storage. d. Relative humidity up to 95%. e. Cabinet for source must be dust proof.
4.3	TEST TO BE PERFORMED	The offered meter test system shall be capable to perform the following tests on the meters as per IEC 62052-11, 62053-11,21,22,23 and IS 13779 <ul style="list-style-type: none"> a. Simultaneous calibration/ testing of ERS Meter b. Pre-warming c. Accuracy test as per IS/IEC d. Starting current test e. Creep test f. Dial test g. Influence quantity test related to accuracy test. <ul style="list-style-type: none"> ▪ Voltage, Frequency, reverse phase sequence, voltage unbalance. ▪ Influence of Harmonic component in voltage and current circuit, odd and sub harmonic, DC and Event harmonics and voltage dip and interruption test. <p>In addition, the offered meter-testing system shall be capable to perform the following tests on RSS and ERSS under testing using frequency output of built-in ERSS.</p> <ul style="list-style-type: none"> h) Accuracy testing of reference standard used in test system against high precision reference standard i) Accuracy testing of reference standard (low accuracy) against the built in reference standard. j) The smart meter switch connection and disconnection over the air commands on no-load condition for all meters simultaneously. k) Smart meter communication testing and switch opening testing. <p>Note: Phase and Neutral circuit should be tested independently without changing connection physically. It should also be possible to test meters like Real time installation (Phase and Neutral elements, together)</p>
5.0	GENERAL CONSTRUCTIONS	
5.1	CONSTRUCTION AND COMPONENT OF SYSTEM	<ol style="list-style-type: none"> 1. The cabinet shall be rack mounted cabinet on which components of the source and reference standard shall be placed. 2. This cabinet shall have facility for easy opening and closing as and when required, preferably with doors system. Doors shall be lockable to allow access by authorised personnel only. In the case of closed-type cabinet, a cooling fan of suitable capacity shall be provided to avoid temperature increase inside the cabinet during normal operation. 3. The cabinet shall have protective earth terminals which shall be earthed during installation at site

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		<p>4. The cabinet shall have one mains-switch to switch-off the incoming power supply. The cabinet shall also be protected against overload, under voltage and over voltage through suitable protection devices.</p> <p>5. With its doors closed, the cabinet housing the source and reference standard shall provide degree of protection equal to or better than IP-30.</p> <p>6. The amplifier used in the source shall have high efficiency, power factor compensation device.</p> <p>7. The source shall be easily programmable so as to provide:</p> <p>a) Reference output frequency independent of mains, with quartz controlled operation range from 40 Hz. to 70 Hz. in steps of 0.01 Hz. with high efficiency, power-factor compensation according to IEC 60555.</p> <p>b) Stability at inductive, capacitive and non-linear loads for the power factor.</p> <p>c) Protection against overload and short circuit and provision for superimposition of harmonics in the range of 2nd to 31st harmonics.</p> <p>Power Factor compensation shall be provided as per IEC 60555 so that the meter-testing system shall draw purely sinusoidal current from the mains A.C. supply without polluting it.</p> <p>8. OEM must be the manufacturer of all the major equipment's impacting the accuracy of Test bench like Reference standard meter, Power source and ICT's/MSVT's. These all equipment's shall have CE/ISI marking and should be modular in design.</p> <p>Power Factor compensation shall be provided as per IEC 60555 so that the meter-testing system shall draw purely sinusoidal current from the mains A.C. supply without polluting it.</p> <p>Note: -The PC and associated IT services can be outsourced. The spares shall be available for 20 years from supply. Undertaking to be submitted along with bid.</p>																																				
5.2	SPECIFICATION OF VOLTAGE AMPLIFIER	<p>Voltage amplifier should have following capabilities:</p> <table border="1"> <thead> <tr> <th>S. No.</th> <th>DESCPRITION</th> <th>MEASURMENT</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Electronic protection against Overload and Short Circuit.</td> <td></td> </tr> <tr> <td>2</td> <td>LED indication for faults like overload, short circuit and power supply failure shall be provided.</td> <td></td> </tr> <tr> <td>3</td> <td>Efficiency</td> <td>Better than 85%.</td> </tr> <tr> <td>4</td> <td>Stability</td> <td>100 ppm / h, or better with integration time of 60 seconds</td> </tr> <tr> <td>5</td> <td>Distortion factor</td> <td>< 0.5 %.</td> </tr> <tr> <td>6</td> <td>Provision for super-imposing of harmonics in the range of</td> <td>2nd to 31st harmonic</td> </tr> <tr> <td>7</td> <td>Maximum possible DC content</td> <td>< 0.05 %</td> </tr> <tr> <td>8</td> <td>Test voltage range</td> <td>30 -300 V (Phase-Neutral)</td> </tr> <tr> <td>9</td> <td>Output VA burden rating</td> <td>Not less than 500VA</td> </tr> <tr> <td>10</td> <td>Accuracy of the test setting amplitude</td> <td>0.05 % or better</td> </tr> <tr> <td>11</td> <td>Accuracy of the test setting phase adjustment</td> <td>0.01 ° or better.</td> </tr> </tbody> </table>	S. No.	DESCPRITION	MEASURMENT	1	Electronic protection against Overload and Short Circuit.		2	LED indication for faults like overload, short circuit and power supply failure shall be provided.		3	Efficiency	Better than 85%.	4	Stability	100 ppm / h, or better with integration time of 60 seconds	5	Distortion factor	< 0.5 %.	6	Provision for super-imposing of harmonics in the range of	2nd to 31st harmonic	7	Maximum possible DC content	< 0.05 %	8	Test voltage range	30 -300 V (Phase-Neutral)	9	Output VA burden rating	Not less than 500VA	10	Accuracy of the test setting amplitude	0.05 % or better	11	Accuracy of the test setting phase adjustment	0.01 ° or better.
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5.3	SPECIFICATION OF CURRENT AMPLIFIER	<p>Current amplifiers should have following capabilities</p> <table border="1"> <thead> <tr> <th>S. No.</th> <th>DESCPRITION</th> <th>MEASURMENT</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Electronic protection against open circuit and over load.</td> <td></td> </tr> <tr> <td>2.</td> <td>Efficiency</td> <td>Better than 85%.</td> </tr> <tr> <td>3.</td> <td>Stability</td> <td>100 ppm / h with integration time of 60 sec</td> </tr> <tr> <td>4.</td> <td>Test Current range</td> <td>1 mA to 120 A</td> </tr> <tr> <td>5.</td> <td>Accuracy of the test setting amplitude</td> <td>0.05 % or better</td> </tr> <tr> <td>6.</td> <td>Accuracy of the test setting phase adjustment</td> <td>0.01 °</td> </tr> <tr> <td>7.</td> <td>Distortion factor</td> <td>0.5 %</td> </tr> <tr> <td>8.</td> <td>Output VA burden rating</td> <td>Not less than 600VA</td> </tr> <tr> <td>9.</td> <td>Provision for super-imposing of harmonics in the range of</td> <td>2nd to 31st harmonic.</td> </tr> <tr> <td>10.</td> <td>Output circuit shall be protected against open circuit/overload</td> <td></td> </tr> </tbody> </table>	S. No.	DESCPRITION	MEASURMENT	1.	Electronic protection against open circuit and over load.		2.	Efficiency	Better than 85%.	3.	Stability	100 ppm / h with integration time of 60 sec	4.	Test Current range	1 mA to 120 A	5.	Accuracy of the test setting amplitude	0.05 % or better	6.	Accuracy of the test setting phase adjustment	0.01 °	7.	Distortion factor	0.5 %	8.	Output VA burden rating	Not less than 600VA	9.	Provision for super-imposing of harmonics in the range of	2nd to 31st harmonic.	10.	Output circuit shall be protected against open circuit/overload																						
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5.4	SPECIFICATION OF ELECTRONIC REFERENCE STANDARD METER (RSM)	<p>Reference standard should have auto-range selection facility and facility of dial test (power dosing) and RS 232 serial communication port for communicating with PC. It must frequency output proportional to the power to calibrate against better standard.</p> <table border="1"> <thead> <tr> <th>S.No.</th> <th>DESCPRITION</th> <th>MEASURMENT</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>The class of accuracy of reference standard should be 0.02 or better for active and reactive energies, over the entire load range & independent of the measuring mode.</td> <td>0.02 or better</td> </tr> <tr> <td>2.</td> <td>Measuring modes</td> <td>2 wire active and 2 wire reactive mode</td> </tr> <tr> <td>3.</td> <td>Frequency Range</td> <td>Basic frequency 40-70 Hz and total detectable frequency range 0...3500 Hz</td> </tr> <tr> <td>4.</td> <td>Voltage Range</td> <td>10-480V (phase - neutral)</td> </tr> <tr> <td>5.</td> <td>Current Ranges</td> <td>1 mA to 120A direct connected</td> </tr> <tr> <td>6.</td> <td>Accuracy (shall be same for Active and reactive measurement)</td> <td></td> </tr> <tr> <td>a.</td> <td>Power / Energy (For active and reactive measurement)</td> <td></td> </tr> <tr> <td></td> <td></td> <td>0.02 % at $\cos\phi =1$ or $\sin\phi =1$ (20mA to 120A)</td> </tr> <tr> <td></td> <td></td> <td>0.04 % at $\cos\phi =0.5$ or $\sin\phi =0.5$</td> </tr> <tr> <td></td> <td></td> <td>0.05 % for the range of 1 mA to 50 mA at $\cos\phi =1$ or $\sin\phi =1$</td> </tr> <tr> <td>b.</td> <td>Voltage</td> <td></td> </tr> <tr> <td></td> <td></td> <td>0.01 % for the range of 10 V to 480 V (P-N)</td> </tr> <tr> <td>c.</td> <td>Current</td> <td></td> </tr> <tr> <td></td> <td></td> <td>0.01 % (50 mA to 120 A)</td> </tr> <tr> <td></td> <td></td> <td>0.02 % (10 mA to 50 mA)</td> </tr> <tr> <td></td> <td></td> <td>0.05 % (1 mA to 10 mA)</td> </tr> <tr> <td>7.</td> <td>Phase Angle Accuracy</td> <td>0.01 °</td> </tr> </tbody> </table>	S.No.	DESCPRITION	MEASURMENT	1.	The class of accuracy of reference standard should be 0.02 or better for active and reactive energies, over the entire load range & independent of the measuring mode.	0.02 or better	2.	Measuring modes	2 wire active and 2 wire reactive mode	3.	Frequency Range	Basic frequency 40-70 Hz and total detectable frequency range 0...3500 Hz	4.	Voltage Range	10-480V (phase - neutral)	5.	Current Ranges	1 mA to 120A direct connected	6.	Accuracy (shall be same for Active and reactive measurement)		a.	Power / Energy (For active and reactive measurement)				0.02 % at $\cos\phi =1$ or $\sin\phi =1$ (20mA to 120A)			0.04 % at $\cos\phi =0.5$ or $\sin\phi =0.5$			0.05 % for the range of 1 mA to 50 mA at $\cos\phi =1$ or $\sin\phi =1$	b.	Voltage				0.01 % for the range of 10 V to 480 V (P-N)	c.	Current				0.01 % (50 mA to 120 A)			0.02 % (10 mA to 50 mA)			0.05 % (1 mA to 10 mA)	7.	Phase Angle Accuracy	0.01 °
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		8.	Voltage, Current & Power measurement drift (Drift for individual parameters shall be defined clearly in the offer.)	equal to or better than 100PPM / year
		9.	A common modular cabinet should be used for housing source and reference standard. All the measured values like voltage, current, power, phase angle, frequency should be available on the display screen of the control PC and on the local display of reference meter.	
		10.	Temperature coefficient(Bidder Should submit certificate of Reference standard along with Bid to specify the temperature coefficient of Reference standard	10PPM/ K or better
		11.	Display -The reference meter shall have following display parameters. (All the parameters also required in actual graphical mode with wave form with THD% value)	
		a.	True RMS value of each voltage & current input	
		b.	Phase angle between voltage / current and defined reference	
		c.	Power factor	
		d.	Frequency	
		e.	Active , reactive & apparent power	
		f.	Integration time	
		12.	Facility to select integration time between 1 to 99 second shall be provided in the RSM.	
		13.	Reference Channel	
			The RSM shall have facility to select reference for phase angle measurement. Selection of reference shall be provided manually and automatically.	
		14.	Frequency output	
			This shall provide frequency output proportional to power to calibrate the reference standard against high precision reference standard. This output shall be in commonly used BNC type socket.	
5.5	SPECIFICATION OF MULTI SECONDARY VOLTAGE TRANSFORMER/ CT	Test bench shall include MSVT to facilitate testing of link-less single-phase meters. MSVT shall be installed in the voltage circuit of the test bench with minimum 22 secondary windings and one primary winding, other specifications being Ratio Error (worst case) : 0.05% Maximum Sec. Voltage: 300 V AC ICT is required for test of MAIN & NEUTRAL Element test together. For 20 position test bench 4 Numbers of ICT would be required and delivered. ICT with Ratio (1:1) & Ratio Error: 0.02% or better, Phase Error: 0.8 Min. or better for current range: 100mA ... 120A. Output VA: 60VA/Phase (with single turn)		
5.6	SPECIFICATION OF HARMONIC INJECTION UNIT	Over the range 2nd to the 31st harmonic to the test voltage and test current, Magnitude of each harmonic shall be adjustable from 0-40% of the fundamental wave and with maximum peak value of the wave form shall be 130% of the magnitude of the fundamental wave. Facility of controlling the phase angle of harmonics shall be provided (0 to 180 degree). The super-imposition of harmonics shall be possible to carry out all the tests prescribed at Clause 6g.		

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5.7	SOFTWARE	<p>The user friendly software should be menu driven operated with the help of mouse and keyboard in manual/automatic mode.</p> <p>The Manual operation mode shall allow following tasks:</p> <ul style="list-style-type: none"> • Control the source • Actual value on PC screen • Wave form of output and Harmonic analysis • Perform the accuracy test <p>The licensed proprietary software of meter testing equipment shall allow, at least, performance of following tasks -</p> <ul style="list-style-type: none"> • User interface to operate the system • Easy to prepare test table by using “ drag & drop “ concept • Supervision and control of the test procedure • Supervision and display of the test current and voltage • Indication of the errors of the meters under test • Evaluation and report of the test results • Manual testing, semiautomatic and automatic testing facility • Adjustment testing i.e. software shall guide to the operator for the adjustment of particular screw in case of Ferrari meters • It shall have facility to define the test parameters in terms of percentage and absolute terms. • It shall have facility to define the error limit in two levels. • It shall have facility to interrupt the testing and restart it again. • Password facility for each main and sub-option • Print out facility with desired header • Facility to take back up of data • Absolute measurement with more precious standard • Testing facility of at-least 20 different meters with 20 different constants. • Software shall have facility to display of different voltage and current • Display of curve of test voltage and current in presence of harmonics. • Protection of Meter under test form high voltage and current. • It shall have facility to protect the system from over voltage in manual and automatic mode. • It shall have facility to display of curve of test voltage and current in presence of harmonics.
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		<ul style="list-style-type: none"> Absolute measurement with higher precision /more accurate standard in fully automatic mode using BNC type socket provided on meter mounting rack. <p>The software shall have facility to display following parameters.</p> <ul style="list-style-type: none"> Individual phase voltage Individual phase current Phase angle, power factor symmetrical or unsymmetrical star system Total Power Factor Total Power (Active, Reactive and Apparent) Frequency Phase Sequence Measurement mode Vectorial display Analog view 																																	
5.8	TECHNICAL DATA FOR PC AND PRINTER	<table border="1"> <thead> <tr> <th>S. No.</th> <th>DESCPRITION</th> <th>MEASURMENT</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Color Monitor</td> <td>SVGA 24" LCD</td> </tr> <tr> <td>2</td> <td>Pentium Processor</td> <td>Pentium corei3,2.4GHZ Minimum</td> </tr> <tr> <td>3</td> <td>RAM</td> <td>16GB</td> </tr> <tr> <td>4</td> <td>HDD</td> <td>1 TB</td> </tr> <tr> <td>5</td> <td>Cache Memory</td> <td>4 MB</td> </tr> <tr> <td>6</td> <td>DVD</td> <td>COMBO drive</td> </tr> <tr> <td>7</td> <td>Keyboard</td> <td>Type 101</td> </tr> <tr> <td>8</td> <td>Ports</td> <td>3 serial and 2 parallel</td> </tr> <tr> <td>9</td> <td>Printer</td> <td>LASER JET HP 1160</td> </tr> <tr> <td>10</td> <td>Operation System</td> <td>Windows 10 Pro</td> </tr> </tbody> </table>	S. No.	DESCPRITION	MEASURMENT	1	Color Monitor	SVGA 24" LCD	2	Pentium Processor	Pentium corei3,2.4GHZ Minimum	3	RAM	16GB	4	HDD	1 TB	5	Cache Memory	4 MB	6	DVD	COMBO drive	7	Keyboard	Type 101	8	Ports	3 serial and 2 parallel	9	Printer	LASER JET HP 1160	10	Operation System	Windows 10 Pro
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5.9	SPECIFICATION OF METER MOUNTING RACK	<ol style="list-style-type: none"> The rack shall consist of a lightweight aluminum frame for mounting of sensor heads, display devices and meters under test. Meters under test shall get connected to the current circuit by means of quick acting connector and voltage circuit by means of connecting leads. Design of the frame should be such that ERS (substandard meter) or 20 nos. meters of any make can be safely and easily accommodated on it. Meter fixing arrangement shall be moveable in both X and Y axis for their easy installation. Meter mounting rack shall additionally have emergency stop switch. In addition to above Meter Mounting Rack shall have all necessary arrangement which shall include connectors, BNC socket and platform to keep & test substandard Meters. The Rack shall be designed in such a way that substandard meter of any make can be kept and can be tested simultaneously in fully automatic mode. There should be a warning lamp & two emergency push button on Meter mounting rack. Necessary socket to test standard meters against higher accuracy standard shall be provided on Meter Mounting Rack. 																																	

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		<p>7. The Meter Mounting Rack shall be provided with necessary BNC sockets for absolute measurement. The offered software shall have facility to test the external and internal reference standards by using these BNC terminals. These terminals shall be provided with necessary hardware.</p> <p>8. The offered meter test system should be capable to carry out following tamper test simultaneously</p> <ul style="list-style-type: none"> • Accuracy test for Single Phase Meter for phase Element & Neutral Element, Phase & Neutral Element combined together. • Accuracy test for Single Phase Meter in case of reverse power for phase & Neutral channel for same magnitude of current. • Facility to disconnection neutral simultaneously for all meters.
5.10	CONNECTION CABLES	Apart from connection cable required to install and commission the meter test system itself, Supplier shall provide the set of connection cable for meter under test
5.11	SPECIFICATION FOR SCANNING HEAD AND ERROR INDICATION UNITS	<p>1. 1 photoelectric scanning head for each position suitable for reading the marking from the disc of Ferraris wheel meters without opening the cover of the meter. Same scanner should also be suitable for reading the pulse output of electronic meters.</p> <p>2. Each scanning head should be designed in such a way that the scanning head can be fixed easily in a position which would facilitate accurate and proper testing of the meter-under-test. Mounting arrangement for scanning head should have facility to move vertical, horizontal, forward or backward directions.</p> <p>3. It should be insensitive to ambient light. It should give optical indication of pulses by LED.</p> <p>4. The scanner must be able to measure LED pulse output of frequency up to 1 kHz.</p> <p>5. An Error indication device shall be mounted on each test position. The resolution of error indication shall be 4 ½ digit with decimal point configurable by software and the error indication unit should LED/LCD. There shall be provision on the error indication unit to reset the error or to repeat it if something is wrong. The same should have acknowledgement function while testing of starting and creep testing manually.</p>
5.12	SPECIFICATION FOR DIGITAL PROCESS UNIT	<p>For the simultaneous error measurement of 20 meters under test, the basic unit shall be equipped with:</p> <ol style="list-style-type: none"> i. 20 inputs for scanning head pulses. ii. 1 input for reference output iii. 1 interface for connection with PC. iv. Controlled output for Dosage Operation (Dial Test).
6.0	NAME PLATE AND MARKING	All the components and Operating Devices of the test bench shall be provided with durable and legible nameplates containing all technical parameters. Name shall be embossed with "PO No. with date, "Property of TPNODL", along with Manufacturer's Name
7.0	TESTS	All routine, acceptance & type tests shall be carried out in accordance with the relevant IS/IEC. All routine & type tests shall be witnessed by the purchaser/his authorized representative. All the components shall also be type tested as per the relevant standards. Calibration certificate of the Reference Standard which will be supplied should have calibration certificate valid for a period of one year. This calibration should be done from laboratory accredited as per ISO/IEC 17025. Name of the laboratory shall be given in the bid.
7.1	TYPE TEST	Bidder must submit type test certificate of similar model fully automatic test system as per IS 12346.

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7.2	ROUTINE/ACCEPTANCE TEST	<p>The following checks are to be carried out for Fully- automatic Meter Testing Bench as per Appendix B (Clause 8) of IS 12346 detailed as under as applicable for fully - automatic test benches:</p> <ol style="list-style-type: none"> i. Mechanical construction. ii. Wiring and connections specially those of parts which can be moved. iii. Stated accuracy of all measuring instruments. iv. Di-electric properties. v. Phase Sequence. vi. Voltage Circuit Control. vii. Measuring range verification. viii. Voltage adjusting facility, regulating capacity at various loads. ix. Voltage balance adjustment facility. x. Verification of VA burden of voltage circuit. xi. Verification of VA burden of current circuit. xii. Current Circuit control. xiii. Measuring range verification. xiv. Current circuit regulating facility and verification of capacity on various loads. xv. Measuring circuits. xvi. Accuracy of display of various parameters like, current, voltage, P.F., phase angle etc. of measuring range, measuring methods, checking of phase displacement (lagging-leading). xvii. Accuracy of measurement of energy by connecting High precision reference meter with it. xviii. Distortion factor Control xix. Input terminals of meter testing bench. xx. Output terminals of Meter Testing Bench. xxi. Software operated controls for measurements of voltage & current circuits & other parameters. xxii. Verification of various output reports.
8.0	TYPE TEST CERTIFICATE	<p>The bidder shall furnish the type test certificates of the meter for the tests as mentioned above as per the corresponding standards. All the tests shall be conducted at CPRI/ERDA as per the relevant standards. For communication testing any national approved laboratory or international acclaimed lab or equivalent will also suffice at the discretion of TPNODL. Type test should have been conducted in certified Test Laboratories during the period not exceeding 5 years from the date of opening the bid. In the event of any discrepancy in the test reports i.e. any test report not acceptable or any/all type tests (including additional type tests, if any) not carried out, same shall be carried out without any cost implication to TPNODL.</p>
9.0	PRE-DESPATCH INSPECTION	<p>Equipment shall be subject to inspection by a duly authorized representative of the TPNODL. Inspection may be made at any stage of manufacture at the discretion of the purchaser and the equipment, if found unsatisfactory as to workmanship or material, the same is liable to rejection.</p>

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		<p>Equipment shall be subject to inspection by a duly authorized representative of the Purchaser. Bidder shall grant free access to the places of manufacture to TPNODL's representatives at all times when the work is in progress. Inspection by the TPNODL or its authorized representatives shall not relieve the bidder of his obligation of furnishing equipment in accordance with the specifications. Material shall be dispatched after specific MDCC (Material Dispatch Clearance Certificate) is issued by TPNODL.</p> <p>Following documents shall be sent along with material</p> <ul style="list-style-type: none"> a) Test reports b) MDCC issued by TPNODL c) Invoice in duplicate d) Packing list e) Drawings & catalogue f) Guarantee / Warrantee card g) Delivery Challan h) Other Documents (as applicable) i) One no. leaflet with each meter
10.0	INSPECTION AFTER RECEIPT AT STORE	<p>The material received at TPNODL store shall be inspected for acceptance and shall be liable for rejection, if found different from the reports of the pre-dispatch inspection and one copy of the report shall be sent to concerned Project Engineering department.</p> <p>The supply shall be accepted only after such test is done successfully, as it confirms on successful withstand of short circuit and healthiness of the active parts.</p>
11.0	GUARANTEE	<p>Bidder shall stand guarantee towards design, materials, workmanship & quality of process / manufacturing of items under this contract for due and intended performance of the same, as an integrated product delivered under this contract. In the event any defect is found by the purchaser up to a period of at least 60 months from the date of commissioning or 66 months from the date of last supplies made under the contract whichever is earlier, Bidder shall be liable to undertake to replace/rectify such defects at its own costs, within mutually agreed time frame, and to the entire satisfaction of the Company, failing which the purchaser will be at liberty to get it replaced/rectified at bidder's risks and costs and recover all such expenses plus the Company's own charges (@ 20% of expenses incurred), from the bidder or from the " Security cum Performance Deposit" as the case may be.</p> <p>Bidder shall further be responsible for 'free replacement at site' for another period of THREE years from the end of the guarantee period for any 'Latent Defects' if noticed and reported by the purchaser.</p>
12.0	PACKING	<p>Bidder shall ensure that all material covered under this specification shall be prepared for rail/road transport (local equipment) and be packed in such a manner as to protect it from damage in transit. The material used for packing shall be environmentally friendly.</p>
13.0	TENDER SAMPLE	N.A.
14.0	QUALITY CONTROL	<p>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>

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		<p>14.1 The bidder shall invariably furnish following information along with his bid, failing which his bid shall be liable for rejection. Information shall be separately given for individual type of equipment offered.</p> <ol style="list-style-type: none"> a. 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. b. Information and copies of test certificates as in (l) above in respect of bought out accessories. c. List of manufacturing facilities available. d. Level of automation achieved and list of areas where manual processing exists. e. List of areas in manufacturing process, where stage inspections are normally carried out for quality control and details of such test and inspection. f. List of testing equipment available with the bidder for final testing of equipment along with valid calibration reports shall be furnished with the bid. Manufacturer shall possess 0.1 class instruments for measurement of losses. g. Quality Assurance Plan (QAP) with hold points for Purchaser's inspection as per annexure. <p>14.2 The successful bidder shall within 30 days of placement of order, submit following information to the Purchaser.</p> <ol style="list-style-type: none"> a. List of raw materials as well as bought out accessories and the names of sub-suppliers selected from those furnished along with offer. b. Type test certificates of the raw materials and bought out accessories. <p>14.3 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.</p>
15.0	MINIMUM TESTING FACILITIES	Bidder shall have adequate in house testing facilities for carrying out all routine tests & acceptance tests as per relevant International / Indian standards/TPNODL specification. The bidder shall have duly calibrated Reference Standard meter of Class 0.01 accuracy or better.
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. This bar chart will have to be submitted within 15 days from the release of the order.

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17.0	SPARES, ACCESSORIES AND TOOLS	<p>17.1-INSTALLATION & COMMISSIONING-The supplier shall be responsible to install & commission the meter test equipment at the purchaser location. The supplier shall submit the layout plan, installation proposal and electric supply requirements within 4 weeks after receiving the purchase order.</p> <p>17.2-TRAINING- The supplier shall provide Seven days training on operation and maintenance of the meter test equipment to engineers of TPNODL, without any cost implication towards TPNODL. (Excluding the period of installation and commissioning)</p>																																													
18.0	DRAWINGS AND DOCUMENTS	<p>Following drawings & Documents shall be prepared based on TPNODL specifications and statutory requirements and shall be submitted with the bid:</p> <ol style="list-style-type: none"> a) Completely filled-in Technical Parameters. b) General arrangement drawing of the meter c) Terminal Block dimensional drawing d) Mounting arrangement drawings. e) General description of the equipment and all components with makes and technical requirement f) Type Test Certificates g) Experience List h) Manufacturing schedule and test schedule <p>After the award of the contract, four (4) copies of following drawings, drawn to scale, describing the equipment in detail shall be forwarded for approval:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">S. No.</th> <th style="width: 60%;">Description</th> <th style="width: 10%;">For Approval</th> <th style="width: 10%;">For Review Information</th> <th style="width: 10%;">Final Submission</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>Technical Parameters</td> <td style="text-align: center;">√</td> <td></td> <td style="text-align: center;">√</td> </tr> <tr> <td style="text-align: center;">2</td> <td>General Arrangement drawings</td> <td style="text-align: center;">√</td> <td></td> <td style="text-align: center;">√</td> </tr> <tr> <td style="text-align: center;">3</td> <td>Terminal block Dimensional drawings</td> <td style="text-align: center;">√</td> <td></td> <td style="text-align: center;">√</td> </tr> <tr> <td style="text-align: center;">4</td> <td>Mounting arrangement drawing.</td> <td style="text-align: center;">√</td> <td></td> <td style="text-align: center;">√</td> </tr> <tr> <td style="text-align: center;">5</td> <td>Manual/Catalogues</td> <td></td> <td style="text-align: center;">√</td> <td></td> </tr> <tr> <td style="text-align: center;">6</td> <td>Transport/ Shipping dimension drawing</td> <td></td> <td style="text-align: center;">√</td> <td style="text-align: center;">√</td> </tr> <tr> <td style="text-align: center;">7</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;">8</td> <td>Routine, Acceptance and Type Test Certificates</td> <td style="text-align: center;">√</td> <td style="text-align: center;">√</td> <td style="text-align: center;">√</td> </tr> </tbody> </table> <p>Bidder 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 TPNODL.</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</p>	S. No.	Description	For Approval	For Review Information	Final Submission	1	Technical Parameters	√		√	2	General Arrangement drawings	√		√	3	Terminal block Dimensional drawings	√		√	4	Mounting arrangement drawing.	√		√	5	Manual/Catalogues		√		6	Transport/ Shipping dimension drawing		√	√	7	QA & QC Plan	√	√	√	8	Routine, Acceptance and Type Test Certificates	√	√	√
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		<p>instructions and all relevant information and drawings pertaining to the main equipment as well as auxiliary devices.</p> <p>DOCUMENTATION-The bidder shall submit detailed General arrangement drawing for Source, Meter Mounting Rack with different terminal required for voltage and current circuit connection, proposed installation scheme of complete system and leads and connectors provided to mount any number of meters on the Meter Mounting Rack along with their offer. In absence of this their offer will liable to rejection.</p> <p>Two set of following documents shall be supplied along with each test system.</p> <ul style="list-style-type: none"> • Operating manual of each components of test equipment like reference standard, amplifier, etc. • Wiring diagram • Service manual • Calibration certificate of reference standard from the laboratory accredited as per ISO/IEC/17025 • Test certificate of complete test system 		
19.0	GUARANTEED TECHNICAL PARTICULARS	S.No.	Specifications	To be furnished by bidder
		1	OPERATING CONDITIONS:	
			The meter test system shall be suitable for giving an uninterrupted service in following conditions:	
		1.1	Ambient temperature (-) 10°C to (+) 45°C for operation.	
		1.2	Relative humidity up to 95%.	
		1.3	Mains voltage shall be 240V ± 10% for Single phase supply.	
		1.4	Frequency 50Hz ± 5 %.	
		2	TEST TO BE PERFORMED	
		2.1	The offered meter test system shall be capable to perform the following tests on the meters as per IEC 62052-11, 62053-11,21,22,23, IS 13779 and IS 16444	
		2.2	Simultaneous calibration/ testing of ERS Meter	
		2.3	Pre-warming	
		2.4	Accuracy test as per IS/IEC	
		2.5	Starting current test	
		2.6	Creep test	
		2.7	Dial test	
		2.8	Influence quantity test related to accuracy test and harmonics	
			Voltage, Frequency, reverse phase sequence, voltage unbalance	
			Influence of Harmonic component in voltage and current circuit	
		2.9	Phase and Neutral circuit should be tested independently without changing connection physically	
		3	CONSTRUCTION AND COMPONENT OF SYSTEM	
		3.1	The source cabinet shall be rack mounted cabinet on which components of the source and reference standard shall be placed.	
		3.2	The source cabinet shall have protective earth terminal.	

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		Protection against overload, under voltage and over voltage of mains supply shall be provided.	
		The amplifier used in the source shall have high efficiency, power factor compensation device.	
	3.3	System shall be easily programmable to give reference output frequency independent of mains, with quartz controlled operation range from 45-60Hz Hz in steps of 0.01 Hz. The system shall comprise of :	
	3.3.1	Voltage amplifier and current amplifiers	
	3.3.2	Single Phase Reference Meter	
	3.3.3	Harmonic Injection Unit.	
	3.3.4	Window based software to operate the system.	
	3.3.5	Source should have : Stability at inductive, capacitive and non-linear loads for the power factor, Protection against O/L and short circuit. Provision for superimposition of voltage and current harmonics for the range of 2nd to 40th harmonics. Note: - All major equipment of Test Bench like Power Source, Reference Meter, Measuring Unit, Scanner, ICT and MSVT from one manufacturer. This all equipment shall have CE marking	
	4.0	VOLTAGE AMPLIFIER:	
		Voltage amplifier should have following capabilities:	
		Electronic protection against O/L and Short Circuit. LED indication for fault shall be provided on amplifier.	
		Efficiency better than 85%.	
		Stability 100 ppm / h, or better ,	
		Distortion factor < 0.5 %.	
		Provision of super imposing of harmonics in the range of 2nd to 31st harmonic	
		Test voltage range: 30 -300 V (Phase-Neutral)	
		Output Power : not less than 500VA	
		Accuracy of the test setting amplitude 0.05 % or better	
		Accuracy of the test setting phase adjustment 0.01 ° or better.	
	5.0	CURRENT AMPLIFIER	
		Current amplifiers should have following capabilities	
		Electronic protection against open circuit and over load.	
		Efficiency better than 85%.	
		Stability 100 ppm / h with integration time of 60 sec	
		Accuracy of the test setting amplitude 0.05 % or better	
		Accuracy of the test setting phase adjustment 0.01 °	
		Distortion factor 0.5 %	
		Output circuit shall be protected against open circuit/overload	
		Provision of super imposing of harmonics in the range of 2nd to 31st harmonic.	
		Test Current range 1 mA to 120 A	
		Output Power : not less than 600 VA	

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		6.0	HARMONIC INJECTION UNIT:	
			Over the range 2nd to the 31st harmonic to the test voltage and test current, Magnitude of each harmonic shall be adjustable from 0-40% fundamental wave; with maximum peak value of the wave form shall be 130% of the magnitude of the fundamental wave. Facility of controlling the phase angle of harmonics shall be provided (0 to 180 degree).	
		7.0	SPECIFICATION OF ELECTRONIC REFERENCE STANDARD METER (RSM):	
		7.1	The class of accuracy of reference standard should be 0.02 or better for active and reactive energies, over the entire load range & independent of the measuring mode.	
		7.2	Current range of reference standard should be 1 mA to 120 A direct connected.	
		7.3	Voltage range from 10-480V (phase - neutral)	
		7.4	Frequency output proportional to the power to calibrate against better standard.	
		7.5	RS 232 serial communication port for communicating with PC.	
		7.6	Reference standard should have auto-range selection facility.	
		7.7	Technical specifications of Reference Standard Meter of the test system(RSM)	
		7.7.1	Measuring modes	
		7.7.1.1	<ul style="list-style-type: none"> • 2 wire active , • 2 wire reactive mode 	
		7.7.2	Frequency Range	
			Basic frequency 40-70 Hz and total detectable frequency range 0...3500 Hz	
		7.7.3	Voltage Range : 10-480 V Phase to Neutral	
		7.7.4	Current Ranges: 1 mA to 120A direct connected	
		7.7.5	Accuracy	
		7.7.5.1	Voltage & Current : 0.01%	
		7.7.5.3	Power / Energy (For active and reactive measurement)	
			0.02 % at $\cos \phi$ or $\sin \phi = 1$ (20mA to 120A)	
			0.04 % at $\cos \phi$ or $\sin \phi = 0.5$ (20mA to 120mA)	
			0.05 % for the range of 1 mA to 50 mA at $\cos \phi = 1$ or $\sin \phi = 1$	
		7.7.5.4	The Accuracy shall be same for Active and reactive measurement	
		7.7.5.5	Phase Angle Accuracy 0.01 °	
		7.7.5.6	Voltage, Current & Power measurement drift shall be equal to or better than 100PPM / year . Drift for individual parameters shall be defined clearly in the offer.	

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		7.7.5.7	A common modular cabinet should be used for housing source and reference standard. All the measured values like voltage, current, power, phase angle, frequency should be available on the display screen of the control PC and on the local display of reference meter	
		7.7.5.8	Temperature drift for power measurement shall be 10PPM/K or better	
		7.7.6	Display of reference standard	
		7.7.6.1	The reference meter shall have following display parameters.	
		7.7.6.2	voltage & current	
		7.7.6.3	Phase angle between voltage / current and defined reference	
		7.7.6.4	Power factor	
		7.7.6.9	Frequency, Waveshape of Selected voltage or current signal and Harmonics in the selected phase along with THD information	
		7.7.7	Reference Channel	
			The RSM shall have facility to select reference for phase angle measurement. Selection of reference shall be provided automatically.	
		7.7.8	Frequency output for calibration of reference standard:	
			This shall provide frequency output proportional to power to calibrate the reference standard against high precision reference standard. This output shall be in commonly used BNC type socket.	
		8.0	Multi-secondary voltage transformer / ICT	
		8.1	Multi Secondary Voltage Transformer Test bench shall include MSVT to facilitate testing of link-less single-phase meters. MSVT shall be installed in the voltage circuit of the test bench with minimum 22 secondary windings and one primary winding, other specifications being Ratio Error (worst case) : 0.05% Maximum Sec. Voltage : 300 V AC Isolation Current Transformer: Ratio: 1:1 Ratio Error: better than 0.02% Phase Error: better than 0.8 Min. for current range: 100mA ... 120A Output VA: 60VA/Phase (with Single turn)	
		9.0	SOFTWARE :	
			The user friendly software should be menu driven operated with the help of mouse and keyboard in manual/automatic mode. The Manual operation mode shall allow following tasks: <ul style="list-style-type: none"> • Control the source • Actual value on PC screen • Wave form of output and Harmonic analysis 	

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			<ul style="list-style-type: none"> • Perform the accuracy test <p>The program should support the following tasks:</p> <ul style="list-style-type: none"> • User interface to operate the system • Easy to prepare test table by using “ drag & drop “ concept • Supervision and control of the test procedure • Supervision and display of the test current and voltage • Indication of the errors of the meters to test • Evaluation and report of the test results • Manual testing, semiautomatic and automatic testing facility • Adjustment testing i.e. software shall guide to the operator for the adjustment of particular screw in case of Ferrari meters • It shall have facility to interrupt the testing restart it again. • Password facility for each main and sub-option • Print out facility with desired header • Absolute measurement with more precious standard • Testing facility of at-least 20 different meters with 20 different constants. • Software shall have facility to display of different voltage and current • Display of curve of test voltage and current in presence of harmonics. • Protection of Meter under test form high voltage and current. <p>The software shall have facility to display following parameters.</p> <ul style="list-style-type: none"> • Individual phase voltage • Individual phase current • Phase angle, power factor symmetrical or unsymmetrical star system • Total Power Factor • Individual phase power (Active, 	
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		<p>Reactive and Apparent)</p> <ul style="list-style-type: none"> • Total Power (Active, Reactive and Apparent) • Frequency • Phase Sequence • Measurement mode • Vectorial display • Analog view 	
	10.0	METER MOUNTING RACK	
	10.1	The rack shall consist of a lightweight aluminum frame for mounting of sensor heads, display devices and meters under test, from OEM (Original Equipment manufacturer)	
	10.2	Meter shall get connected to the current circuit by means of quick acting connector and voltage circuit by means of connecting leads. Design of the frame should be such that ERS (substandard meter) or 20 nos. meters of any make can be safely and easily accommodated on it. Meter mounting rack shall additionally have emergency stop switch.	
	10.3	In addition to above Meter Mounting Rack shall have all necessary arrangement which shall include connectors, BNC socket and platform to keep and test substandard Meters. The Rack shall be designed in such a way that sub standard meter of any make can be kept and can be tested simultaneously in fully automatic mode.	
	10.4	There should be a warning lamp & two emergency push button on Meter mounting rack	
	10.5	Necessary socket to test standard meters against higher accuracy standard shall be provided on Meter Mounting Rack.	
	10.6	The Meter Mounting Rack shall be provided with necessary BNC sockets for absolute measurement. The offered software shall have facility to test the external and internal reference standards by using these BNC terminals. These terminals shall be provided with necessary hardware.	
	11.0	PC and printer as per Cl.no. 5.8(Yes/no)	
	12.0	Scanning head and error indication units as per Cl.no-5.11(Yes/no)	
	13.0	Digital process unit as per Cl.no. 5.12(Yes/no)	
	14.0	Connection cables to be supplied(Yes/No)	

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20.0	SCHEDULE OF DEVIATIONS	<p style="text-align: center;">(TO BE ENCLOSED WITH THE BID)</p> <p>All deviations from this specification shall be set out by the Bidders, clause by Clause in this schedule. Unless specifically mentioned in this Schedule, the tender shall be deemed to confirm the purchaser's specifications:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">S. No.</th> <th style="width: 25%;">Clause No.</th> <th style="width: 60%;">Details of deviation with justifications</th> </tr> </thead> <tbody> <tr> <td style="height: 200px;"></td> <td></td> <td></td> </tr> </tbody> </table> <p>We confirm that there are no deviations apart from those detailed above.</p> <p>Seal of the Company:</p> <div style="text-align: right; margin-top: 20px;"> <p>Signature</p> <p>Designation</p> </div>	S. No.	Clause No.	Details of deviation with justifications			
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1.0	SCOPE	<p>This Specification covers the technical requirements of design, engineering, manufacturing, testing at manufacturer's works, packing, forwarding, supply, unloading and commissioning of Fully Automatic Modular Twenty position Meter Test Bench for Three phase Meters at site.</p> <p>The Sub Standard Meter should be of 0.02 Accuracy Class for testing of electricity meters of class 0.2, 0.5 and 1 available with utility can be tested for IS 13779 & IS 14697 latest amendment.</p> <p>The test bench should consist of transformer operated voltage and current source, a high accuracy class Reference standard meter of 0.02 class, DC and Harmonic injection kit, computer system with meter test software resident on it and energy meter mounting rack.</p> <p>In addition to above, bidder shall also be required to provide:</p> <ol style="list-style-type: none"> i. Operations & Maintenance Manuals including drawings. ii. Training to at least four personnel from TPNODL personals on all aspects of operation, maintenance and trouble shooting. iii. Continued technical support during warranty period. <p>It is not the intent to specify completely herein all the details of tech design and construction of material. However, the material shall conform in all respects to high standards of engineering, design and workmanship and shall be capable of performing in continuous commercial operation in manner acceptable to TPNODL, who will interpret the meanings of drawings and specification and shall have the power to reject any work or material which, in his judgment is not in accordance therewith. The offered material shall be complete with all components necessary for their effective and trouble free operation. Such components shall be deemed to be within the scope of Bidder's supply irrespective of whether those are specifically brought out in this specification and/or the commercial order or not.</p>																		
2.0	APPLICABLE STANDARDS	<p>The equipment covered by this specification shall conform to the requirements stated in latest editions of relevant Indian/ IEC Standards and shall conform to the regulations of local statutory authorities.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: center;">a</td> <td style="width: 30%;">IS 12346: 1999</td> <td>Specifications for testing equipment for A.C. Electrical energy meter</td> </tr> <tr> <td style="text-align: center;">b</td> <td>IS 15707: 2006</td> <td>Testing Evaluation Installation and maintenance of AC Electricity Meters – Code of practices</td> </tr> <tr> <td style="text-align: center;">c</td> <td>IEC 60736</td> <td>Testing equipment for electrical energy meters</td> </tr> <tr> <td style="text-align: center;">D</td> <td>IEC 62052-11</td> <td>Electricity metering equipment (AC) General requirements, tests and test conditions Part 11: Metering equipment</td> </tr> <tr> <td style="text-align: center;">E</td> <td>IEC 62053-11,21,22,23</td> <td>Electricity metering equipment (AC) Particular requirements- Static meter for active energy(Class 1 and 2)</td> </tr> <tr> <td style="text-align: center;">f</td> <td>IEC 61010</td> <td>Safety requirements for electrical equipment for measurement, control, and laboratory use</td> </tr> </table>	a	IS 12346: 1999	Specifications for testing equipment for A.C. Electrical energy meter	b	IS 15707: 2006	Testing Evaluation Installation and maintenance of AC Electricity Meters – Code of practices	c	IEC 60736	Testing equipment for electrical energy meters	D	IEC 62052-11	Electricity metering equipment (AC) General requirements, tests and test conditions Part 11: Metering equipment	E	IEC 62053-11,21,22,23	Electricity metering equipment (AC) Particular requirements- Static meter for active energy(Class 1 and 2)	f	IEC 61010	Safety requirements for electrical equipment for measurement, control, and laboratory use
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3.0	CLIMATE CONDITIONS OF THE INSTALLATION	<p>a) Max. Ambient Temperature : 50 deg.C b) Max. Daily average ambient temp. : 40 deg.C c) Min Ambient Temp : 0 deg C d) Maximum Humidity : 95% e) Minimum Humidity : 10% f) Average No. of thunderstorm days per annum : 50 g) Maximum Annual Rainfall : 1450 mm h) Average No. of rainy days per annum : 60 i) Rainy months : June to Oct. j) Altitude above MSL not exceeding : 1000 meters k) Wind Pressure : 150 kg/sq m up to an elevation at 10 m.</p> <p>The atmosphere is generally laden with mild acid and dust in suspension during the dry months and is subjected to fog in cold months. The design of equipment and accessories shall be suitable to withstand seismic forces corresponding to an acceleration of 0.3 g.</p>
4.0	GENERAL TECHNICAL REQUIREMENTS	
4.1	APPLICATION	To provide facilities for carrying out routine, acceptance and certification test on all types of Electronic meters from single phase meter, three phase whole current, CT energy Meters and & Portable Reference meters in Active, Reactive & Apparent Mode.
4.2	OPERATING CONDITIONS	<p>The meter test system shall be suitable for giving an uninterrupted service in following Conditions:</p> <p>a. Mains voltage shall be 230/440V ± 10% for Three phase supply. b. Frequency 50Hz ± 5 %. c. Ambient temperature (-) 10°C to (+) 45°C for operation and from (-) 10°C to (+) 60°C for storage. d. Relative humidity up to 95%. e. Cabinet for source must be dust proof.</p>
4.3	TEST TO BE PERFORMED	<p>The offered meter test system shall be capable to perform the following tests on the meters as per IEC 62052-11, 62053-11,21,22,23, IS 13779 and IS 14697</p> <p>a. Simultaneous calibration/ testing of ERS Meter b. Pre-warming c. Accuracy test as per IS/IEC d. Starting current test e. Creep test f. Dial test g. Influence quantity test related to accuracy test.</p> <ul style="list-style-type: none"> ▪ Voltage, Frequency, reverse phase sequence, voltage unbalance. ▪ Influence of Harmonic component in voltage and current circuit, odd and sub harmonic, DC and Even harmonics and voltage dip and interruption test. <p>In addition, the offered meter-testing system shall be capable to perform the following tests on RSS and ERSS under testing using frequency output of built-in ERSS.</p> <p>h) Accuracy testing of reference standard used into test system against high precision reference standard i) Accuracy testing of reference standard (low accuracy) against the built in reference standard. j) The smart meter switch connection and disconnection over the air commands on no-load condition for all meters simultaneously. k) Smart meter communication testing and switch opening testing.</p> <p>Note: Phase and Neutral circuit should be tested independently without changing connection physically.</p>

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5.0	GENERAL CONSTRUCTIONS																						
5.1	CONSTRUCTION AND COMPONENT OF SYSTEM	<p>1. The cabinet shall be rack mounted cabinet on which components of the source and reference standard shall be placed.</p> <p>2. This cabinet shall have facility for easy opening and closing as and when required, preferably with doors system. Doors shall be lockable to allow access by authorised personnel only. In the case of closed-type cabinet, a cooling fan of suitable capacity shall be provided to avoid temperature increase inside the cabinet during normal operation.</p> <p>3. The cabinet shall have protective earth terminals which shall be earthed during installation at site</p> <p>4. The cabinet shall have one mains-switch to switch-off the incoming power supply. The cabinet shall also be protected against overload, under voltage and over voltage through suitable protection devices.</p> <p>5. With its doors closed, the cabinet housing the source and reference standard shall provide degree of protection equal to or better than IP-30.</p> <p>6. The amplifier used in the source shall have high efficiency, power factor compensation device.</p> <p>7. The source shall be easily programmable so as to provide:</p> <p>a) Reference output frequency independent of mains, with quartz controlled operation range from 45 Hz. to 65 Hz. in steps of 0.01 Hz. with high efficiency, power-factor compensation according to IEC 60555.</p> <p>b) Stability at inductive, capacitive and non-linear loads for the power factor.</p> <p>c) Protection against overload and short circuit and provision for superimposition of harmonics in the range of 2nd to 31st harmonics.</p> <p>8. OEM must be the manufacturer of all the major equipment's impacting the accuracy of Test bench like Reference standard meter, Power source and ICT's. These all equipment's shall have CE/ISI marking and should be modular in design.</p> <p>Power Factor compensation shall be provided as per IEC 60555 so that the meter-testing system shall draw purely sinusoidal current from the mains A.C. supply without polluting it.</p> <p>Note: -The PC and associated IT services can be outsourced. The spares shall be available for 20 years from supply. Undertaking to be submitted along with bid.</p>																					
5.2	SPECIFICATION OF VOLTAGE AMPLIFIER	<p>Voltage amplifier should have following capabilities:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">S.No.</th> <th style="text-align: center;">DESCPRITION</th> <th style="text-align: center;">MEASURMENT</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>Electronic protection against Overload and Short Circuit.</td> <td></td> </tr> <tr> <td style="text-align: center;">2</td> <td>LED indication for faults like overload, short circuit and power supply failure shall be provided.</td> <td></td> </tr> <tr> <td style="text-align: center;">3</td> <td>Efficiency</td> <td>Better than 85%.</td> </tr> <tr> <td style="text-align: center;">4</td> <td>Stability</td> <td>100 ppm / h, or better with integration time of 60 seconds</td> </tr> <tr> <td style="text-align: center;">5</td> <td>Distortion factor</td> <td>< 0.5 %.</td> </tr> <tr> <td style="text-align: center;">6</td> <td>Provision for super-imposing of harmonics in the range of</td> <td>2nd to 31st harmonic minimum</td> </tr> </tbody> </table>	S.No.	DESCPRITION	MEASURMENT	1	Electronic protection against Overload and Short Circuit.		2	LED indication for faults like overload, short circuit and power supply failure shall be provided.		3	Efficiency	Better than 85%.	4	Stability	100 ppm / h, or better with integration time of 60 seconds	5	Distortion factor	< 0.5 %.	6	Provision for super-imposing of harmonics in the range of	2 nd to 31st harmonic minimum
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5.4	SPECIFICATION OF ELECTRONIC REFERENCE STANDARD METER (RSM)	<p>Reference standard should have auto-range selection facility and facility of dial test (power dosing) and RS 232 serial communication port for communicating with PC. It must frequency output proportional to the power to calibrate against better standard.</p> <table border="1"> <thead> <tr> <th>S.No.</th> <th>DESCRPTION</th> <th>MEASURMENT</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>The class of accuracy of reference standard should be 0.02 or better for active and reactive energies, over the entire load range & independent of the measuring mode.</td> <td>0.02 or better</td> </tr> <tr> <td>2.</td> <td>Measuring modes</td> <td>4 wire active and 4 wire reactive mode</td> </tr> <tr> <td>3.</td> <td>Frequency Range</td> <td>Basic frequency 40-70 Hz and total detectable frequency range 0...3000 Hz</td> </tr> </tbody> </table>	S.No.	DESCRPTION	MEASURMENT	1.	The class of accuracy of reference standard should be 0.02 or better for active and reactive energies, over the entire load range & independent of the measuring mode.	0.02 or better	2.	Measuring modes	4 wire active and 4 wire reactive mode	3.	Frequency Range	Basic frequency 40-70 Hz and total detectable frequency range 0...3000 Hz																								
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		4.	Voltage Range	10-480V (phase - neutral)	
		5.	Current Ranges	1 mA to 120A direct connected	
		6.	Accuracy (shall be same for Active and reactive measurement)		
		a.	Power / Energy (For active and reactive measurement)		
			0.02 % at $\cos\phi =1$ or $\sin\phi =1$ (10mA to 120A)		
			0.04 % at $\cos\phi =0.5$ or $\sin\phi =0.5$		
			0.05 % for the range of 1 mA to 50 mA at $\cos\phi =1$ or $\sin\phi =1$		
		b.	Voltage		
			0.01 % for the range of 10 V to 480 V (P-N)		
		c.	Current		
			0.01 % (50 mA to 120 A)		
			0.02 % (10 mA to 50 mA)		
			0.05 % (1 mA to 10 mA)		
		7.	Phase Angle Accuracy	0.01 °	
		8.	Voltage, Current & Power measurement drift (Drift for individual parameters shall be defined clearly in the offer.)	equal to or better than 100PPM / year	
		9.	A common modular cabinet should be used for housing source and reference standard. All the measured values like voltage, current, power, phase angle, frequency should be available on the display screen of the control PC and on the local display of reference meter.		
		10.	Temperature coefficient(Bidder Should submit certificate of Reference standard along with Bid to specify the temperature coefficient of Reference standard	10PPM/ K or better	
		11.	Display -The reference meter shall have following display parameters. (All the parameters also required in actual graphical mode with wave form with THD% value) This is a feature required as per ISO17025/NABL		
		a.	True RMS value of each voltage & current input		
		b.	Phase angle between voltage / current and defined reference		
		c.	Power factor		
d.	Frequency				
e.	Active , reactive & apparent power				
f.	Integration time				
12.	Facility to select integration time between 1 to 99 second shall be provided in the RSM.				
13.	Reference Channel				
	The RSM shall have facility to select reference for phase angle measurement. Selection of reference shall be provided manually and automatically.				
14.	Frequency output				
	This shall provide frequency output proportional to power to calibrate the reference standard against high precision reference standard. This output shall be in commonly used BNC type socket.				

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5.5	SPECIFICATION OF ICT	<p>Test bench shall include ICT to facilitate testing of link-less single-phase and poly phase meters.</p> <p>Nominal primary current 100A Maximum Primary current 120A Nominal Secondary Current 100A Maximum Secondary current 120A VA rating 50VA@ 100A Accuracy ratio error $\pm 0.01\%$ (1A to 120A) Accuracy ratio error $\pm 0.03\%$ (0.15A to <1A) Accuracy ratio error $\pm 0.15\%$ (0.02A to <0.15A) Accuracy ratio error $\pm 0.3\%$ (0.01A to <0.02A) Phase angle error ± 1 min (1A to 120A) Phase angle error ± 3 min (0.15A to <1A) Phase angle error ± 10 min (0.02A to <0.15A)</p> <p>There shall be provision to bypass individual ICT automatically when secondary of ICT kept open and same shall be logged in the meter test report in software. Sufficient protection should be provided in the ICT to protect it when secondary opens and full load current is running in primary.</p> <p>ICT should be designed in such a way that the primary and secondary of ICT can carry full load current of 120A for two hours minimum without any heating or failure of any component.</p> <p>The ICT with fault indication is preferred. And the software shall log and provide the faults in ICT such as overload or open circuit. Manufacturer traceable test report/calibration reports to be submitted along with bid.</p>
5.6	SPECIFICATION OF HARMONIC INJECTION UNIT	<p>Over the range 2nd to the 31st harmonic to the test voltage and test current, Magnitude of each harmonic shall be adjustable from 0-40% of the fundamental wave and with maximum peak value of the wave form shall be 130% of the magnitude of the fundamental wave. Facility of controlling the phase angle of harmonics shall be provided (0 to 180 degree). The super-imposition of harmonics shall be possible to carry out all the tests prescribed in IS and this document.</p>
5.7	SOFTWARE	<p>The user friendly software should be menu driven operated with the help of mouse and keyboard in manual/automatic mode.</p> <p>The Manual operation mode shall allow following tasks:</p> <ul style="list-style-type: none"> • Control the source • Actual value on PC screen • Wave form of output and Harmonic analysis • Perform the accuracy test <p>The licensed proprietary software of meter testing equipment shall allow, at least, performance of following tasks -</p> <ul style="list-style-type: none"> • User interface to operate the system • Easy to prepare test table by using “ drag & drop “ concept

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		<ul style="list-style-type: none"> • Supervision and control of the test procedure • Supervision and display of the test current and voltage • Indication of the errors of the meters under test • Evaluation and report of the test results • Manual testing, semiautomatic and automatic testing facility • Adjustment testing i.e. software shall guide to the operator for the adjustment • It shall have facility to define the test parameters in terms of percentage and absolute terms. • It shall have facility to define the error limit in two levels. • It shall have facility to interrupt the testing and restart it again. • Password facility for each main and sub-option • Print out facility with desired header • Facility to take back up of data • Absolute measurement with more precious standard • Testing facility of at-least 20 different meters with 20 different constants. • Software shall have facility to display of different voltage and current • Display of curve of test voltage and current in presence of harmonics. • Protection of Meter under test form high voltage and current. • It shall have facility to protect the system from over voltage in manual and automatic mode. • It shall have facility to display of curve of test voltage and current in presence of harmonics. • Absolute measurement with higher precision /more accurate standard in fully automatic mode using BNC type socket provided on meter mounting rack. <p>The software shall have facility to display following parameters.</p> <ul style="list-style-type: none"> • Individual phase voltage • Individual phase current • Phase angle, power factor symmetrical or unsymmetrical star system • Total Power Factor • Total Power (Active, Reactive and Apparent) • Frequency • Phase Sequence • Measurement mode • Vectorial display
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		<ul style="list-style-type: none"> Analog view 																																	
5.8	TECHNICAL DATA FOR PC AND PRINTER	<table border="1"> <thead> <tr> <th>S.No.</th> <th>DESCPRITION</th> <th>MEASUREMENT</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Color Monitor</td> <td>24" Full HD LED Back lit</td> </tr> <tr> <td>2</td> <td>Intel Processor</td> <td>Intel core i7, 4.7GHZ Minimum</td> </tr> <tr> <td>3</td> <td>RAM</td> <td>16GB</td> </tr> <tr> <td>4</td> <td>HDD</td> <td>1TB</td> </tr> <tr> <td>5</td> <td>Cache Memory</td> <td>12 MB</td> </tr> <tr> <td>6</td> <td>DVD</td> <td>COMBO drive</td> </tr> <tr> <td>7</td> <td>Keyboard</td> <td>Type 104</td> </tr> <tr> <td>8</td> <td>Ports</td> <td>3 serial and 2 parallel, 2 USB</td> </tr> <tr> <td>9</td> <td>Printer</td> <td>LASER JET HP 1160 or better</td> </tr> <tr> <td>10</td> <td>Operation System</td> <td>Windows 7 or better</td> </tr> </tbody> </table>	S.No.	DESCPRITION	MEASUREMENT	1	Color Monitor	24" Full HD LED Back lit	2	Intel Processor	Intel core i7, 4.7GHZ Minimum	3	RAM	16GB	4	HDD	1TB	5	Cache Memory	12 MB	6	DVD	COMBO drive	7	Keyboard	Type 104	8	Ports	3 serial and 2 parallel, 2 USB	9	Printer	LASER JET HP 1160 or better	10	Operation System	Windows 7 or better
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5.9	SPECIFICATION OF METER MOUNTING RACK	<ol style="list-style-type: none"> The rack shall consist of a lightweight aluminum frame for mounting of sensor heads, display devices and meters under test. Meters under test shall get connected to the current circuit by means of quick acting connector and voltage circuit by means of connecting leads. Design of the frame should be such that ERS (substandard meter) or 20 nos. meters of any make can be safely and easily accommodated on it. Meter fixing arrangement shall be moveable in both X and Y axis for their easy installation. Meter mounting rack shall additionally have emergency stop switch. In addition to above Meter Mounting Rack shall have all necessary arrangement which shall include connectors, BNC socket and platform to keep & test substandard Meters. The Rack shall be designed in such a way that substandard meter of any make can be kept and can be tested simultaneously in fully automatic mode. There should be a warning lamp & two emergency push button on Meter mounting rack. Necessary socket to test standard meters against higher accuracy standard shall be provided on Meter Mounting Rack. The Meter Mounting Rack shall be provided with necessary BNC sockets for absolute measurement. The offered software shall have facility to test the external and internal reference standards by using these BNC terminals. These terminals shall be provided with necessary hardware. The offered meter test system should be capable to carry out following tamper test simultaneously <ul style="list-style-type: none"> Accuracy test for Three phase Meter for phase & Neutral channel for same magnitude of current. Accuracy test for Three phase Meter in case of reverse power for phase & Neutral channel for same magnitude of current. Facility to disconnection neutral simultaneously for all meters. 																																	
5.10	CONNECTION CABLES	Apart from connection cable required to install and commission the meter test system itself, Supplier shall provide the set of connection cable for meter under test																																	
5.11	SPECIFICATION FOR SCANNING HEAD AND ERROR	<ol style="list-style-type: none"> 1 photoelectric scanning head for each position suitable for reading the pulse output of electronic meters. 																																	

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	INDICATION UNITS	<p>2. Each scanning head should be designed in such a way that the scanning head can be fixed easily in a position which would facilitate accurate and proper testing of the meter-under-test. Mounting arrangement for scanning head should have facility to move vertical, horizontal, forward or backward directions.</p> <p>3. It should be insensitive to ambient light. It should give optical indication of pulses by LED.</p> <p>4. The scanner must be able to measure LED pulse output of frequency up to 500Hz.</p> <p>5. An Error indication device shall be mounted on each test position. The resolution of error indication shall be 4 ½ digit with decimal point configurable by software and the error indication unit should LED/LCD. There shall be provision on the error indication unit to reset the error or to repeat it if something is wrong. The same should have acknowledgement function while testing of starting and creep testing manually.</p>
5.12	SPECIFICATION FOR DIGITAL PROCESS UNIT	<p>For the simultaneous error measurement of 20 meters under test, the basic unit shall be equipped with: The system should be Communication Interface free.</p> <p>i. 20 inputs for scanning head pulses.</p> <p>ii. 1 input for reference output</p> <p>iii. 1 interface for connection with PC.</p> <p>iv. Controlled output for Dosage Operation (Dial Test).</p> <p>v. The LED displays shall be preferred.</p>
5.13	METER TEST BENCH TESTING CAPACITY	<p>The test bench should work for minimum 8 Hrs. continuously per day and should able to complete minimum 8 cycles of meter testing per day tests as per IS and NABL guidelines. The voltage source, current source and allied instruments must be design for handling this continuous loading and necessary cooling arrangement to be ensured.</p>
6.0	NAME PLATE AND MARKING	<p>All the components and Operating Devices of the test bench shall be provided with durable and legible nameplates containing all technical parameters. Name shall be embossed with "PO No. with date, "Property of TPNODL", along with Manufacturer's Name</p>
7.0	TESTS	<p>All routine, acceptance & type tests shall be carried out in accordance with the relevant IS/IEC. All routine & type tests shall be witnessed by the purchaser/his authorized representative. All the components shall also be type tested as per the relevant standards. Calibration certificate of the Reference Standard which will be supplied should have calibration certificate valid for a period of one year. This calibration should be done from laboratory accredited as per ISO/IEC 17025. Name of the laboratory shall be given in the bid.</p>
7.1	TYPE TEST	<p>Bidder must submit type test certificate of similar model fully automatic test system as per IS 12346.</p>
7.2	ROUTINE/ACCEPTANCE TEST	<p>The following checks are to be carried out for Fully- automatic Meter Testing Bench as per Appendix B (Clause 8) of IS 12346 detailed as under as applicable for fully - automatic test benches:</p> <p>i. Mechanical construction.</p> <p>ii. Wiring and connections specially those of parts which can be moved.</p> <p>iii. Stated accuracy of all measuring instruments.</p> <p>iv. Di-electric properties.</p>

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		<ul style="list-style-type: none"> v. Phase Sequence. vi. Voltage Circuit Control. vii. Measuring range verification. viii. Voltage adjusting facility, regulating capacity at various loads. ix. Voltage balance adjustment facility. x. Verification of VA burden of voltage circuit. xi. Verification of VA burden of current circuit. xii. Current Circuit control. xiii. Measuring range verification. xiv. Current circuit regulating facility and verification of capacity on various loads. xv. Measuring circuits. xvi. Accuracy of display of various parameters like, current, voltage, P.F., phase angle etc. of measuring range, measuring methods, checking of phase displacement (lagging-leading). xvii. Accuracy of measurement of energy by connecting High precision reference meter with it. xviii. Distortion factor Control xix. Input terminals of meter testing bench. xx. Output terminals of Meter Testing Bench. xxi. Software operated controls for measurements of voltage & current circuits & other parameters. xxii. Verification of various output reports. xxiii. Switch opening of smart meters.
8.0	TYPE TEST CERTIFICATE	<p>The bidder shall furnish the type test certificates of the meter for the tests as mentioned above as per the corresponding standards. All the tests shall be conducted at CPRI/ERDA as per the relevant standards. For communication testing any national approved laboratory or international acclaimed lab or equivalent will also suffice at the discretion of TPNODL. Type test should have been conducted in certified Test Laboratories during the period not exceeding 5 years from the date of opening the bid. In the event of any discrepancy in the test reports i.e. any test report not acceptable or any/all type tests (including additional type tests, if any) not carried out, same shall be carried out without any cost implication to TPNODL.</p>
9.0	PRE-DESPATCH INSPECTION	<p>Equipment shall be subject to inspection by a duly authorized representative of the TPNODL. Inspection may be made at any stage of manufacture at the discretion of the purchaser and the equipment, if found unsatisfactory as to workmanship or material, the same is liable to rejection.</p> <p>Equipment shall be subject to inspection by a duly authorized representative of the Purchaser. Bidder shall grant free access to the places of manufacture to TPNODL's representatives at all times when the work is in progress. Inspection by the TPNODL or its authorized representatives shall not relieve the bidder of his obligation of furnishing equipment in accordance with the specifications. Material shall be dispatched after specific MDCC (Material Dispatch Clearance Certificate) is issued by TPNODL.</p> <p>Following documents shall be sent along with material</p> <ul style="list-style-type: none"> a) Test reports b) MDCC issued by TPNODL c) Invoice in duplicate

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		<ul style="list-style-type: none"> d)Packing list e)Drawings & catalogue f) Guarantee / Warrantee card g)Delivery Challan h)Other Documents (as applicable) i) One no. leaflet with each meter
10.0	INSPECTION AFTER RECEIPT AT STORE	The material received at TPNODL store shall be inspected for acceptance and shall be liable for rejection, if found different from the reports of the pre-dispatch inspection and one copy of the report shall be sent to concerned Project Engineering department. The supply shall be accepted only after such test is done successfully, as it confirms on successful withstand of short circuit and healthiness of the active parts.
11.0	GUARANTEE	<p>Bidder shall stand guarantee towards design, materials, workmanship & quality of process / manufacturing of items under this contract for due and intended performance of the same, as an integrated product delivered under this contract. In the event any defect is found by the purchaser up to a period of at least 60 months from the date of commissioning or 66 months from the date of last supplies made under the contract whichever is earlier, Bidder shall be liable to undertake to replace/rectify such defects at its own costs, within mutually agreed time frame, and to the entire satisfaction of the Company, failing which the purchaser will be at liberty to get it replaced/rectified at bidder's risks and costs and recover all such expenses plus the Company's own charges (@ 20% of expenses incurred), from the bidder or from the " Security cum Performance Deposit" as the case may be.</p> <p>Bidder shall further be responsible for 'free replacement at site' for another period of THREE years from the end of the guarantee period for any 'Latent Defects' if noticed and reported by the purchaser.</p>
12.0	PACKING	Bidder shall ensure that all material covered under this specification shall be prepared for rail/road transport (local equipment) and be packed in such a manner as to protect it from damage in transit. The material used for packing shall be environmentally friendly.
13.0	TENDER SAMPLE/ TRAINING	N.A / 7 days training to be arranged for TPNODL representatives, for operating and handling of every software and hardware regarding test benches for Energy Meters, without any cost implication towards TPNODL.
14.0	QUALITY CONTROL	<p>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>14.1 The bidder shall invariably furnish following information along with his bid, failing which his bid shall be liable for rejection. Information shall be separately given for individual type of equipment offered.</p> <ul style="list-style-type: none"> a. 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. b. Information and copies of test certificates as in (l) above in respect of bought out accessories.

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		<p>c. List of manufacturing facilities available.</p> <p>d. Level of automation achieved and list of areas where manual processing exists.</p> <p>e. List of areas in manufacturing process, where stage inspections are normally carried out for quality control and details of such test and inspection.</p> <p>f. List of testing equipment available with the bidder for final testing of equipment along with valid calibration reports shall be furnished with the bid. Manufacturer shall possess 0.1 class instruments for measurement of losses.</p> <p>g. Quality Assurance Plan (QAP) with hold points for Purchaser's inspection as per annexure.</p> <p>14.2 The successful bidder shall within 30 days of placement of order, submit following information to the Purchaser.</p> <p>a. List of raw materials as well as bought out accessories and the names of sub-suppliers selected from those furnished along with offer.</p> <p>b. Type test certificates of the raw materials and bought out accessories.</p> <p>14.3 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.</p>
15.0	MINIMUM TESTING FACILITIES	Bidder shall have adequate in house testing facilities for carrying out all routine tests & acceptance tests as per relevant International / Indian standards/TPNODL specification. The bidder shall have duly calibrated Reference Standard meter of Class 0.01 accuracy or better.
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. This bar chart will have to be submitted within 15 days from the release of the order.
17.0	SPARES, ACCESSORIES AND TOOLS	<p>17.1-INSTALLATION & COMMISSIONING-The supplier shall be responsible to install & commission the meter test equipment at the purchaser location. The supplier shall submit the layout plan, installation proposal and electric supply requirements within 4 weeks after receiving the purchase order.</p> <p>17.2-TRAINING- The supplier shall provide Two days training on operation and maintenance of the meter test equipment to engineers of TPNODL. (Excluding the period of installation and commissioning)</p>
18.0	DRAWINGS AND DOCUMENTS	<p>Following drawings & Documents shall be prepared based on TPNODL specifications and statutory requirements and shall be submitted with the bid:</p> <p>a) Completely filled-in Technical Parameters.</p> <p>b) General arrangement drawing of the meter</p> <p>c) Terminal Block dimensional drawing</p> <p>d) Mounting arrangement drawings.</p> <p>e) General description of the equipment and all components with makes and technical requirement</p>

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		<p>f) Type Test Certificates g) Experience List h) Manufacturing schedule and test schedule</p> <p>After the award of the contract, soft copies of following drawings, drawn to scale, describing the equipment in detail shall be forwarded for approval:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">S. No.</th> <th style="width: 50%;">Description</th> <th style="width: 15%;">For Approval</th> <th style="width: 15%;">For Review Information</th> <th style="width: 10%;">Final Submission</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>Technical Parameters (GTP)</td> <td style="text-align: center;">√</td> <td></td> <td style="text-align: center;">√</td> </tr> <tr> <td style="text-align: center;">2</td> <td>General Arrangement drawings with all items of bench</td> <td style="text-align: center;">√</td> <td></td> <td style="text-align: center;">√</td> </tr> <tr> <td style="text-align: center;">3</td> <td>Terminal block Dimensional drawings</td> <td style="text-align: center;">√</td> <td></td> <td style="text-align: center;">√</td> </tr> <tr> <td style="text-align: center;">4</td> <td>Mounting arrangement drawing of bench</td> <td style="text-align: center;">√</td> <td></td> <td style="text-align: center;">√</td> </tr> <tr> <td style="text-align: center;">5</td> <td>Manual/Catalogues</td> <td></td> <td style="text-align: center;">√</td> <td></td> </tr> <tr> <td style="text-align: center;">6</td> <td>Drawing of Rack with RSM, Voltage and current source etc.</td> <td></td> <td style="text-align: center;">√</td> <td style="text-align: center;">√</td> </tr> <tr> <td style="text-align: center;">7</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;">8</td> <td>Routine, Acceptance and Type Test Certificates</td> <td style="text-align: center;">√</td> <td style="text-align: center;">√</td> <td style="text-align: center;">√</td> </tr> </tbody> </table> <p>Bidder shall subsequently provide Four 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 TPNODL.</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 information and drawings pertaining to the main equipment as well as auxiliary devices.</p> <p>DOCUMENTATION-The bidder shall submit detailed General arrangement drawing for Source, Meter Mounting Rack with different terminal required for voltage and current circuit connection, proposed installation scheme of complete system and leads and connectors provided to mount any number of meters on the Meter Mounting Rack along with their offer. In absence of this their offer will liable to rejection.</p> <p>Two set of following documents shall be supplied along with each test system.</p> <ul style="list-style-type: none"> • Operating manual of each components of test equipment like reference standard, amplifier, etc. • Wiring diagram • Service manual • Calibration certificate of reference standard from the laboratory accredited as per ISO/IEC/17025 • Test certificate of complete test system 	S. No.	Description	For Approval	For Review Information	Final Submission	1	Technical Parameters (GTP)	√		√	2	General Arrangement drawings with all items of bench	√		√	3	Terminal block Dimensional drawings	√		√	4	Mounting arrangement drawing of bench	√		√	5	Manual/Catalogues		√		6	Drawing of Rack with RSM, Voltage and current source etc.		√	√	7	QA & QC Plan	√	√	√	8	Routine, Acceptance and Type Test Certificates	√	√	√
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19.0	GUARANTEED TECHNICAL PARTICULARS	S.No.	Specifications	To be furnished by bidder
		1	OPERATING CONDITIONS:	
			The meter test system shall be suitable for giving an uninterrupted service in following conditions:	
		1.1	Ambient temperature (-) 10°C to (+) 45°C for operation.	
		1.2	Relative humidity up to 95%.	
		1.3	Mains voltage shall be 240V ± 10% for Three phase supply.	
		1.4	Frequency 50Hz ± 5 %.	
		2	TEST TO BE PERFORMED	
		2.1	The offered meter test system shall be capable to perform the following tests on the smart meters with RF NIC as per IEC 62052-11, 62053-11,21,22,23, IS 13779 and IS 16444 part1 and 2	
		2.2	Simultaneous calibration/ testing of ERS Meter	
		2.3	Pre-warming	
		2.4	Accuracy test as per IS/IEC	
		2.5	Starting current test	
		2.6	Creep test	
		2.7	Dial test	
		2.8	Influence quantity test related to accuracy test and harmonics Voltage, Frequency, reverse phase sequence, voltage unbalance Influence of Harmonic component in voltage and current circuit	
		2.9	Phase and Neutral circuit should be tested independently without changing connection physically	
		2.10	DC and even Harmonics test kit	
		3	CONSTRUCTION AND COMPONENT OF SYSTEM	
		3.1	The source cabinet shall be rack mounted cabinet on which components of the source and reference standard shall be placed.	
		3.2	The source cabinet shall have protective earth terminal. Protection against overload, under voltage and over voltage of mains supply shall be provided. The amplifier used in the source shall have high efficiency, power factor compensation device.	
		3.3	System shall be easily programmable to give reference output frequency independent of mains, with quartz controlled operation range from 45-65Hz Hz in steps of 0.01 Hz. The system shall comprise of :	
		3.3.1	Voltage amplifier and current amplifiers	
		3.3.2	Three phase Reference Meter	
		3.3.3	Harmonic Injection Unit.	
		3.3.4	Window based software to operate the system.	

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		<p>3.3.5 Source should have : Stability at inductive, capacitive and non-linear loads for the power factor, Protection against O/L and short circuit. Provision for superimposition of voltage and current harmonics for the range of 2nd to 31st harmonics.</p> <p>Completer Test Station from OEM. Country of Origin</p>	
	4.0	VOLTAGE AMPLIFIER:	
		Voltage amplifier should have following capabilities:	
		Electronic protection against O/L and Short Circuit. LED indication for fault shall be provided on amplifier.	
		Efficiency better than 85%.	
		Stability 100 ppm / h, or better ,	
		Distortion factor < 0.5 %.	
		Provision of super imposing of harmonics in the range of 2nd to 31st harmonic	
		Test voltage range: 30 -300 V (Phase-Neutral)	
		Output Power : not less than 800VA/Phase @ 50HZ RMS	
		Accuracy of the test setting amplitude 0.05 % or better	
		Accuracy of the test setting phase adjustment 0.01 ° or better.	
	5.0	CURRENT AMPLIFIER	
		Current amplifiers should have following capabilities	
		Electronic protection against open circuit and over load.	
		Efficiency better than 85%.	
		Stability 100 ppm / h with integration time of 60 sec	
		Accuracy of the test setting amplitude 0.05 % or better	
		Accuracy of the test setting phase adjustment 0.01 °	
		Distortion factor 0.5 %	
		Output circuit shall be protected against open circuit/overload	
		Provision of super imposing of harmonics in the range of 2 nd to 31st harmonic.	
		Test Current range 1 mA to 120 A	
		Output Power : not less than 1200 VA/phase @50Hz RMS	
	6.0	HARMONIC INJECTION UNIT:	
		Over the range 2 nd to the 31st harmonic to the test voltage and test current, Magnitude of each harmonic shall be adjustable from 0-40% fundamental wave; with maximum peak value of the wave form shall be 130% of the magnitude of the fundamental wave. Facility of controlling the phase angle of harmonics shall be provided (0 to 180 degree).	
	7.0	SPECIFICATION OF ELECTRONIC REFERENCE STANDARD METER (RSM):	

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		7.1	The class of accuracy of reference standard should be 0.02 or better for active and reactive energies, over the entire load range & independent of the measuring mode.	
		7.2	Current range of reference standard should be 1 mA to 120 A direct connected.	
		7.3	Voltage range from 10-480V (phase - neutral)	
		7.4	Frequency output proportional to the power to calibrate against better standard.	
		7.5	RS 232 serial communication port for communicating with PC.	
		7.6	Reference standard should have auto-range selection facility.	
		7.7	Technical specifications of Reference Standard Meter of the test system(RSM)	
		7.7.1	Measuring modes	
		7.7.1.1	<ul style="list-style-type: none"> • 4 wire active , • 4 wire reactive mode 	
		7.7.2	Frequency Range	
			Basic frequency 40-70 Hz and total detectable frequency range 0...3500 Hz	
		7.7.3	Voltage Range : 10-480 V Phase to Neutral	
		7.7.4	Current Ranges: 1 mA to 120A direct connected	
		7.7.5	Accuracy	
		7.7.5.1	Voltage & Current : 0.01%	
		7.7.5.3	Power / Energy (For active and reactive measurement)	
			0.02 % at $\cos \phi$ or $\sin \phi = 1$ (10mA to 120A)	
			0.04 % at $\cos \phi$ or $\sin \phi = 0.5$ (10mA to 120mA)	
			0.05 % for the range of 1 mA to 50 mA at $\cos \phi = 1$ or $\sin \phi = 1$	
		7.7.5.4	The Accuracy shall be same for Active and reactive measurement	
		7.7.5.5	Phase Angle Accuracy 0.01 °	
		7.7.5.6	Voltage, Current & Power measurement drift shall be equal to or better than 100PPM / year . Drift for individual parameters shall be defined clearly in the offer.	
		7.7.5.7	A common modular cabinet should be used for housing source and reference standard. All the measured values like voltage, current, power, phase angle, frequency should be available on the display screen of the control PC and on the local display of reference meter	
		7.7.5.8	Temperature drift for power measurement shall be 10PPM/ K or better	
		7.7.6	Display of reference standard	
		7.7.6.1	The reference meter shall have following display parameters.	

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		7.7.6.2	voltage & current with % THD display of selected voltage/current signal	
		7.7.6.3	Phase angle between voltage / current and defined reference along with Vector diagram	
		7.7.6.4	Power factor	
		7.7.6.9	Frequency	
		7.7.7	Reference Channel	
			The RSM shall have facility to select reference for phase angle measurement. Selection of reference shall be provided automatically.	
		7.7.8	Frequency output for calibration of reference standard:	
			This shall provide frequency output proportional to power to calibrate the reference standard against high precision reference standard. This output shall be in commonly used BNC type socket..	
		8.0	ICT	
		8.1	<p>Test bench shall include ICT to facilitate testing of link-less single-phase meters and poly phase meters.</p> <p>Nominal primary current 100A Maximum Primary current 120A Nominal Secondary Current 100A Maximum Secondary current 120A VA rating 50VA@ 100A Accuracy ratio error $\pm 0.01\%$ (1A to 120A) Accuracy ratio error $\pm 0.03\%$ (0.15A to <1A) Accuracy ratio error $\pm 0.15\%$ (0.02A to <0.15A) Accuracy ratio error $\pm 0.3\%$ (0.01A to <0.02A) Phase angle error ± 1 min (1A to 120A) Phase angle error ± 3 min (0.15A to <1A) Phase angle error ± 10 min (0.02A to <0.15A)</p> <p>There shall be provision to bypass individual ICT automatically when secondary of ICT kept open and same shall be logged in the meter test report in software. Sufficient protection should be provided in the ICT to protect it when secondary opens and full load current is running in primary.</p> <p>ICT should be designed in such a way that the primary and secondary of ICT can carry full load current of 120A for two hours minimum without any heating or failure of any component.</p> <p>The ICT with fault indication is preferred. And the software shall log and provide the faults in ICT such as overload or open circuit. Manufacturer traceable test report/calibration reports to be submitted along with bid.</p>	
		9.0	SOFTWARE :	
			The user friendly software should be menu driven operated with the help of mouse and keyboard in manual/automatic mode.	

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			<p>The Manual operation mode shall allow following tasks:</p> <ul style="list-style-type: none"> • Control the source • Actual value on PC screen • Wave form of output and Harmonic analysis • Perform the accuracy test <p>The program should support the following tasks:</p> <ul style="list-style-type: none"> • User interface to operate the system • Easy to prepare test table by using “ drag & drop “ concept • Supervision and control of the test procedure • Supervision and display of the test current and voltage • Indication of the errors of the meters to test • Evaluation and report of the test results • Manual testing, semiautomatic and automatic testing facility • Adjustment testing i.e. software shall guide to the operator • It shall have facility to interrupt the testing restart it again. • Password facility for each main and sub-option • Print out facility with desired header • Absolute measurement with more precious standard • Testing facility of at-least 20 different meters with 20 different constants. • Software shall have facility to display of different voltage and current • Display of curve of test voltage and current in presence of harmonics. • Protection of Meter under test form high voltage and current. <p>The software shall have facility to display following parameters.</p> <ul style="list-style-type: none"> • Individual phase voltage • Individual phase current • Phase angle, power factor symmetrical or unsymmetrical star system • Total Power Factor 	
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		<ul style="list-style-type: none"> • Individual phase power (Active, Reactive and Apparent) • Total Power (Active, Reactive and Apparent) • Frequency • Phase Sequence • Measurement mode • Vectorial display • Analog view 	
	10.0	METER MOUNTING RACK	
	10.1	The rack shall consist of a light weight aluminium frame for mounting of sensor heads, display devices and meters under test. The rack shall take weight of all type of Poly phase meters	
	10.2	Meter shall get connected to the current circuit by means of quick acting connector and voltage circuit by means of connecting leads. Design of the frame should be such that ERS (substandard meter) or 20 nos. meters of any make can be safely and easily accommodated on it. Meter mounting rack shall additionally have emergency stop switch.	
	10.3	In addition to above Meter Mounting Rack shall have all necessary arrangement which shall include connectors, BNC socket and platform to keep and test substandard Meters. The Rack shall be designed in such a way that sub standard meter of any make can be kept and can be tested simultaneously in fully automatic mode.	
	10.4	There should be a warning lamp & two emergency push button on Meter mounting rack	
	10.5	Necessary socket to test standard meters against higher accuracy standard shall be provided on Meter Mounting Rack.	
	10.6	The Meter Mounting Rack shall be provided with necessary BNC sockets for absolute measurement. The offered software shall have facility to test the external and internal reference standards by using these BNC terminals. These terminals shall be provided with necessary hardware.	
	11.0	PC and printer as per Cl.no. 5.8(Yes/no)	
	12.0	Scanning head and error indication units as per Cl.no-5.11(Yes/no)	
	13.0	Digital process unit as per Cl.no. 5.12(Yes/no)	
	14.0	Connection cables to be supplied(Yes/No)	
	15.0	All major equipment's of Test Bench like Power Source, Reference Meter, and Measuring Unit shall be made by bidder himself in his factory. These all equipment's shall have CE/ISI marking and should be modular in design. The spares shall be available for 20 years from supply from OEM.	
	16.0	The test bench should work for minimum 8 Hrs. continuously per day and should able to complete	

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		<table border="1"> <tr> <td></td> <td>minimum 8 cycles of meter testing per day tests as per IS and NABL guidelines. The voltage source, current source and allied instruments are capable for same.</td> <td></td> </tr> <tr> <td>17.0</td> <td>The mounting of the meter shall be on both sides of the bench.</td> <td></td> </tr> <tr> <td>18.0</td> <td>Size of the Power source, RSS cabinet (L,B,H)</td> <td></td> </tr> <tr> <td>19.0</td> <td>Size of the test bench offered (L,B,H)</td> <td></td> </tr> <tr> <td>20.0</td> <td>Service Support- The bidder should have service support in Odisha and should reach within 48 Hrs for addressing the complaint.</td> <td></td> </tr> <tr> <td>21.0</td> <td>Technical competency- Bidder has supplied Min. 5 Benches of same configuration in India or abroad and performance report for successful running for two years minimum to be provided in English</td> <td></td> </tr> </table>		minimum 8 cycles of meter testing per day tests as per IS and NABL guidelines. The voltage source, current source and allied instruments are capable for same.		17.0	The mounting of the meter shall be on both sides of the bench.		18.0	Size of the Power source, RSS cabinet (L,B,H)		19.0	Size of the test bench offered (L,B,H)		20.0	Service Support- The bidder should have service support in Odisha and should reach within 48 Hrs for addressing the complaint.		21.0	Technical competency- Bidder has supplied Min. 5 Benches of same configuration in India or abroad and performance report for successful running for two years minimum to be provided in English	
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20.0	SCHEDULE OF DEVIATIONS	<p style="text-align: center;"><u>(TO BE ENCLOSED WITH THE BID)</u></p> <p>All deviations from this specification shall be set out by the Bidders, clause by Clause in this schedule. Unless specifically mentioned in this Schedule, the tender shall be deemed to confirm the purchaser's specifications:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">S.No.</th> <th style="text-align: center;">Clause No.</th> <th style="text-align: center;">Details of deviation with justifications</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> <p>We confirm that there are no deviations apart from those detailed above.</p> <p>Seal of the Company:</p> <p style="text-align: right;">Signature</p> <p style="text-align: right;">Designation</p>	S.No.	Clause No.	Details of deviation with justifications															
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TPNODL	TP NORTHERN ODISHA DISTRIBUTION LTD	
	WORK INSTRUCTION /OPERATING GUIDELINES	
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Prepared By Imran Ahmad/ Swetaraj Parida	Reviewed By Vipin Chauhan	Approved By Sunil Bhattar

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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. Tata Code of Conduct

The Business Associate and TPNODL shall be bound by the provisions/ clauses mentioned in Tata Code of Conduct (TCoC) in all their dealings with stakeholders. The Associate is advised to go through the TCoC document available as Annexure-P.

3.0 CONTRACT PARAMETERS

3.1 Issue/Award of Contract

TPNODL 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 TPNODL 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.

Note- In case of RC though, further Release Orders (RO) shall be issued by TPNODL on RC rates and terms & Conditions as per the requirement of TPNODL.

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

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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 TPNODL.

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 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

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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 TPNODL, 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

TPNODL 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.

In addition to this TPNODL reserve the rights for manual negotiation even after the Reverse Auction.

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 TPNODL's requirements.

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.

TPNODL 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 TPNODL, provide Purchaser with a reasonably detailed estimate of the cost of the change outlined in the request.

In the event, TPNODL 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

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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 TPNODL.

4.1 Bid Evaluation- Commercial, Technical and Safety Evaluation

TPNODL reserves the right to evaluate the bid in the following manner on the below parameters as per the requirement:

- **Safety Evaluation:** Business Associates may be required to submit a separate Safety Bid along with their Technical & Price Bids at the time of bidding, especially in cases where the expected contract value \geq Rs. 1 Cr. and which fall in high risk category as detailed in Annexure-N. In such cases, TPNODL shall also do a Safety Bid Evaluation along with Technical Evaluation to declare the Qualified Bidders.
- **Technical Evaluation:** The bid shall be evaluated on the parameters and not limited to Bidder Experience, Bidder Performance with other utility/company, internal performance feedback, Technical Specification, General Technical Parameters (GTP), Layout, Drawings etc.

TPNODL reserves the right to carry out Factory Evaluation of Manufacturer along with the Visit to executed Sites for further evaluation to ascertain bidder's manufacturing capability, quality procedures & Performance of executed works.

- **Commercial Evaluation:** The bid shall be evaluated on the basis of Qualifying Requirement parameters and other commercial parameters as mentioned in tender.

4.2 Indemnity

Associates shall undertake to fully indemnify TPNODL (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 TPNODL, 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.

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.

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- 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 TPNODL.
- 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 TPNODL for execution of the contract including Sundays and Holidays whenever required to do so with no extra cost to TPNODL. 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

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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.

TPNODL 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 TPNODL'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 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 TPNODL to vary the scope work

TPNODL 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 TPNODL with a reasonably detailed estimate of the cost of the change in scope outlined in the TPNODL 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 TPNODL.

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Any change in the Scope of Work and/or Terms & Conditions of the order shall be intimated by TPNODL 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 TPNODL, packaging and forwarding charges, freight and transit insurance charges covering loading at Associate's works, transportation to TPNODL store/site & unloading & delivery at TPNODL stores/TPNODL 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 TPNODL 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 TPNODL and to the extent required for completion of works, cost of 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 TPNODL 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 TPNODL 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 TPNODL.

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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 (APBG) 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 (CPBG) 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 TPNODL 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 item. In case this milestone is not completed beyond 120 days for reasons attributable to TPNODL, 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 TPNODL.
- 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 TPNODL, 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 TPNODL.

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

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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 TPNODL'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 TPNODL'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 TPNODL.

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), e-Way challan (if applicable) and a copy of statement substantiating that statutory payments having been affected.

Bills/ invoices shall mention Associate's GST Number, PAN number as applicable.

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 TPNODL's notice, TPNODL will be entitled to deduct 30% of estimated wages plus 20% of wages as TPNODL's overheads. Associates would be obliged to provide the copy of monthly wage sheet in any case, failing which no payment shall be made. TPNODL at their sole discretion may deposit the PF etc. with statutory authorities. TPNODL 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

TPNODL 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 TPNODL'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

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certification of the work executed and the bills. Bills (including original) shall be submitted in triplicate at Finance office, Balasore.

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 TPNODL and not on the basis of contract quantity.

6.6 Full and Final Payment

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

6.7 Erection All –Risk Insurance Policy

Associate shall obtain an Erection All Risk (EAR) Policy as a comprehensive insurance solution designed to cover broad spectrum of risks to which a project is exposed to - from arrival of construction material at site till the completion of project, including but not limited to the following, the copy of Insurance Policy shall be submitted to E-I-C/ Finance department of TPNODL before starting the work.

- a. Earthquake
- b. Terrorism
- c. Escalation Cost (10% of sum insured on annual basis)
- d. Extended Maintenance cover for defect liability period-24 months
- e. Design Defect
- f. 50-50 Clause
- g. 72 Hours Clause
- h. Loss minimization clause
- i. Offsite storage/ fabrication
- j. TPL (INR 50 lac per occurrence)
- k. Theft, pilferage
- l. Cross liability
- m. Malicious damage
- n. Contractor's plant & equipment (value 25 lakh)
- o. Waiver of Subrogation clause
- p. STFI- Storm, Tempest, Flood, Fire and Inundation

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EAR policy is mandatory document for processing the invoices. Business Associate needs to ensure that the All- Risk Insurance Policy is obtained as per the terms of contract, failing which:

- Penalty @1% of contract value would be charged.
- In case of expiry of policy before handing over the project, TPNODL Engineer-In-Charge shall reserve the right to deduct the penalty upto a maximum of 1% of contract value.

7.0 MODE OF PAYMENT

Payment shall be made through RTGS/ NEFT/ Online Net banking mode for which Business Associate shall submit the details of Bank Account and other details as per annexure J. Further, for any payments made, TPNODL 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 TPNODL Engineer-in-Charge before raising any bill of work done. In the event Associate fails to do so, TPNODL 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 TPNODL 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 TPNODL 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 TPNODL. Alternatively, Associate may extend the

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validity of original SPBG only till the requisite period, i.e. Guarantee Period plus one month.

9.0 STATUTORY COMPLIANCE

9.1 Compliance to Various Acts

Associate should ensure adherence to the Anti-Lobbying, Debarment, Drug-Free, Child Labour, Factories Act and Shop and Establishment Workplace Certification, Registration details under GST, Sales Tax and Works Contract Tax Act.

Associate shall bear the entire responsibility, liability and risk relating to coverage of its workforce under different statutory regulations including Workman's Compensation Act, ESI Act, Factories Act, 1948, the Contract Labour (Regulation and abolition) Act 1970, and any other relevant regulations as the case may be. Associate shall also be solely responsible for the payment of all benefits such as Provident Fund, ESI, Bonus, Leave compensation and other benefits as may be applicable under applicable labour laws, etc. as per the various statutory regulations. The Associate shall compulsorily bear the cost of medical treatment and payment of monetary compensation to the families of the victims in case of injury or death, while on duty during his/her engagement with the Associate and shall keep TPNODL indemnified in this regard against any such claim and provide documentary evidences of the same to TPNODL. TPNODL shall be entitled to, if necessary, make such payment and recover the amount from Associate.

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 TPNODL indemnified always till completion of contracts.

9.2 SA 8000

Further being TPNODL is SA 8000 complied and expects its Associates to follow guidelines of SA8000: 2014 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

Business Associate is expected to ensure adherence to all statutory laws and requirements as applicable. The Associate needs to obtain Form C-3 before commencement of work and No Objection Certificate (NOC) on completion of work from BA-Relations Cell/ HR.

In case any non-compliance is observed, TPNODL shall reserve the right to penalize the bidder as per direction of E-I-C. The penalty shall be 1% of total all-inclusive contract value for such cases. Also, TPNODL reserves the right to reject such bidder in future tenders.

9.3 Affirmative Action

TPNODL 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**

TPNODL 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 TPNODL 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 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 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 Labor Laws

Bidder needs to ensure compliance to applicable labor laws including timely disbursement of wages. In case wages are not disbursed as per the stipulated timelines, then TPNODL shall pay the wages to BA employees on behalf of BA. Apart from deducting the amount of wages paid, TPNODL 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

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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 road side storage of construction material and waste shall be prohibited.
10. No uncovered vehicles carrying construction material and waste shall be permitted.
11. Construction and demolition waste processing and disposal site shall be identified and required dust mitigation measures to be notified at the site.

9.6 Special Terms & Conditions for BAs engaged under PLPBC or Service Contracts

1. The Business Associate will abide by the rules & regulations and various process requirements of TPNODL which may get amended from time to time based on business needs.
2. The Business Associate shall ensure submission of required information to TPNODL as required by TPNODL or any government authorities (with a copy to TPNODL), as and when required within the stipulated time frame.
3. The business associate shall, before start of work, obtain and submit to TPNODL a copy of
 - ✚ PF Code allotment letter issued to him/them by the EPF organization.
 - ✚ ESIC Code allotment letter issued to him/them by the ESI authorities.
 - ✚ valid insurance documents under Employees' Compensation Act, for its employees not eligible for coverage under ESIC
4. The Business Associate shall, in case of his/engagement in any construction activities falling under the purview of the Building and Other Construction Workers (BOCW) Act, apply for registration under the said BOCW Act before start of work and obtain the said registration within a month of starting such work. Business Associate shall also ensure compliance to all other applicable provisions including payment of applicable cess under the Act.
5. The Business Associate shall comply with all applicable provisions under Inter State Migrant Workmen (ISMW) Act.

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6. The Business Associate shall ensure its employees enter and work at respective place of work or premises of TPNODL in fulfilment of contractual obligations of the Business Associate, only with due authorization and valid IDENTITY. Issue of such authorization cum identity passes to its workers would be facilitated by the Business Associate, by submitting relevant information, documents, authorizations and complying to TPNODL's processes including safety training and medical checkup procedures as laid down from time to time for issue of authorization cum identity-passes. Business Associate shall not engage any of its workers for work without a valid authorization cum identity pass or with a VISITOR GATE PASS. Violation of the above may lead to termination of the contract.
7. The Business Associate shall comply with the following under various statutes, statutory requirement or any other requirement as may be applicable from time to time :
- i) Submit an application for obtaining Form-V, required for applying for Labour License.
 - ii) Submit a copy of valid Labour License with reference to the work order, without which authorization cum identity passes would not be issued to the employees of respective Business Associate.
 - iii) Temporary authorization cum identity passes are issued only for seven days, hence the Business Associate will be required to arrange for issuance of permanent authorization cum identity passes within said timeline, by submitting required documents/information. With special permission from user and HR/IR department the validity of temporary authorization cum identity passes can be extended upto 15 days. Under no circumstances shall temporary authorization cum identity passes be issued for more than 15 days.
 - iv) Business Associate is required to complete the process of Medical fitness certificate and police verification certificate within these seven days, unless exempted by the TPNODL management. Any delay due to reasons beyond control of the vendor, needs to be approved by TPNODL HR/IR department.
 - v) Business Associate shall apply for Authorisation cum Photo identity pass as per Company's security procedure.
 - vi) In case of renewal of authorization cum identity passes, the application should be initiated at least seven days in advance.
 - vii) Business Associate shall submit the Register of Workmen in Form-XIII, duly filled in all respects, within 15 days of starting the job.
 - viii) Business Associate shall provide employment card (Form-XIV) to all his/their workers.
 - ix) Business Associate shall disburse wages to its employees by 7th of the subsequent month under intimation to TPNODL, through bank transfer with submission of a copy of bank statement to TPNODL. TPNODL expects its associate vendors/ Business Associates to facilitate opening of bank account by all its employees and pay wages through bank transfers.
 - x) Wage notification should be given by the Business Associate at least one week ahead. A copy of the same to be forwarded to TPNODL for information necessary confirmation of payments.
 - xi) Wages Slip (Form-XIX) to be provided by the Business Associate to all its workers before disbursement of wages.
 - xii) PF contribution to be deposited on or before 15th of the subsequent month and proof thereof need to be submitted to TPNODL by 25th of the month.
 - xiii) Business Associate to facilitate transfer of PF/EPS accumulations in respect of its employees from their previous employer, if any.
 - xiv) ESI contribution to be deposited on or before 21st of the subsequent month and proof thereof need to be submitted to TPNODL by 25th of the month.

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- xv) Muster roll, Wage Register, Combined Challan & ECR of PF deposition and Challan / Contribution history of ESIC to be submitted to TPNODL HR/IR Department on or before 25th of the subsequent month.
- xvi) Business Associate shall be required to arrange for applicable welfare measures under applicable statutes for its employees in consultation with TPNODL order manager.
- xvii) Business Associate has to submit all the relevant returns under all applicable enactments on or within the scheduled date and a copy of the same need to be submitted to TPNODL HR/IR department within seven days of the scheduled date of submission.
8. Business Associate shall not be allowed to work for TPNODL without possessing a
*** Valid PO *Valid Labour License * Valid AUTHORISATION cum Identity Pass**
9. NO BILLS OF THE VENDOR/BUSINESS ASSOCIATE SHALL BE RELEASED IN CASE OF FAILURE TO COMPLY WITH THE ABOVE PROVISIONS.
10. Above requirement not being exhaustive, vendors/ Business Associate will be liable to comply with the provisions of any other enactment as notified or would be applicable to them from time to time.
11. An additional overhead charge of 25% of the wage bill value will be charged to the Business Associate in case the BA fails to pay the wages of its workers in time and TPNODL as principle employers is compelled to make the payment on their behalf. The total amount, including the overhead charge, will be recovered from the subsequent bill payable to the Business Associate.
12. Continuous default in wage payment to its employees within stipulated date as mentioned above, for three months, will lead to termination of the contract and may also lead to blacklisting of the Business Associate/ cancel vendors' registration.
13. After completion of work and before or at the time of submission of final bills, the Business Associate must ensure the following and submit proof thereof to TPNODL enabling TPNODL release its final bills. In absence of the same no such bills would be released by TPNODL :
- All wage payments are made to its workers till the last day of their work in TPNODL
 - Compensation towards Leave with wages are disbursed to its employees till the last day of their work.
 - Statutory bonus is paid to its employees for the period of their work.
 - Retrenchment compensation, where applicable, is paid to its employees as per eligibility.
 - Notice is given to the workers regarding retrenchment and in absence; notice pay is given to the workers as per the enactment, where applicable.
 - Along with final payments, full & final statement is issued to all its employees engaged by them for their work in TPNODL
 - No dues certificate is obtained from all its employees and copy submitted to TPNODL
 - Ensure withdrawal or transfer formalities in respect of PF/EPS accumulation of all its employees and submit proof thereof to TPNODL HR/IR dept.
 - Submit Form VI-A to TPNODL and surrender Labour License, wherever issued, to concerned labour department in case the license is no more required for work in TPNODL, and obtain clearance thereof from the Licensing Authority for submission to TPNODL.

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- j. Ensure intimation to PF & ESI authorities regarding completion of work and closure of contract with TPNODL. Proof of such intimation need to be submitted to TPNODL.
 - k. Indemnify TPNODL from any future liability on account of statutory compliance or failure on part of the vendor/Business Associate for their work in TPNODL in respect of their employees or employees of their sub vendors/Business Associates, by submitting an Indemnity Bond on Rs.100/- non judicial stamp paper executed by its Director/Proprietor, authorized for the purpose, and duly notarized.
 - l. Return back the Authorization cum Photo Identity passes to Administration representative or HR/IR department and submit proof thereof to TPNODL HR/IR team.
14. Penalty of up to Rs.1,00,000/- per month will be applicable to Business Associates defaulting on compliances as mentioned below, at the sole discretion of TPNODL management.
- a. Any complaint received from the workmen of the Business Associate of non-payment / less payment or payment after the due date i.e. the stipulated date for such payment as per law, will attract penalty
 - b. Non submission of any or all of the documents listed below (as applicable), in proof of all required statutory compliance (other than wage/payment register), within stipulated time for which it is due, will attract penalty.

List of documents:

1. Copy of valid Labour License.
2. Registers & records under applicable enactments.
3. PF Challan & ECR File.
4. ESI Challan & Contribution History.
5. Undertaking regarding non engagement of migrant workmen at TPNODL Site.
6. Details of wage payment through Bank.
7. Compliance w.r.t. BOCW Act (if applicable)
8. Submission of Applicable returns.

Our Business Associates are our business partners who we expect to be law abiding and complying to all statutory requirements, thereby not necessitating us to invoke the penalty clause mentioned in this GCC

15. The Business Associate will be required to take an appropriate insurance coverage for all its employees engaged by them in TPNODL against any accidental death anywhere in India, for a sum insured value of Rs.15 Lacs. In absence of having such coverage and in an unfortunate event of any accidental death of any of its workers, the BA will be required to pay such amount of Rs.15 Lacs to the victim's family/ legal heirs. This will be payable by the BA over & above the compensation, if any, payable under the Employees' State Insurance Act for covered employees or compensation payable by BA under the Employees' Compensation Act.

The Business Associate will also be required to take an appropriate insurance coverage for all its employees engaged by them in TPNODL against any death due to Covid-19 irrespective of place, type & days of treatment anywhere in India, for a sum insured value of Rs.10 Lacs. In absence of having such coverage and in an unfortunate event of any death of any of its workers due to Covid-19, the BA will be required to pay such amount of Rs.10

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Lacs to the victim's family/ legal heirs. The BA is free to have this coverage for their employees against Covid-19 death through a mutually agreed contributory scheme and may recover up to 50% of the average premium payable per insured, from its employees.

9.6 MSME Development ACT 2006

Provisions for Firms falling in The Micro, Small and Medium Enterprise Development Act 2006:-

- Business Associate is requested to inform the TPNODL if they fall under provisions of The Micro, Small and Medium Enterprises Development Act, 2006 legislation, and provide necessary documents to TPNODL. The Associate also needs to mention the relevant details on their invoice/ bill.
- Business Associate shall submit the self-undertaking of registration in MSME category at the time of bidding as well as on an annual basis to TPNODL, enabling them to avail the consequent benefits, failing which TPNODL may take appropriate action against such defaults.
- Business Associates falling in MSME category shall submit the Tender Fee when participating in TPNODL tenders. However, they are eligible to submit concessional EMD at 50% of the EMD otherwise applicable.

9.6 ISO 14001

The vendor to confirm whether their organization is ISO 14001 certified. If not, the Vendor must certify that the handling, use and disposal of their product/ by-products conform to practices consistent with sound environment management and local statues. The Vendor shall ensure that all the wastes are disposal in environmental friendly way with strict compliance to applicable laws including adherence to MoEF guidelines with respect to the disposal of batteries, lead waste, copper cables, ash, waste oil, e-waste etc. which shall be disposed through MoEF approved parties only. The vendor shall also dispose off the e-waste generated at the end of the product life cycle at its own costs and risk as per the MoEF guidelines/ Orders

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 TPNODL/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

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fabrication/construction/manufacture may be permitted but only with the prior written approval of the TPNODL.

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 TPNODL 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 TPNODL. 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 TPNODL, 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 of the bought out items without the prior written approval of the TPNODL. All such products and equipment shall be used or installed in strict accordance with original manufacturer's recommendations, unless otherwise directed by the TPNODL. 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 TPNODL'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 K and is an integral part of this GCC.

12.0 INSPECTION/PARTICIPATION

12.1 Right to Carry Out Inspection

TPNODL 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.

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- 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 TPNODL during contract execution time.

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

MDCC request shall be submitted by BA to TPNODL at least 7 days before inspection date.

12.2 Facilitating Inspection

The Associate shall provide all opportunities and information to TPNODL's engineers to get acquainted with the technical know-how and the methods and practices adopted by the Associate in basic and detail engineering. The Associate shall provide documents, drawings, calculations etc. as may be required by TPNODL's Engineers.

The Associate shall provide free of charge office accommodation, office facilities, secretarial services, communication facilities, general and drawing office stationary, etc. as may be reasonably required by the TPNODL'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 TPNODL/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 TPNODL inspectors are not satisfied with the safety arrangements at the plant, TPNODL 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 TPNODL along with the inspection call, for scrutiny of TPNODL.

The Associate and TPNODL 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 TPNODL for receiving clearance for dispatch of materials.

12.3 Third Party Nomination

TPNODL 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 TPNODL as far as conducting the inspection.

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12.4 Waiver of Inspections

TPNODL 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 TPNODL 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 TPNODL. Material delivered at TPNODL stores or at project site without a valid MDCC issued by the designated official of TPNODL 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 TPNODL, 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 utilised 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 Odisha	12 days
2	Within Odisha	5 days
3	Waiver*	3 working days

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

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

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, Materials/Goods/Equipment shall be consigned to "Stores-In-Charge", TPNODL.

13.4 Submission of mandatory documents on Delivery

Following documents shall be mandatorily submitted by BA along with supply of material to TPNODL 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	TPNODL material code and material description shall be mentioned in invoice and on material.
3	"Property of TPNODL" 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 manufacturing, PO/RO no. and date, "PROPERTY OF TPNODL, Odisha", Guarantee period and Associate's name.
8	In case of manual unloading, supplier / transporter shall deploy sufficient Labour for unloading the material at TPNODL central store. For heavy item(s), crane will be provided by TPNODL [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

30.0 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 TPNODL 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

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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, TPNODL will be at liberty to get the same done at Associate's risks and costs and recover all such expenses plus the TPNODL's own charges (@ 20% of expenses incurred), from the Associate or from the "Security cum Performance Deposit" as the case may be.

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 TPNODL. However, if replacement of the Equipment is required, Associate shall notify the same to TPNODL within 7 days of reporting the issue by TPNODL. 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 vendor 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, TPNODL 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.

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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 shall become leviable without prejudice to other rights of the TPNODL. 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, TPNODL 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 TPNODL as a proof of deduction/ recovery.

31.0 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 TPNODL 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/outsourced the schedule of activities of contract TPNODL enters with the associate, in part or full, without TPNODL's prior written approval. However outsourcing of materials/equipment/services by Associate to make the integrated product for which TPNODL'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 TPNODL 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 TPNODL 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.

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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.

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 TPNODL's interest failing which appropriate action (legal or otherwise) may be taken against the Associate by the TPNODL, 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.

32.0 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 TPNODL in connection with the performance of the contract shall be held confidential by the Associate and shall remain the property of the TPNODL 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 TPNODL.

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 TPNODL shall not be published or disclosed to the third parties or taken out of the country without prior written approval of the TPNODL and upon execution of confidentiality agreements satisfactory to the TPNODL 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. TPNODL 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 TPNODL. 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 TPNODL under the Contract shall be passed on to the TPNODL. The TPNODL 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.

18.4 Exclusions

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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 TPNODL.

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 TPNODL. All rights, with respect to, or arising from such intellectual property, as afore mentioned, shall solely vest in TPNODL.

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 TPNODL shall arise in this respect, and any costs, damages, expenses, compensation payable by TPNODL 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 TPNODL 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 TPNODL is held liable for by any court judgement. In this connection, the TPNODL 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 TPNODL from all liability, claims, costs, expenses, taxes and assessments including penalties, punitive damages, attorney's fees and court costs which are or may be required to be paid by the TPNODL 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

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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 TPNODL.

The TPNODL 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.***

TPNODL 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:

- 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.

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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

33.0 Suspension for Convenience

TPNODL 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 atleast two business days written notice for contracts having contract completion period less than sixty days and atleast 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
- Promptly make every reasonable effort to obtain suspension, upon terms satisfactory to TPNODL, 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 TPNODL, the Associate shall resume execution of contract as specified in the resumption notice, within the time frame specified in the resumption notice,

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23.2 Suspension for Breach of Contract conditions.

TPNODL 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 TPNODL and not due to any breach of contract conditions by the associate, TPNODL 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 TPNODL.

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 TPNODL 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 TPNODL 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.
- b. Refusal or neglect on the part of the Associate to supply material/equipment of quantity or quality as specified by TPNODL 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 TPNODL that Associate has adopted/ or attempted to adopt any unethical conduct, action in award of the contract /PO or at any time thereafter.

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- 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 TPNODL.

If the default or breach as specified under clause 24 (except sub clause g thereof) be committed by the associate for the first time, TPNODL shall issue, along 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 TPNODL then TPNODL 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, TPNODL shall have the right to terminate all the contracts TPNODL is having with the Associate by issuing termination notice which shall be without prejudice to the other rights of TPNODL available to it under law.

Without prejudice to its right to terminate for breach of contract, TPNODL 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 TPNODL having proceeded with termination of the contract the associate shall comply and proceed further in the following manner:

34.0 Associate shall discontinue the supply, on the expiry of the said period of two weeks.

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 into with third parties for due discharge of its obligations under the contract with TPNODL.

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 TPNODL 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 TPNODL 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 TPNODL 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 against by the associate.

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

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a) In case TPNODL 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 TPNODL 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, TPNODL 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 TPNODL 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 TPNODL 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 TPNODL against the amount recoverable from him on this ground. The same shall be without prejudice to other rights available to TPNODL 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 , TPNODL shall be entitled to bar the associates its agents , affiliates from undertaking any negotiation / tendering, bidding, participation activities concerning TPNODL for a period of two years from date of such termination. The same shall be without prejudice to other rights available to TPNODL.

24.2 Termination for convenience of Associate

Associate at its convenience may request for termination of contract, clearly assigning the reason for such request. TPNODL 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 TPNODL, Associate will have to pay TPNODL a 'termination convenience fee' equivalent to 5% of unexecuted contract value.

24.3 Termination for Convenience of TPNODL

TPNODL at its sole discretion may terminate the contract by giving 30 days prior notice in writing or through email to the Associate. TPNODL 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 Bhubaneswar. 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

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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 TPNODL or suspended by the arbitrator. Further, TPNODL shall continue making such payments as may be found due and payable to the associate for such works.

35.0 Governing law and jurisdiction

The parties shall be subject to the jurisdiction of the courts of law in Bhubaneswar 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 to the extent stipulated hereinabove while balance portion of respective clauses of GCC shall continue to be applicable.

36.0 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 TPNODL 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 TPNODL 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. TPNODL shall stand fully indemnified in this respect.

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 TPNODL or not. However any error in design/drawing arising out of any incorrect data/written information from TPNODL will not be considered as error and omissions on part of the Associate.

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29.0 TRANSFER OF TITLES

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

However, such passing of title of ownership and property to the TPNODL 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 TPNODL.

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.

37.0 SUGGESTIONS & FEEDBACK

We welcome all our Business Associates to write to us about their experience with TPNODL; 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-Q. You can also log on to our website www.tpnodl.com to provide your feedback according to the guidelines mentioned below:

38.0 CONTACT POINTS

In case Business Associate needs information with respect to payments or has any grievances, same may be submitted by log on to our website www.tpnodl.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
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.	Acceptance Form For Participation In Reverse Auction Event	I

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10.	NEFT or RTGS payment request form	J
11.	Contractor Safety Management System	K
12.	Vendor Appraisal Form	L
13.	Manufacturers Authorization Form	M
14.	Safety Bid Document	N
15.	Tata Code of Conduct	P
16.	Vendor Feedback Form	Q

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ANNEXURE-A

PROFORMA FOR BID SECURITY BANK GUARANTEE

TP Northern Odisha Distribution Ltd

Balasure

WHEREAS, (Name of the Bidder) _____ (hereinafter called "the BIDDER") has submitted his bid dated _____ for the (Tender No. & 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 Northern Odisha Distribution Ltd (TPNODL) in the sum of _____ for which payment well and truly to be made to the TPNODL 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 TPNODL 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 TPNODL upto the above amount upon receipt of its first written demand, provided that in its demand the TPNODL 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 upto 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 Northern Odisha Distribution Ltd

Balasore

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

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

1. You have entered into a Contract No _____ with M/s. _____ (hereinafter referred to as "the Vendor") 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 Vendor" 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 Vendor" 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 Vendor" has not fulfilled his contractual obligations. You shall be the sole judge for such non-fulfillment and "the Vendor" 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 months 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 Vendor", which shall include but

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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 Vendor" 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 Vendor'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 Vendor" or for any other reason whatsoever.
8. Any claim / extension under the guarantee can be lodge-able at outstation banks or at Mumbai branch and claim will also be payable at Mumbai Branch **(to be confirmed by Balasore 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 upto and including _____ (Date) and shall be extended from time to time for such period or period as may be desired by "the Vendor".
10. Unless a demand or claim under this guarantee is received by us in writing within one month 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

- | | |
|----------|--|
| 1. _____ | Bank's rubber stamp
Banks full address |
| 2. _____ | Designation of Signatory
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 month must be kept up
- (c) The guarantee to be accompanied by the covering letter from the bank confirming the signature to the guarantee

TP Northern Odisha Distribution Ltd

Balasore

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 Vendor") 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 Vendor" 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 demur and without reference to "the Vendor" 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 Vendor" has not fulfilled his contractual obligations. You shall be the sole judge for such non-fulfillment and "the Vendor" 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 month** 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 Vendor", 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 Vendor" 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

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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 Vendor'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 Vendor" or for any other reason whatsoever.
8. Any claim / extension under the guarantee can be lodge-able at outstation banks or at Mumbai branch and claim will also be payable at Mumbai Branch (to be confirmed by Mumbai Branch by a letter to that effect in case BG is from the branch outside Mumbai)
9. Notwithstanding anything herein contained, our liability under this guarantee is limited to Rs. _____ (Rupees _____) only and the guarantee will remain in force upto and including _____ (Date) and shall be extended from time to time for such period or period as may be desired by "the Vendor".
10. Unless a demand or claim under this guarantee is received by us in writing within one months 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

1. _____

Bank's rubber stamp

Banks full address

2. _____

Designation of Signatory

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 TPNODL 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 TPNODL, in respect of our aforesaid Order No _____ dated _____ including amendments, if any, issued by TPNODL to our entire satisfaction and we further confirm that we have no claim whatsoever pending with TPNODL 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 favour of TPNODL, 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. TPNODL 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. TPNODL.

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. TPNODL 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, Labour Laws, Local Municipal dues, Electricity dues etc. We have entered into the above written bond for the indemnity to M/s. TPNODL against all losses from the acts or default of the said Associate in respect of compliance of the Local Sales Tax Laws, Local Laws, Labour 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. TPNODL 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 Northern Odisha Distribution Ltd,

Bhubaneswar

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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ANNEXURE - G

SERVICE LEVEL AGREEMENT

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

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

Shall Abide by TPNODL 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 TPNODL would also ensure adherence of these values by his employees / persons deployed by him in connection with his works undertaken in TPNODL.

3.0 TPNODL is a signatory to the United Nation Global Compact as an integral part of its Governance principles / business. 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.

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

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- 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 TPNODL.
- 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 TPNODL 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 / TPNODL authorities.
- g) Payment of wages shall be made only in presence of and with certification of authorized representative of TPNODL 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 TPNODL 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 TPNODL as principal employer to fulfil any of his legal obligations, if he fails to do so under applicable labour laws and 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 TPNODL 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

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TPNODL 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 TPNODL business.

5.0 The 'Statutory Compliance Enforcement System' in TPNODL is detailed below for adherence by all concerned. Corporate IR & Welfare Group 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 TPNODL 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 Corporate IR & Welfare group for completion of statutory requirements.
- c) Normally, the work will be started only after 'Clearance for Commencement of Work (CCW)' is issued by IR & W group 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 IR & W group about the same. Statutory requirements in this case may be completed parallelly.
- 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 IR & W 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).
- d) Copy of Wage disbursement sheet / Bank statement.
- e) Filing / Maintenance of all statutory registers / reports / returns for inspection by Statutory/ TPNODL authorities.
- f) Certification of wage disbursement by authorized representative of TPNODL.
- g) Copy of 'Labour Welfare Fund' deposit certificate / Challan.
- h) Insuring safe working practices at the work place.

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

- a) Submission of duly filled up Form VI A (Notice of Completion).

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- 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 TPNODL : Yes/No
If yes, furnish details:

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 TPNODL 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 TPNODL Premises on my behalf.

Date:

**(Signature of the Business Associate
 or his Authorized Representative)**

This Business Associate is / will be engaged in TPNODL.

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

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Form X

Undertaking

I _____ hereby undertake that all the dues in respect of my employment with M/s _____ for the period of _____ to _____ have been settled and final payments including retrenchment benefit have been made to me in full.

(_____)

Date:

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Form XI

Undertaking

With reference to the contract job awarded by M/s TPNODL 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, Bhubaneswar 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 it's own and such liability will be borne by M/s _____

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

Date:

()
Authorized Signatory

For M/s _____

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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

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

10. Amount of deductions from wages, if any

Men	Women	Children	Total

Whether the following have been provided –

- (i) Canteen : _____
- (ii) Rest rooms : _____

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(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

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 more fair and transparent, TPNODL intends to use the reverse auctions through SAP-SRM/ ARIBA 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:

1. TPNODL 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. TPNODL will make every effort to make the bid process transparent. However, the award decision by TPNODL would be final and binding on the supplier.
3. The bidder agrees to non-disclosure of trade information regarding the purchase, identity of TPNODL, 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 TPNODL.
6. In case of intranet medium, TPNODL shall provide the infrastructure to bidders. Further, TPNODL has sole discretion to extend or restart the auction event in case of any glitches in infrastructure observed which has restricted the bidders to submit the bids to ensure fair & transparent competitive bidding. In case an auction event is restarted, the best bid as already available in the system shall become the start price for the new auction.
7. In case the bidder fails to participate in the auction event due any reason whatsoever, it shall be presumed that the bidder has no further discounts to offer and the initial bid as submitted by the bidder as a part of the tender shall be considered as the bidder's final no regret offer. Any offline price bids received from a bidder in lieu of non-participation in the auction event shall be outrightly rejected by TPNODL.
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 TPNODL 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 the auction event shall be considered by TPNODL.
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

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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 TPNODL well in time at our own. Further, we kept TPNODL 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
VENDOR APPRAISAL FORM

TO BE SUBMITTED BY VENDOR (To be filled as applicable)		
Part A		
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	
1.5	CONTACT DETAIL OF BA's REPRESENTATIVE NAME E-MAIL ID CELL NO.	
1.6	LOCATION OF MANUFACTURING UNITS	:
	i) UNITS 1	:
	ii) OTHER UNITS	:
2.0	PRODUCTS / SERVICES BEING OFFERED	:
3.0	TURNOVER DURING THE LAST 3 YEARS (TO BE VERIFIED WITH THE LATEST PROFIT & LOSS STATEMENT).	:
4.0	AVALABILITY OF STATUTORY DOCUMENTS I.E. COPY OF PAN CARD	:
5.0	AVALABILITY OF STATUTORY DOCUMENTS I.E. COPY OF GST REGISTRATION	÷
6.0	APPLICABILITY UNDER MSME CERTIFICATION	÷

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7.0	BA BELONGS TO AA COMMUNITY (SC/ST)		÷
8.0	DOCUMENTS VERIFYING ADDRESS PROOF (SUPPORTED BY ANY GOVT. ISSUED DOCUMENT)		÷
9.0	TECHNICAL		
	9.1	NO.OF DESIGN ENGINEERS (INDICATE NO.OF YEARS EXPERIENCE IN RELATED FIELDS)	:
	9.2	NO.OF DRAUGHTSMEN	:
	9.3	COLLABORATION DETAILS (IF ANY)	:
		9.3.1 DATE OF COLLABORATION	:
		9.3.2 NAME OF COLLABORATOR	:
		9.3.3 RBI APPROVAL DETAILS	:
		9.3.4 EXPERIENCE LIST OF COLLABORATOR	:
		9.3.5 DURATION OF AGREEMENT	:
	9.4	AVAILABILITY OF STANDARDS / DESIGN PROCEDURES / COLLABORATOR'S / DOCUMENTS (CHECK WHETHER THESE ARE LATEST/CURRENT)	:
	9.5	TECHNICAL SUPPORT, BACK-UP GUARANTEE, SUPERVISION, QUALITY CONTROL BY COLLABORATOR (WHEREVER ESSENTIAL). (THIS CLAUSE IS RELEVANT WHEN VENDOR'S EXPERIENCE IS INADEQUATE)	:
	9.6	QUALITY OF DRAWINGS	:
10.0	MANUFACTURE		
	10.1	SHOP SPACE, LAYOUT LIGHTING, VENTILATION, ETC.	:
	10.2	POWER (KVA)	:

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		MAINS INSTALLED	:
		UTILISED	:
		STANDBY POWER SOURCE	:
	10. 3	MANUFACTURING FACILITIES (ATTACH LIST OF EQUIPMENTS AS APPLICABLE)	:
		10.3.1 MATERIAL HANDLING	:
		10.3.2 MACHINING	:
		10.3.3 FABRICATION	:
		10.3.4 HEAT TREATMENT	:
		10.3.5 BALANCING FACILITY	:
		10.3.6 SURFACE TREATMENT PRIOR TO PAINTING/ COATING, POLISHING, PICKLING, PASSIVATION, PAINTING, ETC.	:
	10. 4	SUPERVISORY STAFF	:
	10. 5	ADEQUACY OF SKILLED LABOURS (MACHINISTS, WELDERS, ETC.)	:
	10. 6	NO. OF SHIFTS	:
	10. 7	TYPE OF MATERIAL HANDLED (SUCH AS CS, SS, ETC.)	:
	10. 8	WORKMANSHIP	:
	10. 9	MATERIAL IN STOCK AND VALUE	:
	10. 10	TRANSPORT FACILITIES	:
	10. 11	CARE IN HANDLING	:
	11. 0	INSPECTION / QC / QA / TESTING	

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	11. 1	NUMBER OF PERSONNEL (INDICATE NO.OF YEARS OF EXPERIENCE)	:
	11. 2	INDEPENDENCE FROM PRODUCTION	:
	11. 3	AVAILABILITY OF PROCEDURAL WRITE UP/QUALITY PLAN	:
	11. 4	INCOMING MATERIAL CONTROL AND DOCUMENTATION	:
	11. 5	RELIABILITY/REPUTATION OF SUPPLY SOURCES	:
	11. 6	STAGE INSPECTION AND DOCUMENTATION	:
	11. 7	SUB-ASSEMBLY & DOCUMENTATION	:
	11. 8	FINAL INSPECTION AND DOCUMENTATION	:
	11. 9	PREPARATION OF FINAL DOCUMENTATION PACKAGE	:
	11. 10	TYPE TEST FACILITIES	:
	11. 11	ACCEPTANCE TEST FACILITIES	:
	11. 12	CALIBRATION OF INSTRUMENTS AND GAUGES (WITH TRACEABILITY TO NATIONAL STANDARDS) (ATTACH LIST)	:
	11. 13	STATUTORY APPROVALS LIKE BIS, IBR, ETC.(AS APPLICABLE)	:
	11. 14	SUB-VENDOR APPROVAL SYSTEM AND QUALITY CONTROL	:
	11. 15	DETAILS OF TESTS CARRIED OUT AT INDEPENDENT RECOGNISED LABORATORIES	:

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	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	:
12. 0		EXPERIENCE (INCLUDING CONSTRUCTION / ERECTION / COMMISSIONING) TO BE FURNISHED IN THE FORMAT INDICATED IN APPENDIX)	:
13. 0		SALES, SERVICE AND SITE ORGANISATIONAL DETAILS	:
14. 0		CERTIFICATE FROM CUSTOMERS (ATTACH COPIES OF DOCUMENTS)	:
15. 0		POWER SITUATION	:
16. 0		LABOUR SITUATION	:
17. 0		APPLICABILITY OF SC/ST RELAXATION (Y/N) IF YES, SUPPORTING DOCUMENTS TO BE ATTACHED	:
Part C Supporting Documents			

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18. 0	<p>DOCUMENTS TO BE ENCLOSED:</p> <ol style="list-style-type: none"> 1. Factory License 2. ISO Certificate 3. Registration of Central Excise 4. Income Tax Clearance. 5. PF Registration 6. ESI Registration 7. Insurance for Workman Compensation Act No. 8. Electrical Contract LIC No. 9. PAN No. 10. GST Registration 11. MSME Certification 12. WC Tax Registration 13. Organogram of Co. having organogram of Design, safety, quality, production and other teams. 14. Details of subscription of BIS, IEC, IEE, ASTM or other. 15. Details of the team in Design, Quality, Safety, Production. 16. List of manufacturing equipment as per Part C. 17. List of calibrated equipment as per Part C. 18. List of clients and order executed in past two years. 19. Complaint escalation matrix. 20. Performance Certificates of same product from Minimum two utilities. 21. e-Payment Form as per enclosed Annexure-J 	
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*** Classification of BAs 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).
- The relaxation available for BAs under SC / STs shall be as per GCC for Tender Fees, EMD, PBG and Turnover criteria.

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- Certification from SC/ST Commission shall be required for deciding upon SC/ST status of a person.
- Annexure-J (e-Payment detail form) must be filled by Associate along with this form.

ANNEXURE-M

MANUFACTURER AUTHORIZATION FORM

(To be submitted on OEM's Letter Head)

Date:

Tender Enquiry No.:

To,
Chief (Procurement & Stores)
TP Northern Odisha Distribution Ltd,
Mumbai

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

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Annexure-P

TATA CODE OF CONDUCT (TCoC)

Introducing Tata Code of Conduct (TCoC) in GCC, the following clause is proposed for inclusion as per suggestions from Chief Ethics Counsellor -

“TCoC is the overarching policy framework that applies to all TATA Group companies including TPNODL. TCoC provides for stakeholder-wise approach in each of the seven chapters.

The chapter “Our Value Chain Partners” states the policy as follows:

1. We shall select our suppliers and service providers fairly and transparently.
2. 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.
3. 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.
4. 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.
5. We respect our obligations on the use of third party intellectual property and data.

To effectively implement TCoC, there is a 3-tier framework comprising of Ethics Management Apex Team headed by the CEO, who is also the Principal Ethics Officer (PEO), TPNODL; Locational Ethics Counsellors (LECs) who cover various locations/offices of TPNODL; and LECs are assisted by 4-5 Ethics Champions (ECs).

In case any Ethical Concern is faced during the course of your business dealings with TPNODL, one may utilize any one or more of the following avenues:

1. Ethics Portal on website – www.tpnodl.com
2. Ethics Box
3. IVRS No. 19124 and then press 7
4. Locational Ethics Counsellor (LEC)
5. **Third Party Ethics Helpline – 1800-22-7697 (Toll Free) ***
6. Chief Ethics Counsellor

TPNODL is committed to follow Core Values and Core Principles mentioned in TCoC, cited below, in carrying out various activities as well as in discharge of bi-lateral and multi-lateral obligations involving other entities/organizations:

Core Values:

All six core values are already mentioned in GCC.

Core Principles:

1. **Zero tolerance to bribery or corruption** in any form.
2. Committed to **good corporate citizenship**
3. Contribute to the **economic development of the communities** of the countries & regions we operate in.

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4. No compromise on **Safety**
5. Our conduct shall be **fair & transparent**
6. Respect the **human rights & dignity** of our stakeholders
7. **No unfair discrimination** of any kind
8. Statements made to stakeholders shall be **truthful & made in good faith**
9. Not engage in any restrictive or **unfair trade practice**
10. Provide avenues for our stakeholders to **raise concerns in good faith**
11. Environment **free from fear** of retribution to deal with concerns that are raised
12. Expect the leaders to be **role model**
13. **Comply with the laws** of the countries in which we operate

Gift Policy:

Principles for acceptance of gifts/benefits –

A gift or benefit may be accepted only if it complies with all of the following principles:

- ✓ it does not influence,
- ✓ does not have the potential to influence, an employee in such a way as to compromise or appear to compromise integrity and impartiality
- ✓ does not create a conflict of interest or perception of conflict of interest;

Principles for non-acceptance of gifts/benefits -

The gift or benefit may not be accepted or given if any of the following principles apply:

- ✓ causes the recipient or donor **to act in partial manner** in the course of duty
- ✓ apprehension of the recipient becoming **obligated to the donor**
- ✓ it is **not offered openly**
- ✓ if is an **offer of money** or something readily convertible to money (e.g. Shares)

Violation –

1. Not abiding with this policy would constitute violation of “Our Employees” Stakeholder group Clause “Gifts and Hospitality” of the Tata Code of Conduct (TCoC) 2015. Prompt action will be taken against violations.
2. Any deviation from this policy must be supported by appropriate rationale and must be duly approved by CEO who is also the Principal Ethics Officer. In any case, in dealing with such deviations, the spirit of the TCoC should in no case be compromised.
3. If it is determined that an employee / associate has violated this policy, appropriate action including termination of the employee’s / associate’s employment or association with TPNODL may be decided upon.

ANNEXURE-Q

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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 "TPNODL 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

- Bhubaneswar
 Within 200 kms from Bhubaneswar
 More than 200 kms from Bhubaneswar

Your nearly turnover with TPNODL

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

Additional information

Your Name	
Your Designation	
Your Organization	
Contact Nos.	
Email	

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						
5	Our purchase orders / contracts are simple, specific & easy to understand						
6	TPNODL demonstrate willingness to be flexible in administration of Contract / Purchase Order						
7	We provide timely responses / clarifications to your queries						
8	TPNODL representative you interact / coordinate with is adequately empowered to support you in meeting contractual obligations						
9	TPNODL provide you all necessary infrastructure support for timely and quality completion of work (including AMC)						
10	TPNODL Engineer-in-Charge timely certifies the jobs executed/ material supplied						
11	TPNODL Engineer-in-Charge efficiently supervises the job execution for timely completion of job						
12	BIRD (Bill Inward Receipt Desk) initiative has improved payment						

S. No.	Parameters	1	2	3	4	5	Remarks/ Suggestion
		Do Not Agree	Slightly in Agreement	In Fair Agreement	Mostly in Agreement	Fully Agree	
	disbursement process						
13	Our approach for Inspection and Quality Assurance effective to expedite project completion?						
14	TPNODL never defaults on contractual terms						
15	In TPNODL Contracts closure is done within set time limit						
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	TPNODL Employees follow Ethical behavior						

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SECTION - B

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

SN	Parameters	1	2	3	4	5	Remarks/ Suggestion
1	How do you rate courtesy/ empathy/ attitude level and warmth of TPNODL employees you interact with from following team?						
1.1	Project Engineering						
1.2	District / Zones						
1.3	Projects/HOG (TS &P)						
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 TPNODL in comparison to your other clients in terms of fairness of treatment and transparency with its Business Associates?						
3	How would you rate TPNODL in comparison to your other clients in terms of processes and systems to manage partnership with its Business Associates						
4	How would you rate TPNODL in comparison to your other clients in terms of building long term & mutually relationship with its Business Associates						

SECTION – C

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

S. No.	Parameters	Certainly NO	Probably NO	Probably YES	Certainly YES	Remarks/ Suggestion
1	Based on your experience with TPNODL, would you like to continue your relationship with TPNODL?					
2	If someone asks you about TPNODL, would you talk “positively” about TPNODL?					
3	Would you refer TPNODL 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 TPNODL, 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 TPNODL'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 TPNODL to adopt. Please give your valuable salient recommendations.

Please spare your thoughts for TPNODL'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 TPNODL)	<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>	
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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