

OPEN TENDER NOTIFICATION

FOR

Rate contract for Supply of Testing Instruments at TPCODL

Tender Enquiry No.: TPCODL/P&S/1000000602/23-24

Due Date for Bid Submission: 11.03.2024 [17:00 Hrs.]

The TP Central Odisha Distribution Limited
1st Floor, Anuj Building, 19, Satya Nagar, Bhubaneswar-751007.

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1.0 Event Information

1.1 Scope of work

Open Tenders are invited through Ariba online portal e-tender process from interested Bidders for Rate contract for supply of following Items as defined below:

S. No.	Description	EMD Amount (Rs.)	Tender Fee Inclusive of GST (Rs.)
1	Rate contract for Supply of Testing Instruments at TPCODL.	35,000/-	5000/-

Note:-

- 1) EMD is exempted for MSME Firms registered in the State of Odisha.
- 2) MSMEs registered in the State of Odisha shall pay tender fee of Rs. 1,000/- including GST.

1.2 Availability of Tender Documents

Please Refer "Procedure to participate in the e-Tender".

1.3 Calendar of Events

(a)	Date of sale/ availability of tender documents from TPCODL Website	From 23.02.2024 onwards
(b)	Date by which Interested and Eligible Bidder to pay Tender Fee and confirm participation as mentioned in "Procedure to Participate in Tender"	01.03.2024 , 15:00 Hrs
(c)	Date & Time of Pre-Bid Meeting (If any)	02.03.2024 , 15.00 Hrs.
(d)	Last Date and time of receipt of pre-bid queries, if any	04.03.2024 up to 15:00 Hours
(e)	Last Date of Posting Consolidated replies to all the pre-bid queries as received	06.03.2024
(f)	Last date and time of receipt of Bids	11.03.2024 up to 15:00 Hours
(g)	Date & Time of opening technical bids & EMD (Envelope-1 & 2)	Participating Bidders will get mail intimation from TPCODL E-Tender system (Ariba) when their Technical Bids are opened. Refer Section 4.2 for details
(h)	Date & Time of opening of Price of qualified bids	Bidders will get mail intimation from TPCODL E-Tender system (Ariba) when their Price Bids are opened (Refer Section 4.5)

Note :- In the event of last date specified for submission of bids and date of opening of bids is declared as a closed holiday for TPCODL Bhubaneswar 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

Following documents are to be furnished along with the bid to the address as mentioned at clause 3.1.

- 1.4.1 EMD of requisite value and validity
- 1.4.2 Tender Fee in case the tender is downloaded from website
- 1.4.3 Requisite Documents for compliance to Qualification Criteria mentioned in Clause 1.7.
- 1.4.4 Drawing, Type Test details along with a sample of each item as specified at Annexure I (as applicable)

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

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

1.5 Deviation from Tender

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

1.6 Right of Acceptance/Rejection

Bids are liable for rejection in absence of following documents:-

- 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

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

1.7 Qualification Criteria

- a) The average annual turnover of the bidder shall be a minimum of Rs.50 Lakhs in last three financial years. (FYFY 20-21, FY 21-22 & FY 22-23). Copy of audited Balance Sheet and P&L Account / Turn over Certificate to be submitted in this regard.
- b) Bidder should have a Manufacturer and or authorized dealer/distributor of Original equipment manufacturer for which they are submitting their bid. In case authorized dealer/distributor, Copy of authorization certificate from OEM to participate in this tender shall have to submitted.
- c) The bidder should have supplied at least 01 No each of the testing instruments during last five years for which they are submitting their bid. Copy of purchase order /supply completion certificate to be submitted in this regard.
- d) Bidder must have all statutory compliance like valid PAN and GSTN registration.
- e) Note : Manufacturer shall have adequate in house testing facilities for carrying out all routine tests & acceptance tests as per relevant Indian/Indian standards. The manufacture / authorized dealer/ distributor shall facilitate required testing for acceptance of material at their own cost at manufacturer's accredited laboratory.

1.8 Marketing Integrity

We have a fair and competitive marketplace. The rules for bidders are outlined in the General Condition of Contracts. Bidders must agree to these rules prior to participating. In addition to other remedies

available, TPCODL reserves the right to exclude a bidder from participating in future markets due to the bidder's violation of any of the rules or obligations contained in the General Condition of Contracts. A bidder who violates the market place rules or engages in 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 TPCODL. This includes all bidding information submitted to TPCODL. All tender documents remain the property of TPCODL and all suppliers are required to return these documents to TPCODL upon request. Suppliers who do not honor these confidentiality provisions will be excluded from participating in future bidding events.

2.0 Evaluation Criteria

- ☑ The bids will be evaluated technically on the compliance to tender terms and conditions.
- ☑ The bids will be evaluated commercially on overall lowest cost in BOQ Basis as calculated in Schedule of Items [Annexure I] .TPCODL reserves the right to split the order quantity wise. Hence all bidders are advised to quote their most competitive rates.
- ☑ In case of Reverse Auction, if any change arises in overall BOQ price, it shall be applicable proportionately in each line item in the complete tender BOQ.
- ☑ Bidder has to mandatorily quote as per schedule of item [Annexure-I]. Failing to do so TPCODL may reject the bid.

NOTE:

In case of a new bidder not registered, inspection of Testing house and evaluation shall be carried out to ascertain bidder's capability and quality procedures. However TPCODL reserves the right to carry out inspection and evaluation for any bidder prior to technical qualification. In case a bidder is found as Disqualified in the evaluation, their bid shall not be evaluated any further and shall be summarily rejected. The decision of TPCODL shall be final and binding on the bidder in this regard.

2.1

Price 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 through e-tendering process.

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

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

Bids shall be submitted in 3 (Three) parts:

FIRST PART: "EMD" as applicable shall be submitted. The EMD shall be valid for 210 days from the

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

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

Account Name: TP Central Odisha Distribution Limited

Bank Name: SBI, IDCO Towers, Bhubaneswar

Bank Account No. : 10835304915

IFSC Code : SBIN0007891

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

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

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

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

Chief (Procurement & Stores)

TP CENTRAL ODISHA DISTRIBUTION LIMITED

1st floor, Anuj building, Plot No. 29, Satya Nagar, Bhubaneswar, Odisha – 751007

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 (if 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 TPCODL E-tender System (Ariba) only. Hard Copy of Technical Bids need not be submitted.

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

THIRD PART: "PRICE BID" shall contain only the price details and strictly in format as mentioned in Annexure I (separate Price Bid for Lot-A & Lot-B shall be submitted) 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 Bid is to be submitted in soft copy through TPCODL E-Tendering system (Ariba) only. **Hard copy of Price Bid not be submitted.**

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

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

No verbal correspondence will be responded. All communication will be done strictly with the bidder who have done the above step to participate in the Tender. **Communication Details:**

Handling Executive :

Name: Mr. Prashant Gupta

Contact No.: 9634077589

E-Mail ID: prashant.gupta@tpcentralodisha.com

Sr. General Manager (Purchase & Stores)

Name: Sri Sudhakar Behera

Contact No.: 9437282663

E-Mail ID: Sudhakar.behera@tpcentralodisha.com

Bidders are strictly advised to communicate with Package Owner through TPCODL E-tender System (Ariba) only. They need to pay Tender Participation Fee and receive the Ariba log-in. Above escalation details are for reference purpose only.

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 TPCODL. The all-inclusive prices offered shall be inclusive of all costs as well as Duties, Taxes and Levies paid or payable during the execution of the supply work, breakup of price constituents.

Applicable GST to be specified clearly.

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

3.4 Bid Currencies

Prices shall be quoted in Indian Rupees Only.

3.5 Period of Validity of Bids

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

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

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 TPCODL against the risk of bidder's conduct which would warrant forfeiture.

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

- Banker's Cheque/ Demand Draft/ Pay order drawn in favour of TPCODL, payable at Bhubaneswar.
- Online transfer of requisite amount through NEFT/ RTGS.
- Bank Guarantee valid for 210 days after due date of submission.

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

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

4.2 Technical Bid Opening

The bids shall be opened at TPCODL office in front of participated bidders either physically or in virtual mode . A link shall be provided to the participated bidders to view the tender opening process online. Also Participating Bidders shall get mail intimation from TPCODL E-Tender system (Ariba) when their Technical Bids are opened.

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

4.3 Preliminary Examination of Bids/Responsiveness

TPCODL will examine the Bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the Bids are generally in order. TPCODL may ask for submission of original documents in order to verify the documents submitted in support of qualification criteria.

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

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

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

4.4 Techno Commercial Clarifications

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

4.5 Price Bid Opening

Price bid of only Techno-commercially and / or safety qualified Bidders shall be opened internally. Bidders shall get mail intimation from TPCODL E-Tender system (Ariba) when their Price Bids are opened.

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

4.7 Reverse Auctions

TPCODL shall conduct the reverse auction for the products/ services being asked for in this tender.

The terms and conditions for such reverse auction events shall be as per the Acceptance Form attached as Annexure VI of this document. The bidders along with the tender document shall mandatorily submit

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

Reverse Auction shall be as per the below approach:

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

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

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

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

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

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

5.0 Award Decision

TPCODL will award the contract to the successful bidder whose bid has been determined to be the lowest-evaluated responsive bid as per the Evaluation Criterion mentioned at Clause 2.0. The Cost for the said calculation shall be taken as the all-inclusive cost quoted by bidder in Annexure I (Schedule of Items) subject to any corrections required in line with Clause 4.3 above. The decision to place purchase order/LOI solely depends on TPCODL on the cost competitiveness across multiple lots, quality, delivery and bidder's capacity, in addition to other factors that TPCODL may deem relevant.

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

In case any supplier is found unsatisfactory during the delivery process, the award will be cancelled and TPCODL reserves the right to award other suppliers 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 (if any)
5. Technical Specifications (Annexure II)
6. Inspection Test Plan (if any)
7. Acceptance Form for Participation in Reverse Auction (Annexure VI)
8. General Conditions of Contract (Annexure VII)

7.0 Post Award Contract Administration

7.1 Special Conditions of Contract

- After finalization of tender, Rate Contract shall be issued on successful bidder with a validity period of **One Year**. Prices shall remain firm till validity of issued rate contract. Within the validity of rate contract and as per requirement of material, release order shall be issued time to time.

- Business Associate (BA) shall submit applicable Performance Bank Guarantee as per GCC within 30 days of issuance of rate contract. PBG applicable shall 5% of Rate Contract Value or 10% of Release Order value. PBG against Release Order has to be submitted against each Release Order. PBG submitted, shall be released after completion of applicable guarantee period plus one month.
- Guarantee applicable shall be as per technical specifications.
- **Within 30 days of Rate Contract issuance by TPCODL, it is the responsibility of BA to get manufacturing clearance and CAT-A issued from TPCODL.** In case BA does not get necessary approvals for issuance of CAT-A within mentioned / mutually agreed timelines, then TPCODL reserve the right to cancel issued rate contract / release order and also reserve the right to forfeit EMD / PBG.
- Delivery period shall be 60 days from date of receipt of release order / CAT-A issuance, whichever is later.
- TPCODL shall short close the issued Release Order / Rate contract, in case of any quality issues.
- Any change in statutory taxes, duties and levies shall be borne by TPCODL.
- All other terms and conditions of TPCODL GCC shall be applicable.

7.2 Drawing Submission & Approval

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

7.3 Delivery Terms

The delivery schedule shall be **60 days** from the date of issuing of PO/RO issued by MRP Team as per the monthly Capacity of Manufacturer.

7.4 Guarantee/Warranty Period

Bidder shall stand guarantee towards design, materials, workmanship & quality of process/manufacturing of items under the contract for due and intended performance of the same, as an integrated product delivered under this contract. In the event any defect is found by the Company up to a period of **12 months** from the date of supply, the bidder shall be liable to undertake to replace/rectify such defects at its own costs, within 45 days time frame and to the entire satisfaction of TPCODL, falling which TPCODL will be at liberty to get it replaced/rectified at the bidder risks and cost and recover all such expenses plus the company's own charges (@20% of total expenses incurred) from the bidder or from the "Security from Performance Deposit" as the case may be .

7.5 Payment Terms

On successful completion of SITC work in good condition and certification of acceptance by certified official, Associate shall submit the Bills/ Invoices in original in the name of TP Central Odisha Distribution Limited to Invoice Desk. 100 payment shall be released **within 30 days from the date of submission of certified bills/ invoices.**

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

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

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

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

Bidder is advised to refer GCC attached at Annexure VII for more information.

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

8.0 Specification and standards

Attached separately with the tender As per Annexure II.

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 VII.

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.tpcentralodisha.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

Sl. No.	Item Description	HSN/ SAC code	Qty.	UoM.	Unit Price (Rs.)	GST (Rs.)	All incl. Unit Price (Rs.)	All incl. BOQ Price (Rs.)
1	2	3	4	5	6	7	8=6+7	9=8x4
1	DC LEAKAGE CLAMP ON METER		10	EA				
2	BATTERY IMPEDANCE TESTER/ANALYZER		2	EA				
	SWEEP FREQUENCY RESPONSE ANALYSER		1	EA				

NOTE:

- The quantity mentioned above is for evaluation purpose only and may vary during the execution. Release Orders against this Rate Contract shall be issued by TPCODL as per actual requirement.
- The bidders are advised to quote prices strictly in the above format and for all the line items as mentioned above. Failing to do so, bids are liable for rejection.
- Unit price (column 6) against sl no 1 in the table above shall be inclusive of ex-works price, Transit Insurance, transport charges upto 100KM Distance from Manufacturing site, loading, unloading and all other handling charges. Transportation cost beyond 100KM (sl no 2 of above table) should be quoted only in column 6, 7 and 8.
- 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.
- Quantities mentioned above is for evaluation purpose only and is not guaranteed. Quantities may change as per actual requirements.
- All price shall remain firm and fixed for one year for placement of RO

Annexure II
Technical Specifications

Attached separately

CONFIDENTIAL

ANNEXURE III

Schedule of Deviations

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

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

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

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

Seal of the Bidder:

Signature:

Name:

ANNEXURE IV

Schedule of Commercial Specifications

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

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

Signature & Seal of the Bidder

Annexure VII

**General Conditions of Contract –
Attached separately with the tender**

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Annexure VII (a)

Preferential norms for procurement from Local MSMEs

1) Tender Fees

To participate in the tender, MSMEs registered in the State of Odisha shall pay Rs.1,000/- including GST towards cost of tender paper. In Limited Tender no EMD shall applicable.

2) Earnest Money Deposit (EMD)

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

3) Qualification Requirement for Open Tenders

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

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

4) Reservation for MSME

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

5) Performance Bank Guarantees

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

Annexure VIII

**Safety Policy and Safety Terms and Conditions –
Attached separately with the tender.**

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Annexure IX

**Tata Code of Conduct (TCoC) –
Attached separately with the tender.**

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Annexure X

**Environment & Sustainability –
Attached separately with the tender.**

CONFIDENTIAL

	TATA POWER CENTRAL ODISHA LIMITED, BHUBANESWAR		
	TECHNICAL SPECIFICATION		
Doc. Title	SPECIFICATION FOR DC Leakage Meter		
Doc. No	PRE-GEN-15	Eff. Date: 01.04.2020	
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Prepared by:	Reviewed By:	Approved By:	Issued By:

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Initiator		HOG (Standardization & Procurement III)		HOD (ENGINEERING)	
-----------	--	---	--	-------------------	--

	TATA POWER CENTRAL ODISHA LIMITED, BHUBANESWAR		
	TECHNICAL SPECIFICATION		
Doc. Title	SPECIFICATION FOR DC Leakage Meter		
Doc. No	PRE-GEN-15	Eff. Date: 01.04.2020	
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Prepared by:	Reviewed By:	Approved By:	Issued By:

1. SCOPE

This specification covers technical requirements of design, manufacture, testing at manufacturer's works, packing, forwarding, supply and unloading at stores/ site, performance of DC Leakage Clamp Meter.

2. APPLICABLE STANDARDS:

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

a) IEC 61010-1 : Safety requirements for electrical equipment for measurement, control and laboratory use. CAT III for 1000V & CAT IV for 600V IEC/EN 61010-1:2010 (3 Edition)

3. CLIMATIC CONDITIONS OF THE INSTALLATION:

- a) Max. Ambient Temperature : 50 deg.C
- b) Max. Daily average ambient temp : 40 deg.C
- c) Min. Ambient Temperature : 0 deg.C
- d) Maximum Humidity : 100%
- e) Minimum Humidity : 10%
- f) Average No. of thunderstorm per annum : 50
- g) Average Annual Rainfall : 750 mm
- h) Average No. of rainy days per annum : 60
- i) Rainy months : June to Oct.
- j) Altitude not exceeding : 300 meters.
- k) Wind Pressure : 126kg/sq. m up an elevation of 10m.

Atmosphere is generally laden with mild acid and dust suspended during dry months and subjected to fog in cold months. The design of the equipment and accessories shall be suitable to withstand seismic forces corresponding to an acceleration of 0.1g.

4. GENERAL TECHNICAL REQUIREMENTS:

SI No.	Technical particulars	TPCODL Requirements	Bidder Response
1	DC CURRENT	0 - 10A	
2	Current Resolution & Accuracy	0.1mA @ 300mA 1mA @ 3000mA 0.01A @ 10.00A Accuracy: $\pm (1\%rdg + 10dgts)$	
3	AC & DC VOLTAGE	0.01V - 300V	
4	Voltage Resolution & Accuracy	0.01V @ 0 - 50V 0.1V @ 50.01 - 300V Accuracy $\pm (1\%rdg + 2dgts)$	
5	RESISTANCE	0.1 Ohm to 500K Ohm at different steps with minimum	

Initiator		HOG (Standardization & Procurement III)		HOD (ENGINEERING)	
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	TATA POWER CENTRAL ODISHA LIMITED, BHUBANESWAR		
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		resolution of 0.1Ohm Accuracy: $\pm (1\%rdg + 2dgts)$	
6	Sampling Rate	2 times / Sec	
7	Display	4 digit, 5000 counts LCD display with Backlight for measurement in outdoor	
8	Power Supply	Battery 1.5V AAA size or 9V	
9	Jaw Size	More than or equal to 23mm	
10	Operating Temperature	-10°C to 50°C.	
11	Storage Temperature	-20°C to 60°C.	
12	Function / Features	True RMS Measurement for all functions Max Min measurement function Data Hold & Zero Auto ranging Low Battery Indication LED backlight function Auto Power OFF Continuity Check Less than 300Gms	
13	Accessories	Test Lead User Manual Battery set & Carry Case	
14	Safety Standard	300V AC/DC, 100A, CAT III IEC/EN 61010-1:2010 (3 Edition); IEC/EN 61010-2-032:2002 (2 Edition) Bidder has to provide the type Test certificate of the quoted equipment.	
15	Warranty	5 Years from the date of supply	
16	Demo	Bidder has to provide proper demonstration of the quoted instrument within a week of the bid opening.	

5. TESTS

Initiator		HOG (Standardization & Procurement III)		HOD (ENGINEERING)	
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	TATA POWER CENTRAL ODISHA LIMITED, BHUBANESWAR		
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All routine, acceptance & type tests shall be carried out in accordance with the relevant IS/IEC. All routine /acceptance tests shall be witnessed by the purchaser/his authorized representative. All the components shall also be type tested as per the relevant standards. The camera shall be calibrated against standards which are traceable to National / International standards.

6. TYPE TEST CERTIFICATES

The bidder shall furnish the type test certificates of the individual component for the tests as mentioned as above as per the corresponding standards, if asked for by TPCL. All the tests shall be conducted by CPRI/ERDA as per the relevant standards. 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 TPCL.

7. PRE DISPATCH INSPECTION

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

Following documents shall be sent along with material

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

8. INSPECTION AFTER RECEIPT AT STORES

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

9. PACKING

Bidder shall ensure that all the equipment covered under this specification shall be prepared for rail/road transport in a manner so as to protect the equipment from damage in transit.

10. TENDER SAMPLE

Demonstration has to be provided with in a week after technical bid opening as intimated by TPCODL

11. MINIMUM TESTING FACILITIES

Bidder shall have adequate in house testing and repair facilities for carrying out all routine tests & acceptance tests as per relevant International / Indian standards. It is mandatory to have at least one service lab with calibrated Black body & other facilities in India

12. MANUFACTURING ACTIVITIES

Initiator		HOG (Standardization & Procurement III)		HOD (ENGINEERING)	
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	TATA POWER CENTRAL ODISHA LIMITED, BHUBANESWAR		
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Not Applicable

13. SPARES, ACCESSORIES AND TOOLS

As mentioned in GTP Clause no. 4

14. DRAWINGS AND DOCUMENTS

Not applicable

Instruction Manuals: Bidder shall furnish two (2) soft copies (CD) and four (4) hard copies of nicely bound manual (in English Language) covering maintenance instructions and all relevant information pertaining to the main equipment as well as auxiliary devices.

15.

**SCHEDULE OF DEVIATIONS
(TO BE ENCLOSED WITH TECHNICAL BID)**

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

S. No	Clause No.	Details of deviation with justifications

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

Seal of the Company:

Signature

Designation

Initiator		HOG (Standardization & Procurement III)		HOD (ENGINEERING)	
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TATA POWER COMPANY LIMITED, ODISHA
TECHNICAL SPECIFICATION

Document Title	Standard Technical Particular: Battery Internal Resistance Tester		
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Initiator		HoG(Engineering)	
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TATA POWER COMPANY LIMITED, ODISHA			
TECHNICAL SPECIFICATION			
Document Title	Standard Technical Particular: Battery Internal Resistance Tester		
Document No.		Eff. Date: 01.04.2020	
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1.0 SCOPE:

Scope of the Specification includes technical requirements w.r.t., manufacturing, testing, packing and forwarding, supply and delivery of **Battery Internal Resistance Tester** test equipment with software for diagnosis of battery.

2.0 APPLICABLE STANDARDS:

IEC61010-1 and EN61326-1: Shock proof, Vibration proof, EMC compliant & Safety requirements as per relevant International Standards

3.0 CLIMATIC CONDITIONS OF INSTALLATION

Test kit to be supplied against this specification shall be suitable for satisfactory continuous operation under the following tropical conditions:

- i. Maximum altitude above sea level 1,000m
- ii. Maximum ambient air temperature 50°C
- iii. Maximum daily average ambient air temperature 35°C
- iv. Minimum ambient air temperature 0°C
- v. Maximum relative humidity 95%
- vi. Average number of thunderstorm days per annum (isokeraunic level) 70
- vii. Average number of rainy days per annum 120
- viii. Average annual rainfall 150cm
- ix. Earthquakes of an intensity in horizontal direction - equivalent to seismic acceleration of 0.3g
- x. Earthquakes of an intensity in vertical direction - equivalent to seismic acceleration of 0.15g (g being acceleration due to gravity)
- xi. 11 .Wind velocity: 300 km/hr, 200 km/hr and 160 km/hr. environmentally, some of the regions, where the work will take place includes coastal areas, subject to high relative humidity, which can give rise to condensation. Onshore winds will frequently be salt laden. On occasions, the combination of salt and condensation may create pollution conditions for outdoor insulators. Some places are in heavily industrial polluted areas. Therefore, Outdoor material and equipment shall be designed and protected for use in exposed, heavily polluted, salty, corrosive and humid coastal atmosphere

4.0 GENERAL TECHNICAL REQUIREMENTS

SI. No	Particulars	To be Filled By Bidder
1	APPLICATION Battery Internal resistance tester is used to measure Battery internal resistance for battery condition assessment. Combined with cell voltage and intercell connection resistance measurement, the test determines the state of health of batteries.	

TATA POWER COMPANY LIMITED, ODISHA
TECHNICAL SPECIFICATION

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Sl. No	Particulars	To be Filled By Bidder
2	GENERAL <ul style="list-style-type: none"> Kit should be able to measure the internal resistance, voltage and temperature of rechargeable batteries such as lead storage batteries, lithium batteries to determine the health of the battery. Should also capable of measuring ESR parameters of electrolytic capacitors Measurement should be AC 4 terminal test method to measure internal resistance of the battery and can measure the correct measurement value without being affected by the contact resistance between the test wire, terminal and battery electrode. Should have features of DATA storage, data access, alarm and automatic shutdown 	
3	Resistance measurement Range & Resolution	3mΩ, 30mΩ, 300mΩ & 3Ω, with resolution 1μΩ, 10μΩ, 100μΩ & 1mΩ, respectively
4	Accuracy	Should be ±(1%range + 20dgt) upto 3mΩ & ±(0.5%range + 15dgt) for above 3mΩ
5	Measuring Current	200mA, 20mA & 2mA
6	Voltage measurement	0 to ±71.00V with 2 ranges (0 to 7V @1mV Resolution, 7 to 70V @10mV)
7	Voltage Accuracy	0.2% range + 10 dgts
8	Temperature Measurement	-10.0° C to 60.0°C with 0.1°C resolution
9	Temperature Accuracy	±1.0°C
10	Response Time	200mS, Measurement time: ≤2 Sec
11	Display	3.5 Inch with 320X240 resolution 16 bit true color screen
12	Communication	USB, Data & results saved should be able to transfer to computer, saved and printed.
		Bluetooth connection for transfer of data
13	Hold & Store	Manual retention & Store, automatic retention & store
14	Assessment function	Kit should have preset Pass , Fail and warning thresholds for result assessment
15	Power supply	150V to 250V input charger for charging of battery

Initiator		HoG(Engineering)	
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TATA POWER COMPANY LIMITED, ODISHA			
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Sl. No	Particulars		To be Filled By Bidder
16	Battery	Kit should have inbuilt battery with a minimum of 10 Hrs backup & battery indication should be available on display	
17	Automatic shutdown	Kit should be turn of if kept ideal for more than 15min.	
18	Operating & Storage temperature	Operation: -10.0° C to 50.0°C with 80% RH Storage: -20.0° C to 60.0°C with 70%RH	
19	Safety	IEC 61010	
20	Weight	Less than 1Kg including battery.	
21	Dimension	To be filled by Bidder and should be easy to handle with one hand	
22	Accessories	Test leads, USB Cable, Charger, Software CD, Instruction Manuals, and Instruments Box.	
23	Software	Free software should be provided which can able to acquire data from kit, manage & provide curve trend analysis.	
24	CALIBRATION	Calibration certificate traceable to National/International standards from an International accredited Laboratory with uncertainty calculations shall be provided	
29	GUARANTEE	Test Kit should have warrant of 5 Years Bidder shall be liable to replace it at their own cost.	

5.0 INSTALLATION & COMMISSIONING

Installation, Commissioning & successful demonstration of test equipment at TPCODL shall be the responsibility of the supplier.

6.0 TRAINING

Exhaustive Classroom training at TPCODL with theory and practical session on the usage of the instrument.

7.0 PRE-DISPATCH INSPECTION

Pre-dispatch inspection will be carried out by TPCODL before dispatch of material.

8.0 INSPECTION AFTER RECEIPT AT STORES

The material received at Tata Power-Co. Ltd., Odisha store/workshop/laboratory, shall be inspected for acceptance and shall be liable for rejection, if found different from the Purchase Order or not meeting required technical parameters. Manufacturing date shall not be 30 days prior to the date of delivery at TATA Power Co. Ltd, Odisha's Stores. Certificate of Analysis shall be valid for not less than 11 months from the date of receipt at TATA Power Co. Ltd., Odisha's Stores.

9.0 GUARANTEE

Test Kit should have warrant of 5 Years Bidder shall be liable to replace it at their own cost.

10.0 PACKING

All the material shall be packed in aluminium canister of 500 ml or higher. The bidder shall ensure that all material is prepared for rail/road transport in a manner so as to protect the material from damage in transit. The material used for packing shall be environmentally friendly. Each packaged canister shall be provided with MSDS (material safety data sheet) instructions.

Initiator		HoG(Engineering)	
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	TATA POWER COMPANY LIMITED, ODISHA		
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11.0 TENDER SAMPLE

Demonstration of the above test kit has to be performed by bidder within 7 days of intimation after bid open at TPCODL premises.

12.0 GUARANTEED TECHNICAL PARTICULARS

Bidder to comply & mention technical particulars available in the offered model test set for all above clauses as per specification.

Initiator		HoG(Engineering)	
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	TATA POWER COMPANY LIMITED, ODISHA		
	TECHNICAL SPECIFICATION		
Document Title	Standard Technical Particular: Sweep Frequency Response Analyzer Test Kit		
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13. SCHEDULE OF DEVIATIONS

Initiator		HoG(Engineering)	
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TATA POWER COMPANY LIMITED, ODISHA			
TECHNICAL SPECIFICATION			
Document Title	Standard Technical Particular: Sweep Frequency Response Analyzer Test Kit		
Document No.		Eff. Date: 01.04.2020	
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Prepared By	Reviewed By	Approved By	Issued By

1.0 SCOPE:

Scope of the Specification includes technical requirements w.r.t., manufacturing, testing, packing and forwarding, supply and delivery of automatic **Sweep Frequency Response Analysis** test equipment with software for diagnosis of power transformers

2.0 APPLICABLE STANDARDS:

IEC61010-1 and EN61326-1: Shock proof, Vibration proof, EMC compliant & Safety requirements as per relevant International Standards

3.0 CLIMATIC CONDITIONS OF INSTALLATION

Test kit to be supplied against this specification shall be suitable for satisfactory continuous operation under the following tropical conditions:

- i. Maximum altitude above sea level 1,000m
- ii. Maximum ambient air temperature 50°C
- iii. Maximum daily average ambient air temperature 35°C
- iv. Minimum ambient air temperature 0°C
- v. Maximum relative humidity 95%
- vi. Average number of thunderstorm days per annum (isokeraunic level) 70
- vii. Average number of rainy days per annum 120
- viii. Average annual rainfall 150cm
- ix. Earthquakes of an intensity in horizontal direction - equivalent to seismic acceleration of 0.3g
- x. Earthquakes of an intensity in vertical direction - equivalent to seismic acceleration of 0.15g (g being acceleration due to gravity)
- xii. 11 .Wind velocity: 300 km/hr, 200 km/hr and 160 km/hr. environmentally, some of the regions, where the work will take place includes coastal areas, subject to high relative humidity, which can give rise to condensation. Onshore winds will frequently be salt laden. On occasions, the combination of salt and condensation may create pollution conditions for outdoor insulators. Some places are in heavily industrial polluted areas. Therefore,
- xiii. Outdoor material and equipment shall be designed and protected for use in exposed, heavily polluted, salty, corrosive and humid coastal atmosphere

4.0 GENERAL TECHNICAL REQUIREMENTS

Sl. No.	Particulars	To be Filled By Bidder
1.0	<p>APPLICATION</p> <ul style="list-style-type: none"> • The SFRA with dedicated software system is required for diagnostic field-testing of EHV class power transformers at site. • The equipment shall be robust, portable, have automatic test sequences, mains/battery operation and user defined test procedures with dedicated software for acquisition, storage and analysis of the data • The supplier shall submit list of customers to whom the instrument (or former versions of the SFRA test equipment) has been supplied for the past five years. 	

Initiator		HoG(Engineering)	
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TATA POWER COMPANY LIMITED, ODISHA			
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Prepared By	Reviewed By	Approved By	Issued By

Sl. No.	Particulars	To be Filled By Bidder
2.0	<p style="text-align: center;">GENERAL</p> <ul style="list-style-type: none"> • Shall have automatic testing features for diagnosis of EHV power transformers at site. • Shall be able to detect: <ul style="list-style-type: none"> ✓ Winding deformation and displacement ✓ Core movements ✓ Faculty core grounds ✓ Partial winding collapse ✓ Hoop buckling ✓ Broken or loosened clamping structures ✓ Shorted turns and open windings • Automatic report generation • Interface facility to external Computer • High reliability of results due to the applied measurement method and innovative connection technique • Portable & robust with hard transport casing • Mains and battery operation. Both options are to be supported by the instrument. • User friendly acquisition, storage, analysis & expert guidelines software • Software with integrated data base • IEC60076-18 and IEEE C57.149-2012 compliant and template support 	
3.0	<p style="text-align: center;">TECHNICAL</p> <ul style="list-style-type: none"> • Shall cover the fully dynamic range and maintains the same energy level at each frequency (at least 145dB for the frequency 20Hz up to 2MHz) • High signal to noise ratio across the entire frequency range (noise floor <- 135dB) • Shall filter induced interference & noise • Shall provide special test leads for reproducibility & accurate measurements • The frequency range shall cover most important diagnostic areas: <ul style="list-style-type: none"> ✓ Core and magnetic properties ✓ Winding movement and deformation ✓ Interconnections-leads, load tap changer, de-energized tap changer • User friendly and dedicated software with analysis algorithms and data base solution. 	
4.0	<p style="text-align: center;">OUTPUT VOLTAGE</p> <p>Output voltage should be adjustable from 0.1Vpp up to 10 Vpp at 50Ω. The inputs and outputs are short-circuit protected</p>	
5.0	<p style="text-align: center;">FREQUENCY RANGE</p> <p>1 Hz – 30 MHz, user selectable</p>	
6.0	<p style="text-align: center;">Number of Points</p> <p>At least 801, Logarithmically spaced. User selectable, max 3201 pts per range, maximum of 12 ranges; total of maximum of 38412 pts.</p>	
7.0	<p style="text-align: center;">DYNAMIC RANGE</p> <ul style="list-style-type: none"> • + 10dB to -145dB • Accuracy: ±0.1 down to -50 dB and ±0.1 between -50 dB and -100dB 	
8.0	<p style="text-align: center;">IF BANDWIDTH</p> <ul style="list-style-type: none"> • 10% of active frequency at frequencies higher than 150 Hz. Intelligent setting and algorithms of the band width in the range between 30 Hz and 100 Hz for power frequency noise suppression. 	
9.0	<p style="text-align: center;">INTERFACE</p> <p>USB</p>	

Initiator		HoG(Engineering)	
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TATA POWER COMPANY LIMITED, ODISHA			
TECHNICAL SPECIFICATION			
Document Title	Standard Technical Particular: Sweep Frequency Response Analyzer Test Kit		
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10	DATA COLLECTION Fully automated, <ul style="list-style-type: none"> • Frequency range: 10 Hz-20 MHz, Auto scaling • Number of points: at least 801, logarithmically spaced with capabilities of customization. 	
11	SOFTWARE Shall be user friendly dedicated software <ul style="list-style-type: none"> • Data manager shall allow selection of data based on equipment tested, location, test equipment used, test setup, Organization, Rating, tap position etc. • Identification & comparison of any differences or areas of dissimilarity between two SFRA traces, • Identification & analysis between the references curve & variations in the measured data • Shall provide a plot of the differences and statistical analysis of the results. • The Software shall provide an assessment tool based on the standard DL/T911-2004. • Plotting: shall provide plots of frequency v/s magnitude & phase • All dedicated software's shall be supplied in original in CD's or DVDs • The Software shall be able to import FRA data of different FRA vendors • The Software shall be able to import and export files in CIGRÉ format (.xfra) • The Software shall be able to import and export files in IEC60076-18 format • The software shall be able to remove noise of measured traced (interpolation and average filtering) • The software shall generate automatically reports (e.g. excel reports and pdf) 	
12	POWER INPUT 90 – 260 Volts AC, 47 – 55 Hz	
13	ENVIRONMENTAL <ul style="list-style-type: none"> • TEMPERATURE <ul style="list-style-type: none"> ○ Storage : -5°C – +55°C ○ Operation : -35°C – +55°C • HUMIDITY <ul style="list-style-type: none"> ○ 95 % RH Non condensing at +40°C • ENVIRONMENTAL <ul style="list-style-type: none"> ○ Shall have Dust proof enclosure 	
14	SAFETY Shock proof, Vibration proof, EMC compliant & Safety requirements as per relevant International Standards. System should include a TÜV Octagon certification. IEC61010-1 and EN61326-1 (class A) tested and certified.	
15	ACCESSORIES <ul style="list-style-type: none"> • External AC/DC Adapter • Grounding cable • Measuring cables – 1 sets • Rugged transport cases for all separate units and accessories • Operation & Maintenance manual • All related software • Wheeled Transport trolley for easy movement and transportation at the time of testing under variety of sites conditions. 	
16	CALIBRATION Calibration certificate traceable to National/International standards from an International accredited Laboratory with uncertainty calculations shall be provided	

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5.0 INSTALLATION & COMMISSIONING

Installation, Commissioning & successful demonstration of test equipment at TPCODL shall be the responsibility of the supplier.

6.0 TRAINING

Exhaustive Classroom training at TPCODL with theory and practical session on the usage of the instrument.

7.0 PRE-DISPATCH INSPECTION

Pre-dispatch inspection will be carried out by TPCODL before dispatch of material.

8.0 INSPECTION AFTER RECEIPT AT STORES

The material received at Tata Power-Co. Ltd., Odisha store/workshop/laboratory, shall be inspected for acceptance and shall be liable for rejection, if found different from the Purchase Order or not meeting required technical parameters. Manufacturing date shall not be 30 days prior to the date of delivery at TATA Power Co. Ltd, Odisha's Stores. Certificate of Analysis shall be valid for not less than 11 months from the date of receipt at TATA Power Co. Ltd., Odisha's Stores.

9.0 GUARANTEE

Test Kit should have warrant of 5 Years Bidder shall be liable to replace it at their own cost.

10.0 PACKING

All the material shall be packed in aluminium canister of 500 ml or higher. The bidder shall ensure that all material is prepared for rail/road transport in a manner so as to protect the material from damage in transit. The material used for packing shall be environmentally friendly. Each packaged canister shall be provided with MSDS (material safety data sheet) instructions.

11.0 TENDER SAMPLE

Demonstration of the above test kit has to be performed by bidder within 7 days of intimation after bid open at TPCODL premises.

12.0 GUARANTEED TECHNICAL PARTICULARS

Bidder to comply & mention technical particulars available in the offered model test set for all above clauses as per specification.

13.0 SCHEDULE OF DEVIATIONS

(TO BE ENCLOSED WITH TECHNICAL BID)

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

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

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

Seal of the Company

Signature

Designation

Initiator		HoG(Engineering)	
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