

WEST BENGAL STATE ELECTRICITY TRANSMISSION COMPANY LIMITED

(A Govt of West Bengal Enterprise)

Office of the Chief Engineer, (O&M) – I, Bidyut Bhavan, Block – DJ, Sector – II, Salt Lake City,
Kolkata – 700091.

DETAILED NOTICE INVITING TENDER

For

Data Collection, generation of reports & submission under 100% metering scheme for twelve months from the date of placement of LoA i.r.o.145 (one hundred and forty five) nos. E.H.V Substations of WBSETCL and Hydel Power Stations within the state West Bengal.

Notice Inviting e-Tender No. : -

CE/ (O&M)-I/100% METER READING/2018-2019/14, dated : 14.06.2018

1.0 West Bengal State Electricity Transmission Company Limited herein referred to as WBSETCL invites e-tender (Submission of Bid through online) through local competitive bidding (LCB) from eligible bidders for Engineering as required and procurement of services in respect of the following work :-

Data Collection, generation of reports & submission under 100% metering scheme for twenty four months from the date of placement of LoA i.r.o.146 (one hundred and forty six) nos. E.H.V Substations of WBSETCL and Hydel Power Stations within the state West Bengal.

2.0 SCOPE OF WORK :

GENERAL TECHNICAL PARTICULARS

2.01 **SCOPE:** The scope of works against this NIT is as follows:

- (a) Data Collection.
- (b) Preparation of Standard Report with detailed analysis.
- (c) Preparation of Requisition Based Report with need based analysis

The scope of the works covers to design, supply and installation of necessary hardware and software for servicing of data collection etc. i.r.o. "100% metering systems" at all substations of WBSETCL throughout the geographical domain of West Bengal, data collection detailed analysis & report along with preparation for electrical energy audit using the existing metering infrastructure i.e. Meters, CT's and PT's.

3.0 REQUIREMENT:

3.1 The raw data of the meters have to be taken by the successful bidders by engaging competent technical personnel for Manual collection of data through CMRI or any other suitable tools compatible for the existing meters.

3.2 If any defect with the meter or components of metering system like CT, PT are found to be inoperative during data collection, immediate measures have to be taken for

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- rectification of the same. In case of replacement, WBSETCL will provide CT's, meters; only Logistic support will be given by vendors.
- 3.3 The software that shall be used shall be capable of carrying out respective energy accounting, technical loss calculation, operation reports and system analysis as per the delivery requirements using the Y. hour time stamped load survey data and event data logged by the meters. Meter data shall be used for ascertaining the technical loss of the system and methods of appropriately used the meter data to assess the technical loss in a reliable manner by considering the transmission line lengths, conductor parameters and transformer modeling parameters. Necessary licenses for the software to be used and associated charges (if any) shall be taken care of by the vendor only.
- 3.4 The vendor shall ensure that the system implemented is capable of accurately accounting the parameters by taking care of changes happening in the field like CTIPT/Meter changes, their respective ratios and concerned multiplication factors etc. In addition to this, the proposed system shall be capable of pointing out problems in the metering system like wiring errors, P.T. failure etc. as the problems affect the accuracy of the energy audit.
- 3.5 The systems shall also provide interface for providing the feeder related information to the ownstream/ upstream level projects of WBSETCL. This information shall be furnished on or before 71day of each calendar month irrespective of whether the 71 day is a holiday or not. Data shall also be provided in the desired formats in soft copy to WBSETCL and /or Agency entrusted by WBSETCL for Energy Audit and MIS Report etc.
- 3.6 The software shall provide a graphical interface for making the single line diagram with a provision to show different voltages levels with different color and attaching the metering locations to the respective feeders.
- 3.7 The Software should be capable of generating the energy balance sheet for each sub-station and administrative hierarchies like Area offices, Zones as well as the entire system Viz WBSETCL.
- 3.8 The software should be capable of generating reports for onward submission to the WBERC like reports of annualized losses, FAIDI, Voltage Parameters, ABT Based reports etc.
- 3.9 The software should be capable of integrating with the ERP system of SAP to be introduced very soon in the organization .
- 3.10 It may be required to submit meter data of either one feeder or all the feeders under one substation or more for processing the data through the metering software and generation of MIS report as sample check report.

4.0 DELIVERABLES:

The deliverables are described separately as follows:

- i. Summary Report of Transmission System
- ii. ABT Summary Report
- iii. Utility Exchange Reports of Transmission System with other Transmission & Generating Agencies
- iv. Distribution Exchange Reports with all Distribution Utilities including Bulk consumer Agencies
- v. Maximum/ Minimum Demand (MW/MVA) for the month for all Transformer of the SS with corresponding Voltage

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- vi. Voltage variation report of the feeders as per requisition of variation percentage.
- vii. MW, MA VR flow report of the important nodes
- viii. Area wise Reports
- ix. Sub-station wise Reports
- x. Any other reports as required

All the reports duly complied are presented to WBSETCL by the 15th day of each calendar month (or next working day in case 15 is a holiday)

5.0 CONTENT OF TRANSMISSION SYSTEM REPORTS:

The Transmission system reports shall comprise of the following reports

- i. Energy audit Report
- ii. Operation reports
- iii. Meter reading reports

5.1.1 Energy audit reports for Transmission system:

- i. This shall comprise a summary of energy input, output and loss. The loss should be further bifurcated to technical loss and unaccounted energy.
- i. The energy input shall be summarized source wise as per monthly energy schedules (as per contract on ABT principles as provided by WBSETCL) and the energy drawn/dispatched as per unscheduled interchange (UI).
- ii. This shall also comprise a summary of grid energy that has been wheeled through the system, with wheeling loss, and cost of wheeling loss (as per UI rates)
- iii. Differences between the above and the UI accounting as carried out by ERLDC shall also be summarized in the report. (ERLDC data shall be arranged by WBSETCL)
- iv. The energy output to each sub-station of WBSTCL and the power station/ sub-station of other utilities connected to WBSETCL system shall be computed and reported area wise as per the energy dispatched from WBSETCL system to other agencies like WBSEDCL and any direct EHV consumers of other agencies like WBSEDCL.
- v. The technical loss shall be further bifurcated into technical loss in lines and transformers and further segregated voltage level wise and due to wheeling.
- vi. A trend report for energy input, output and losses is also required covering a 12 month period.
- vii. Transmission availability reports according to forced outage in compliance with availability calculation formula.

5.1.2 OPERATION REPORTS:

- i. Operation reports shall comprise of peak & base demand for WBSETCL as a whole with further bifurcation into Area wise energy drawn and peak and base demands and Peak Contribution Factors (PCF) for each Area.

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- ii. Operation reports shall also contain a summary of the reactive drawl from the grid and reactive demand at each inter-utility exchange bus bars when the voltage was <97% and >103% respectively. Similar summaries for reactive drawl by each Area and reactive demand of the different Areas under low (<97%) and high (>103%) voltage conditions should al so be provided.
- iii. Substation wise bus bar mismatch reports shall be provided using the meter data, Unevenness for short duration shall be reported.
- iv. Loading of lines with more than SIL (Surge Impedance of line) capacity shall be provided. It may be required to provide the report of loading of the line comparing with the SIL & Thermal Capacity of short line and long line with different loading band as required by the WBSETCL.
- v. Monthly maximum loading of the Transformers and percentage overload above 80% of rated capacity. The party may be asked to prepare need based other reports on transformer as per available meter data.
- vi. Statistics of overloaded lines & Transformers showing trend for the post months as required by WBSETCL on a rolling basis.
- vii. % Loss of Each Substation & transmission lines have to be computed and should be submitted for system study.
- viii. Exception reports shall be substantiated by analysis of loading duration of transformers (with & without concurrent loading) and lines etc for providing information on prioritized actions to be taken by WBSETCL
- ix. Loading of all 33KV & 11KV feeders emanating from the WBSETCL substations with feeder wise Voltage profile.

5.1.3 METER READING REPORTS:

- 5.1.3.1 Meter reading reports for all the meters shall be provided in a hierarchical manner showing the previous reading, current reading and energy hand l ed by the meter. This should take care of the CT/PT ratios as applicable.
- 5.1.3.2 Reports shall be substantiated by necessary decision/support information like trends, profiles, duration graphs etc. for various system parameters like active power, reactive power, voltage, frequency etc. and losses like technical losses, total loss etc.

6.0 SUB-STATION REPORTS:

- 6.1 This report should comprise of feeder wise detail energy consumption and other operational figures vi z. MD, Energy Consumption, Supply reliability figures, Power Factor, voltage conditions etc.
- 6.2 All the reports shall be complemented with summary reports, exceptions like best five and worst five feeders in the Area etc. together with rolling reports for the exceptions.
- 6.3 The vendor shall note that quality of the reports is the essence of the requirement and not quantity. The bidder is expected to process the data read from the meters and derive the actionable MIS information from the meter data without much need of assumptions. The reports are expected to give quick information on various system parameters and abnormalities triggering corrective action. Mere submission of tabulated sheets of meter data shall not be acceptable.

7.0 COMPATIBILITY BETWEEN METERS OF DIFFERENT MAKE:

The installed energy meters may vary Sub-Station to Sub-Station basis or within the same Sub- Station. The parties have to ensure compatibility of data collection

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from any type/make of Energy Meters. This compatibility is also required for the static meters already installed in the system or going to be installed or to be installed in future.

8.0 REPORT FORMAT

The reports shall have to be submitted in soft copy through CD (14 copies) in PDF (in excel format). However 3 (three) nos. hard copies along with soft copies (14 nos. CD) in PDF Format should be submitted to the Chief Engineer, Tr. (O&M)-I for submission to different offices of WBSETCL. However the report in PDF format shall be considered as the legitimate report.

- 9.0 Detailed Specification, scope of supply and terms and conditions of supply are given in the bidding documents, which are available at the online e-tendering portal <https://wbenders.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/100% METER READING/2018-2019/14, dated : 14.06.2018
2	Date of uploading of N.I.T. & other Documents (online) (Publishing Date)	14.06.2018
3	Documents download/sell start date (Online)	14.06.2018 from 06.00 P.M.
4	Documents download/sell end date (Online)	11.07.2018 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)	15.06.2018 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)	22.06.2018 up to 03.00 P.M.
7	Pre-bid meeting to be held at Office of the Chief Engineer: (O&M) – II, 10 th Floor, D-Block Bidyut Bhawan.	26.06.2018 at 02.30 P.M.
8	Bid submission start date (On line)	28.06.2018 from 09:00 A.M.
9	Bid Submission closing (On line)	11.07.2018 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)	12.07.2018 up to 01.00 P.M.

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11	Last date of submission of the legally enforceable documents as mentioned in General guidelines for e-tendering in sealed envelope.	12.07.2018 up to 01:00 P.M.
12	Bid opening date for Technical Proposals (Online)	13.07.2018 from 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 Bidding Document	Rs 5000/- + Rs. 900/- (18% GST) = Total Rs. 5,900/- (Rupees Five Thousand and Nine Hundred only). HSN/ SAC Code – 999799.
16	Completion Time	12 (Twelve) Months from the date of placement of LOA.

- 10.0 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 **12.07.2018 up to 01.00 P.M.**
- 11.0 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
- 12.0 All bids must be accompanied by bid security for an amount of **Rs 92.00 Thousand [Rupees Ninety Two Thousand only]** in the form of Demand Draft /Pay order /banker's Cheque/ Bank Guarantee and shall remain valid for a period of 240 days from the date of opening of Bids with a claim period of another 90 days thereafter. Bidders must submit the Bid security physically within the stipulated date as above at the office of the Chief Engineer: (O&M) – I, 10th Floor, D-Block, Bidyut Bhawan and also to be documented along with the bid and submitted online. 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.

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

CANARA BANK

SECTOR III SALT LAKE CITY KOLAKATA 700091

ACCOUNT NO: 2549201000230

IFSC CODE CNRB0002549

13.0 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.

14.0 Qualifying Requirements for bidders:

Necessary documents shall have to be submitted by the bidder to comply the QR.

A. Technical QR :

The Bidder, who intends to participate in the Bid, shall have to comply the following criteria:

- a) Bidder must possess adequate tools /instruments i/c. software/hardware to carry out meter data collection, energy auditing/accounting and MIS generation.
- b) The bidder should have the past experience of executing work and services of similar nature of value not less than **Rs. 55 (Fifty Five) Lac.** in a single contract in the preceding 5(five) financial years for government. central or state, or reputed power utilities of PSUs or private sector on the date of issuance of NIT.

The above information is to be supported by certificate stating successful completion and satisfactory performance certificate and Taking over Certificate [TOC] of the relevant contract executed.

B. Financial QR :

- 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.138.00 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.23.00 lakh** (Rupees Twenty Three lakh only).

C. Personnel Capability:

The bidder must have full-fledged set up for executing similar projects in power utility. Details of execution set up to be deployed by the bidder shall be furnished in their offer. Bidder must have technically qualified Engineers who have experience in similar field. Bidder shall submit the qualification and experience details of their key personnel, who are proposed to be involved in carrying out this work

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D. Other requirement:

Bids may be submitted by a Registered Company that on its own meets all the qualifications, experience and requirements set forth in bidding document.

- a) The "Must Conditions" to be met by the bidder have been further elaborated in the NIT. Bidders shall upload scanned copies of valid and authenticated documentation in support of his capability/experience/requirement and qualification.

Documentary Evidence in support of Technical QR.

Bidder must possess adequate tools /instruments i/c. software/hardware to carry out meter data collection, energy auditing/accounting and MIS generation. Bidder must have technically qualified Engineers who have experience in similar field. Bidder shall submit the qualification and experience details of their key personnel, who are proposed to be involved in carrying out this work.

The bidder should have the past experience of executing Work and services of similar nature of value not less than Rs.55 Lac. in a single contract in the preceding 5(five) financial years for government. Central or state or reputed power utilities of PSUs or private sectors.

Documentary Evidence in support of Financial QR

1. Audited Annual Accounts of the company for the last three (3) years (in case of companies) or IT Return duly acknowledged by the tax department for the last three (3) years (in case of bidders other than companies)
2. Copies of TAN Card, Excise registration certificate, valid Sales Tax / VAT registration certificate.
3. If applicable, Copies of Service Tax Registration certificate.

Or

4. In case the bidder is a small service provider in terms of Finance Act 1994, then he has to furnish one certificate along with his Bid Documents in the following manner:- "That our Firm is a small Service Provider in terms of the Finance Act 1994 & we need not be registered with the Superintendent of Central Excise under Service Tax provision."

In addition to above, the bidder shall also be required to meet the eligibility conditions and submit an affidavit as per Annexure: 6 of Section V-A of the bidding documents

15.0 Completion Period :

The total contract shall be awarded to eligible bidder for a period of 1 (one) years. The date of commencement of the work will be specified in the LOA awarded to the successful bidder.

- 16.0 The purpose of the pre-bid meeting will be to clarify the scope of supply, and any issues regarding the bidding documents and the Technical Specifications, if raised at that stage by the bidders. The WBSETCL shall not be under any obligation to entertain /respond to

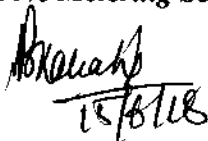
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suggestions made or to incorporate modifications sought for by the prospective bidders during the pre-bid meeting or thereafter.

- 17.0 All bids shall remain valid up to a minimum period of one hundred and twenty (120) days from the next day of price bid opening date.
- 18.0 WBSETCL reserves the right to accept or reject any bid partly or fully or cancel the bidding without assigning any reason thereof and in such case no bidder/ intending bidder shall have any claim arising out of such action.
- 19.0 The initial contract will be for 12 (twelve) months from the date of placement of LoA. But the same may be extended with same terms, conditions and price if required.
- 20.0 If the number of Sub Station will be more than 145 nos., then the payment will be made on pro-rata basis for excess number of Sub Station.
- 21.0 **ADDRESS FOR COMMUNICATION**

The Chief Engineer: (O&M) – I, West Bengal State Electricity Transmission Company Limited ,10th Floor, D Block, Block DJ, Bidyut Bhavan, Sector II, Salt Lake City, Kolkata 700091.

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