

Tender Document
for
**Repair with complete rewinding including dismantling, loading, unloading, to
& fro transportation, inspection, testing, and other allied works in respect of
400/220/33 KV, 315 MVA TELK - make defective Power Transformer lying at
Jeerat 400 KV Substation, WBSETCL.**

**NIT. NO. - CE/ (O&M)-I/315MVA TRF REPAIR/2022-23/21, Dated
05.12.2022.**

Section I – VI

Notice Inviting Tender (NIT) : Section-I
Instruction to Bidders (ITB) : Section-II
General Conditions of Contract (GCC) : Section-III
Special Conditions of Contract (SCC) : Section-IV
Annexures : Section-V (A & B)
Bid Data Sheet: Section VI



WBSETCL

Office of the Chief Engineer: (O&M) – I
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DETAILED NOTICE INVITING TENDER

WEST BENGAL STATE ELECTRICITY TRANSMISSION COMPANY LIMITED

(A Govt of West Bengal Enterprise)

**Office of the Chief Engineer, O&M - I, Vidyut Bhavan, 10th floor, Block-D,
Salt Lake City, Kolkata-700 091**

**Repair with complete rewinding including dismantling, loading, unloading, to
& fro transportation, inspection, testing, and other allied works in respect of
400/220/33 KV, 315 MVA TELK - make defective Power Transformer lying at
Jeerat 400 KV Substation, WBSETCL.**

[Domestic Competitive Bidding]

1. **West Bengal State Electricity Transmission Company Limited** herein referred to as **WBSETCL** invites bids through Domestic Competitive Bidding (DCB) from eligible bidders for **Repair with complete rewinding including dismantling, loading, unloading, to & fro transportation, inspection, testing, and other allied works in respect of 400/220/33 KV, 315 MVA TELK - make defective Power Transformer lying at Jeerat 400 KV Substation, WBSETCL** against NIT No. **CE/ (O&M)-I/315MVA TRF REPAIR/2022-23/21, Dated 05.12.2022**. WBSETCL intends to finance this package through own fund.
2. Brief Scope of work:

The scope of work shall be on the basis of single source responsibility, completely covering all the Equipment/Material specified under the Technical Specifications. It will include the following:

 - a. Loading of defective transformer from plinth to trailer including dismantling & required dragging by contractor.
 - b. Transportation of defective transformer (without oil) & accessories from site to the works by repairer.
 - c. Unloading of defective transformer from trailer to shop floor of works by repairer.
 - d. Insurance of whole transformers during above work to be taken by repairer from reputed insurance company.
 - e. Un-tanking of Core Coil assembly after disconnection of OLTC.
 - f. **Inspection of the Transformer at the works in presence of WBSETCL officials.**

- g. **Stage inspection:** Assembly of new windings / good winding(s) of the defective transformer unit with all new insulating materials over the core, refilling of laminations after cleaning, changing of insulating materials between top & bottom yoke to yoke channels
- h. **Oil filtration, Final inspection & Testing**
 - i. Repairing and Complete manufacture including shop testing.
 - j. Providing engineering drawing, data, operational manual, etc for the Purchaser's approval.
 - k. Packing, forwarding, transportation and insurance of Equipment/ Material from the manufacturer's works to the Site.
 - l. Receipt, storage, preservation, insurance and conservation of Equipment/ Material at the Site.
 - m. Reliability tests, performance and guarantee tests, wherever applicable, on completion of commissioning.

3. Detailed Specification, scope of work and terms and conditions are given in the bidding documents, which are available at the online e-tendering portal <https://wbtenders.gov.in/> or <https://etender.wb.nic.in> as per the following schedule:

Sl. No.	Particulars	Date & Time
1.	Bidding document No.	CE/ (O&M)-I/315MVA TRF REPAIR/2022-23/21, Dated 05.12.2022.
2.	Date of uploading of N.I.T. & other Documents (online) (Publishing Date)	05.12.2022.
3.	Documents download/sell start date (Online)	05.12.2022. from 11:00 A.M.
4.	Documents download/sell end date (Online)	02.01.2023 up to 03.00 P.M.
5.	Start date of hard copy submission/ on line submission of clarification/pre-bid queries/proposed modifications/additional information (if any)	08.12.2022 from 11:00 A.M.
6.	Closing date of hard copy submission/ on line submission of clarification/pre-bid queries/proposed modifications / additional information (if any)	12.12.2022 up to 01.00 P.M.

7.	Pre-bid meeting to be held at Office of the Chief Engineer: (O&M) – I, 10 th Floor, D-Block Bidyut Bhawan.	14.12.2022 at 02:30 P.M.
8.	Bid submission start date (On line)	19.12.2022 from 09:00 A.M
9.	Bid Submission closing (On line)	02.01.2023 up to 03.00 P.M.
10.	Last Date of submission of original copies for the cost of Bidding Documents and Earnest Money Deposit (Off line)	03.01.2023 up to 01.00 P.M.
11.	Last date of submission of the legally enforceable documents as mentioned in General guidelines for e-tendering in sealed envelope (Off line)	03.01.2023 up to 01.00 P.M.
12.	Bid opening date for Technical Proposals (Online)	04.01.2023 up to 03:00 P.M
13.	Date of uploading list for Technically Qualified Bidder(online)	Will be uploaded after completion of the techno-commercial evaluation.
14.	Date for opening of Financial Proposal (Online)	Will be published in due course.
15.	Cost of the Tender Document	Rs. 5000/- + Rs. 900/- GST @18% = Rs. 5,900/- (Rupees Five Thousand and Nine Hundred Only). SAC Code – 999799. The bidders participated in the 1st Call vide NIT No. CE/ (O&M)-I/315MVA TRF REPAIR/2022-23/16, Dated 12.09.2022. are exempted from this Tender Fee.
16.	Completion Time	Delivery within 240 days from the date of placement of LOA & tentative Commissioning within 30 days from the date of delivery.

4. A complete set of bidding documents may be downloaded by any interested bidder. Cost of the Bidding document (non-refundable) as mentioned above in the form of a Demand Draft/Pay Order/Banker's Cheque drawn in favour of **“WEST BENGAL STATE ELECTRICITY TRANSMISSION COMPANY LIMITED”** from any scheduled bank payable at Kolkata shall have to be deposited physically at the office the Chief Engineer: (O&M) - I, D- Block, 10th Floor, WBSETCL, Bidyut Bhawan on or before 03.01.2023 up to 01.00 P.M. Downloading the bidding documents shall not automatically construe that the bidder fulfils the Qualifying Requirements which shall be determined during bid evaluation based on data/documents uploaded by the bidder.

5. All bids must be accompanied by bid security for an amount of **Rs 7.23 Lakhs [Rupees Seven Lakh and Twenty Three Thousand Only]** in the form of Demand Draft / Bank Guarantee/ Banker's Cheque drawn in favour of "WEST BENGAL STATE ELECTRICITY TRANSMISSION COMPANY LIMITED" from any scheduled commercial bank, payable at Kolkata, or a Bank Guarantee from any scheduled commercial bank favouring WBSETCL which shall remain valid for a period of 240 (Two hundred and Forty) days from the next day of techno-commercial bid opening date with a further claim period of thirty (90) days. Non submission of the acceptable bid security along with prescribed cost of bidding documents as specified here, in a sealed cover or submission of bid security and cost of bidding document of inadequate value shall be rejected by the WBSETCL and in such cases bids shall be considered as non-responsive.

For preparation of BG the Bank details of WBSETCL is given below:

**HDFC BANK
BALLYGUNGE BRANCH
ACCOUNT NO: 57500000360602
IFSC: HDFC0000516**

6. Non submission of the acceptable bid security along with prescribed cost of bidding documents as specified here, in a sealed cover or submission of bid security and cost of bidding document of inadequate value shall be rejected by the WBSETCL and in such cases bids shall be considered as non-responsive.

7. **Qualifying Requirement for bidders:**

In addition to the requirements stipulated under Section-II, Instruction to Bidders (ITB), the following shall also apply:

A. **TECHNICAL:**

1. Bidders shall be original transformer manufacturer / repairer having all infrastructural capacity and must have successfully repaired with rewinding/re-insulation of winding or supplied at ***least 01 (One) no.*** of such 400/ 220KV Transformers of capacity 315 MVA or above Transformers in any STU / CTU / Recognized Indian Power Utility within the ***last 10 (Ten) years*** & the same Transformers must be in successful operation for at least ***01 (one) year*** as on date of NIT. ***(The above information is to be supported by certificate stating successful delivery after manufacturing or repairing and satisfactory performance certificate of the delivered Transformers).***
2. The bidder must have stage inspection and all testing facilities for final inspection at their works as on date of NIT. The bidder should have all testing facilities with in house NABL accredited lab to carry out routine tests on the repaired transformer as per latest version of

IS/IEC including impulse test facility of adequate capacity to carry out impulse test on 315 MVA, 400/220/33 KV Transformer.

3. The bidder should have adequate plant & manufacturing/ repairing capacity to perform the work properly and expeditiously within the time period specified. It is mandatory that the bidder should have in house facility of drying of 315MVA, 400/220 KV or higher capacity Transformers as per latest recommendations of IS/IEC. The bidder should furnish list of plant & machinery and testing equipments available in the works. The details of drying and impulse test facilities along with make, sl. No. & rating should be invariably furnished. Further, the bidder should furnish an undertaking that the list of plant & machinery is correct and in case, any of the statements given is found to be incorrect, even at a later stage, the tender shall be liable for rejection.

B. FINANCIAL:

- i) The **Minimum Average Annual Turnover (MAAT)** of the Bidder for the best 3 (three) years out of the last 5 (five) financial years for which the audited accounts are available shall not be less than **Rs. 1084.00 Lac.**
- ii) **Net worth** at the end of last financial year shall be **positive.**
- iii) Bidder shall have **Liquid Asset (L.A.)** and/ or evidence of access to or availability of credit facilities of equivalent amount not less than **Rs. 181.00 Lac.**

C. OTHER REQUIREMENTS :

The bidder shall furnish, as part of his techno-commercial bid, documents establishing the bidder's qualifications to execute the Order to the satisfaction of the Purchaser. All documents required to establish bidder's financial and Technical qualification must be submitted as part of techno-commercial bid. In particular, the following documents need to be submitted by the bidder:

- a. Copies of un-priced/priced purchase order for similar work during the past 05 (Five) years and execution status of each order supported by duly acknowledged delivery challans, client's certificate or other relevant documents.
- b. Confirmation regarding availability of in-house stage as well as final inspection/ testing facilities or access through other government approved agencies for performing inspection/testing.
- c. Performance Certificates from the user for successful operation of the delivered Transformers.
- d. Copies of related Type Test Certificates of tendered Transformers as per relevant IS / IEC.
- e. Audited Annual Accounts of the company for the last 05 (Five) years (in case of companies)

(or)

IT Return duly acknowledged by the tax department for the last 05 (Five) years (in case of bidders other than companies)

- f. Copies of G.S.T. Registration Certificate along with other relevant details.

In addition to above, the bidder shall also be required to meet the eligibility conditions and submit an affidavit as per the bidding documents.

Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have made misleading or false representations in the forms, statements and attachments submitted in proof of the qualification requirements and/or record of unsatisfactory performance.

8. WBSETCL reserves the right to accept or reject any bid partly or fully or cancel the bidding process without assigning any reasons thereof and in such case no bidder shall have any claim arising out of such action.

9. **Delivery Schedule**

The delivery schedule given hereunder is inclusive of the period required for conducting all inspection & testing works (including type tests, if so required by the Purchaser)

- a) The manufacturer/repairer will take up transportation of the transformer from site to their works within 30 (thirty) days from the date of placement of LOA.
- b) All new windings and other components to be supplied /manufactured are to be offered for inspection along with stage inspection.
- c) The repaired transformer to be offered for final inspection within 180 (Two hundred Ten) days from the date of LoA.
- d) The transformers to be dispatched to WBSETCL site (anywhere in West Bengal, except Hills) within 30 (thirty) days from the date of issue of MICC-Cum-DI. The transformer is to be delivered after completion of final inspection of the transformer at factory within **240 (Two hundred and Forty) days from the date of issue of LOA.**
- e) Tentative schedule of Erection & Commissioning is within **30 (Thirty) days from the date of delivery** of the repaired Transformer.
10. **Name Plate details of all the transformers to be repaired are attached separately.**
11. **SUBMISSION OF PERFORMANCE GUARANTEE FOR REPAIRING :**

- 1) The earnest money deposited by the each successful bidder shall be refunded after receipt of Additional Bank Guarantee (**B.G. no.1**) amounting to **Rs. 17,63,68,273.00 (Rupees Seventeen Crores Sixty Three Lakh Sixty Eight Thousand Two hundred Seventy Three only)** to be submitted before lifting of the defective transformer(s) from the site.
- 2) The Contract Performance Guarantee (**B.G. No. 2**) shall be as follows :
 - An unconditional Bank Guarantee(s) towards Performance Security (ies) in respect of the Contracts amounting to 10% (Ten) of the total Contract Value valid up to ninety (90) days after the end of Defects Liability Period with further claim period 90 (ninety) days of all the equipment covered under the contract is to be submitted by the Contractor during delivery of repaired Transformer at site.

The **B.G no. 1** shall be returned after successful delivery of the repaired transformer and submission of **B.G. no. 2.**

12. **DEFECT LIABILITY PERIOD :**

The defects liability period shall be **60 (sixty) months** from the date of delivery of the repaired transformer(s) at site.

13. **Technical know-how:** Qualified, experienced and efficient engineer should supervise the various activities such as dismantling of core & windings, repairing, assembling, dehydration, testing, loading, unloading at works etc. Date-wise record of various activities should be maintained by you.

14. **Methodology for repair of the Transformers.**

- I. The transformers shall be repaired by replacement of the windings and replacement of the Transformer oil along with other materials as per the schedule. Balance materials required for its repairing if any, are to be supplied by the manufacturer/repairer after necessary assessment prior to the submission of the bid.
- II. Before submission of bids, the bidders will carry out Physical (both internal & external) inspection of all the transformers at the site with their representatives. Inspection is to be done in the presence of WBSETCL officials. The bidders may also carry out necessary testing at Site to assess the healthiness of the Transformer & accessories. All testing instruments required for the tests shall be provided by the

bidder. However, the bidders may utilize testing instruments of WBSETCL as per their requirement if available at site. The inspection & testing of the transformers shall be completed within a maximum of 2(two) days. 'To & fro' conveyance, boarding, lodging etc. shall be borne by the bidders.

- III. **Date of inspection and testing of the transformers at site shall be decided by tendering authority, WBSETCL as per request from the intending bidder during scheduled pre-bid meeting.**
- IV. Loading of defective transformer from plinth to trailer by repairer with required dragging.
- V. Transportation of defective transformer (without oil) & accessories from site to the works by repairer.
- VI. Unloading of defective transformer from trailer to shop floor of works by repairer.
- VII. Insurance of whole transformers during above work to be taken by repairer from reputed insurance company.
- VIII. **Joint internal inspection of the Transformer at the works in presence of WBSETCL officials**, after removal of Core Coil Assembly with disconnection of OLTC, dismantling of windings, checking & testing of core, winding & all accessories for final assessment of damage & cause of failure & preparation of MOM.
- IX. **Stage inspection:** Assembly of new windings / good winding(s) of the defective transformer unit with all new insulating materials over the core, refilling of laminations after cleaning, changing of insulating materials between top & bottom yoke to yoke channels. Low Voltage testing of the Windings in presence of WBSETCL official & preparation of MOM.
- X. Making connection including leads, tap leads, soldering, brazing etc.
- XI. Replacement of all Gaskets, oil seals etc by new one.
- XII. **Vapour phase drying** of complete Core-coil assembly & OLTC under vacuum oven – 760 mm of Hg pressure so as to achieve proper IR values and Tan Delta Values and oil impregnation of core & Winding.
- XIII. Overhauling (which includes checking, cleaning, servicing & minor repairing) of all accessories transported to repairer's works such as OLTC, valves, relays, Conservator, Radiators, Bushings, Bushing rods, connector, RTCC panel etc.
- XIV. Oil filtration, Final inspection & Testing: Tanking of transformer with dried core-coil assembly, fresh transformer oil filling through filter machine (filter machine should conform to latest IS/IEC or with latest amendment, if any) and assembling of accessories.
- XV. Complete Routine Testing of the Transformer as per latest IS/IEC.
Preparation of MOM.

- XVI. Painting of transformer tank (inside and outside) & accessories after final testing.
- XVII. Proper sealing to be provided at all outlets / joints of transformer by repairer.
- XVIII. Loading of transformer and accessories on the trailer & truck. SFRA to be taken by the repairer before loading of the repaired transformer on trailer.
- XIX. Transportation of transformer from works to destination site (as per DI) by repairer. Responsible representative of repairer to be deputed during transportation of transformer and accessories.
- XX. Unloading of transformer on plinth from trailer by repairer including necessary dragging of the main tank.
- XXI. Tan delta of windings and all bushings including SFRA to be taken by the repairer before commissioning of the transformer at site. SFRA Tests should be conducted both at factory/ works (before despatch/delivery) and at site (after placement on plinth). Representative of the repairer should be present at site during commissioning & installation.
- XXII. Low voltage testing of the repaired transformer by WBSETCL in presence of repairer and commissioning thereof. Repairer is fully responsible for certifying the transformer test results before commissioning of repaired transformer.
- XXIII. **COST OF NEW & OLD WINDINGS:** All windings to be supplied shall be manufactured from new copper conductor and new insulating materials. The size and type of new copper conductor should be as per original windings. The dimensions (ID, OD, Height, number of turns etc) of the new windings should be as per original windings. A sketch indicating details of outer and inner diameter, size and type of conductor, type of winding, thickness & size of core laminations with limbs and window dimensions shall be made by the repairer. A copy of the same should be sent along with MOM of Stage Inspection.
- XXIV. All defective/damaged windings shall be retained by the repairer. All defective/damaged windings along with other damaged insulating materials shall be cut into small pieces and destroyed / crushed in presence of WBSETCL Engineer. Repairer has to take the photographs of above destroyed scrap windings & photographs of the same should be handed over to WBSETCL officials.
- XXV. If any old windings are manufactured from CTC conductor, then it should be replaced with new windings manufactured from CTC conductor only.
- XXVI. New name plate is to be tagged mentioning repaired transformer and other details. Name plate so attached should meet IS compliance.

XXVII. **Necessary Assistance is to be provided by the bidder for installation and commissioning of the repaired Transformer during commissioning.**

15. **Technical Specification:** - All the Technical Specifications are available at the website of WBSETCL i.e. www.wbsetcl.in. The Bidders are requested to download the same from the aforesaid website and the same should be followed.
16. **Address for seeking any clarifications on the bid documents:**

The Chief Engineer (O&M) – I,
WEST BENGAL STATE ELECTRICITY TRANSMISSION COMPANY LIMITED
CIN: U40101WB2007SGC113474
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GSTIN of WBSETCL: 19AAACW6952G1Z0