BSES Rajdhani Power Limited

Volume - I

Tender Notification for

RATE CONTRCAT FOR SUPPLY OF CT OPERATED HT, DT AND ABT METERS WITH FACTORY FITTED MODEMS AND BOX

CMC/BR/22-23/RB/PR/SN/1011

Due Date for Submission of Bids: 28.03.2022

BSES RAJDHANI POWER LTD (BRPL)
BSES Bhawan, Nehru Place, New Delhi-110019
Corporate Identification Number:
U74899DL2001PLC111527
Telephone Number: +91 11 3009 9999
Fax Number: +91 11 2641 9833
Website: www.bsesdelhi.com

SECTION - I

REQUEST FOR QUOTATION

Tender Notification: CMC/BR/22-23/RB/PR/SN/1011

Event: RATE CONTRCAT FOR SUPPLY OF CT OPERATED HT, DT AND ABT METERS WITH FACTORY FITTED MODEMS AND BOX

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SECTION – I: REQUEST FOR QUOTATION

1.00 Event Information

1.01 BSES RAJDHANI POWER LTD invites sealed tenders for supply of Single Phase Meter from reputed manufacturers. The bidder must qualify the technical requirements as specified in clause 2.0 stated below. The sealed envelopes shall be duly superscribed as — **"RATE CONTRCAT FOR SUPPLY OF CT OPERATED HT, DT AND ABT METERS WITH FACTORY FITTED MODEMS AND BOX(TENDER NOTICE CMC/BR/22-23/RB/PR/SN/1011 DUE FOR SUBMISSION ON 28.03.2022").**

Sl. No.	Item Description	Specification	Requirement Total Qty. (Nos.)	Estimated Cost
BRPL,DELHI				
1	HT Smart Meter 5A_ Factory Fitted Modem and configurable for net Metering	SECTION V & VI	225	1.50 Cr
	HT Smart Meter1A_ Factory Fitted Modem and configurable for net Metering		40	
	DT Smart Meter1A_ Factory Fitted Modem and configurable for net Metering		1000	
	ABT Smart Meter 5A_ Factory Fitted Modem and configurable for net Metering		10	
	ABT Smart Meter1A_ Factory Fitted Modem and configurable for net Metering		5	

Note:

- **Quantity may vary to any extent of +/- 30% of above mentioned total quantity.**
- **The rates quoted shall remain valid for one year from the date of LOI/RC.**

1.02 The schedule of specifications with detail terms & conditions can be obtained from address given below against demand draft/Pay Order of **Rs.1180/-** drawn in favour of **BSES RAJDHANI POWER LTD,** payable at New Delhi. The sale of tender documents will be issued from **08.03.2022** onwards on all working days. The tender documents can also be downloaded from the website **"www.bsesdelhi.com"**.

In case tender papers are downloaded from the above website, then the bidder has to enclose a demand draft covering the cost of bid documents as stated above in a separate envelope with suitable superscription —"Cost of Bid Documents: Tender **Notice Ref: CMC/BR/22-23/RB/PR/SN/1011".**This envelope should accompany the Bid Documents.

1.03 Offers can be received **up to 28.03.2022 (1500 Hrs)** and will be opened on **28.03.2022 at 1645 Hrs** in the presence of authorized representatives of the bidder's (Incase present on the schedule time of opening) **.**The schedule of specifications with detail terms & conditions are enclosed. It is the sole responsibility of the bidder to ensure that the bid documents reach this office on or before the due date.

HEAD OF THE DEPARTMENT,
1st FLOOR, 'C' BLOCK,
CONTRACTS & MATERIALS DEPARTMENT,
BSES RAJDHANI POWER LTD,
BSES BHAWAN,
NEHRU PLACE, NEW DELHI-110019.

1.04 BSES RAJDHANI POWER LTD reserves the right to accept/reject any or all Tenders without assigning any reason thereof and alter the quantity of materials mentioned in the Tender documents at the time of placing purchase orders. Tender will be summarily rejected if:
(i). Earnest Money Deposit (EMD) @ 2% (One percent) of the Tender value i.e **Rs 3,00,000/-**is not deposited in shape of Bank Draft in favor of BSES RAJDHANI POWER LTD, payable at Delhi or Bank Guarantee executed in favor of BSES RAJDHANI POWER LTD.
(i) The offer does not contain "FOR, NEW DELHI price indicating break-up towards all taxes & duties".
(ii). Complete Technical details are not enclosed.
(iii). Sample is not submitted along with the offer.
(iv). Tender is received after due time due to any reason**.**

1.05 BSES RAJDHANI POWER LTD reserves the right to reject any or all bids or cancel/withdraw the invitation for bids without assigning any reason whatsoever and in such case no bidder/intending bidder shall have any claim arising out of such action. time of placing purchase orders.

2.0 Qualification Criteria:-

The prospective bidder must qualify all of the following requirements to be eligible to participate in the bidding Bidders who meet following requirements will be considered as successful bidder and management has a right to disqualify those bidders who do not meet these requirements.

1. The bidder must be a meter manufacturer of static meter.

2. The bidders shall either themselves be manufacturers of the equipment offered or accredited representatives of such manufacturers in India or of their Principals abroad with whom they may be having collaboration. **Such accreditation should be at least of one year preferably last year as on date of tender.** Authority letter from manufacturer shall be attached along with bid

3. Relevant documents in support of the above must be furnished along with undertaking of the manufacturers. If these documents are not furnished along with the tenders the offer will be rejected summarily.

4. Bidder should have supplied minimum 1000 Meters each type of Meters in last five years (from the date of technical bid opening) to Electricity Distribution Utility / Undertaking in India with electronic display and communication facility.

5. Offered meters should be in successful operation from last 2 years as on the date of opening of technical Bid. This should be supported by the copies of purchase orders and performance reports from the SEBs / Power utilities (Copy should be enclosed).

6. The bidder must possess valid ISO 9001:2000 certification for meter manufacturing and must possess valid BIS License.

7. Firms who are debarred /blacklisted in other utilities in India will not be considered.

8. The Bidder should have turnover of Rs.20 Crores in any one of the last three financial years (i.e. 2018-19, 2019-20 & 2020-21) related to metering item only. Bidder should submit report on financial standing such as profit and loss statement, balance sheets for the last three years, banker's certificates only of metering item only. etc.

9. The audited financial statements of accounts for the last three years submitted by bidder shall be evaluated and last year of audited accounts should show positive net worth.

10. Bidder should have complete volume of type test reports as per IS 13779 (Including latest Amendments if any) and magnet test as per CBIP-88 from any NABL accredited lab. The type test report should not be older than 2 years as on the date of opening of tender.

11. The manufacturer should have following facility to meet both quality and quantity requirement of supplies.

a) **Computerized test bench**: The manufacturer should have sufficient Nos of Computerized test benches. The benches should have electronic supply, Isolated CT/ PT system and data should be directly stored in central server.

b) **Seal tracking system:** The manufacturer has to put both his own seal and BSES seal on the meter. He should have a seal tracking software to ensure tracking of seal and no duplication of seals and meter nos.

c) **Meter Burn In system:** In order to ensure the reliability of components and that there is no drift in meter accuracy with time; the manufacturer should have burn in facility --- Running meter with load at elevated temperature.

d) **Routine test data** : During lot acceptance , all routine test data should be made available to inspector. In fact as per BIS, STI all test data should be offered to inspector for verification. **Routine test report should be packed with each meter**.

e) **Test benches:** During the lot acceptance, BSES inspector can test up to 5% of offered quantity .The manufacturer should agree to provide all test facility to do so. Further he should allow BSES inspector to check shop floor process. The place of inspection should be clearly marked in tender and same should be well equipped.

f) **Test equipments:** Since the meters has lot of anti theft features, the manufacturer should have test set up too check the working of all anti theft features. Same should be available during lot inspection; otherwise inspector has a right to withdraw inspection.

g) **PCB assembly facility:** - The PCB facility should have auto- pick n place machine, in-circuit tester, Protection against static charge/ dust etc.; and process to ensure no corrosion of solder points/ tracks. Incase service is taken from other vendor than bidder shall arrange inspection of facility. The bidder should be taking the service from the vendor since last two years and so far have procured one million meter PCB from vendor.

h) The manufacturer should send the compliance of above mentioned parameters in technical offer and has to give an undertaking about No Objection to verify his manufacturing facility as a part of tender process. Further in relevance to above clause vendor should submit details of facilities.

3.00 Bidding and Award Process

Bidders are requested to submit their questions regarding the RFQ or the bidding process after review of this RFQ. BSES RAJDHANI POWER LTD response to the questions raised by various bidders will be distributed to all participating bidders through website.

a. Time schedule of the bidding process

The bidders on this RFQ package should complete the following within the dates specified as under:

S. No.	Steps	Activity description	Due date
1	Technical Queries	▪ All Queries related to RFQ	On or before 28.03.2022
2	Technical Offer	• EMD of requisite amount • Non-refundable DD for Rs 1180/- in case tender documents downloaded from website • It include clause by clause commentary, GTP, Type test report from CPRI / ERDA/NABL Lab (Not more than 2 year old), BIS report, Quality assurance plan, Deviation from the technical specifications, component deviation, undertaking of software protocol ,List of Plant and machinery, Testing facilities available at works and drawings, catalogues, manual and spare parts list etc. mentioned in our technical specifications enclosed • Compliance of Qualification criterion (cl 2.0) and Documentary evidence in support of qualifying criterion as per format attached in Annexure V. • Acceptance of delivery, commercial terms and conditions. • Deviation from the General Conditions of the contract/commercial terms and condtions. • Original Tender documents duly stamped and signed on each page as token of acceptance • Unpriced Quoted Items	28.03.2022, At 1500 Hrs
3	Commercial Officer	• Price for Single Phase meter with & without Box • Break up regarding basic price and taxes as per format enclosed vide Annexure III • Delivery commitment	28.03.2022, At 1500 Hrs
4	Samples (3 nos. of each type)	• Submission of Sample with meter routine report as per bidder offer. • Samples will be submitted at BRPL Laboratory Near substation no .15 , sector – 7 , Pushpa Vihar , Saket ,New Delhi – 110017 on or before the due date. • Sample of optical cord to be submitted with meter – 2 nos. • Optical cord to be demonstrated for mechanical fixing & downloading.	28.03.2022, At 1500 Hrs
5	Performance guarantee quality system report	• As per RFQ	Only for successful bidders.
6	Opening of technical bid	• As per RFQ	28.03.2022 , 17:30 Hrs

This is a two part bid process. Bidders are to submit the bids a) Technical Bid b) Financial Bid. Both these parts should be furnished in separate sealed covers superscribing specification no. validity etc, with particulars as **Part-I Technical Particulars & Commercial Terms & Conditions** and **Part-II "Financial bid"**and these sealed envelopes should again be placed in another sealed cover which shall be submitted before the due date & time specified.

Bidders are requested to submit the bid in one Original plus one copy in duplicate

The Part – I Eligibility and Technical Bid should not contain any cost information whatsoever. In case of Bids where the qualification requirements, technical suitability and other requirements are found to be inadequate, Part-II"Financial Bid'will be returned unopened.
b). Qualified bidders will be intimated after technical evaluation of all the bids is completed.

Part –II Financial Bid: This envelope will be opened after techno commercial evaluation and only of the qualified bidders. The date and time of same shall be intimated in due course to the qualified bidders. Prices strictly in the format enclosed in Annexure III indicating break up of basic prices, taxes, duties, freight etc.

Part –III: E- Bidding and Reverse Auction through SAP-SRM Module

Purchase reserves the right to use the reverse auction through SAP-SRM tool as an integral part of the entire tendering process. All the bidders who are techno-commercial qualified on the basis of tender requirements shall participate in reverse auction.

Notwithstanding anything stated above, the Purchaser reserves the right to assess bidders capability to perform the contract, should the circumstances warrant such assessment in the overall interest of the purchaser. In this regard the decision of the purchaser is final.

4.00 Award Decision

Purchaser intends to award the business on a lowest bid basis, so suppliers are encouraged to bid competitively. The decision to place purchase order / letter of acceptance solely depends on purchaser on the cost competitiveness across multiple lots, quality, delivery and bidder's capacity, in addition to other factors that Purchaser may deem relevant.

The purchaser 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 any reason.

BSES reserves the right to split the tender quantity amongst techno commercially qualified bidders on account of delivery requirement in tender, quantity under procurement etc.

Spilitting of tender quantity amongst more than one bidder shall be governed by below mentioned guidelines:

- **If the quantity is to be split among 2 bidders, it will be done in the ratio of 70:30 on L1 price.**
- **If the quantity is to be split among 3 bidders, it will be done in the ratio of 60:25:15 on L1 price.**

In the event of your bid being selected by purchaser (and / or its affiliates) and your subsequent DEFAULT on your bid; you will be required to pay purchaser (and / or its affiliates) an amount equal to the difference in your bid and the next lowest bid on the quantity declared in RFQ.

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

Qty Variation: The purchaser reserves the rights to vary the quantity by +/- 30% of the tender quantity.

Repeat Order: BRPL reserves the right to place repeat order at the same rates & terms and conditions as per this tender against additional requirement subject to mutual agreement between BRPL & supplier.

5.00 Market Integrity

We have a fair and competitive marketplace. The rules for bidders are outlined in the Terms & Conditions. Bidders must agree to these rules prior to participating. In addition to other remedies available, we 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 Terms & Condition. Bidders who violate the marketplace rules or engage in behavior that disrupts the fair execution of the marketplace restricts a bidder to 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 the terms of the published in Request For Quotation.

6.00 Supplier Confidentiality

All information contained in this RFQ is confidential and may not be disclosed, published or advertised in any manner without written authorization from BSES RAJDHANI POWER LTD. This includes all bidding information submitted .All RFQ documents remain the property of BSES RAJDHANI POWER LTD and all suppliers are required to return these documents to BSES RAJDHANI POWER LTD upon request.

Suppliers who do not honor these confidentiality provisions will be excluded from participating in future bidding events.

7.0 Contact Information

All communication as regards this RFQ shall be made (i) in English, (ii) in writing and (iii) sent by mail, facsimile to

	Technical	Commercial
Contact Name	**Mr. Rishi Goyal Copy to Mr. Mr. Gopal Nariya**	**Mr. Sarveshwar Nautiyal Copy to Mr. Pankaj Goyal**
Address	2nd Floor , B-Block, BSES Bhawan Nehru Place , New Delhi -111019	1st Floor , D-Block, BSES Bhawan Nehru Place , New Delhi -111019
Email Id	**Rishi.Goyal@relianceada.com, Goap.Nariya@relianceada.com,**	**Sarveshwar.Nautiyal@relianceada.com, Pankaj.goyal@relianceada.com,**

Note: Those who are downloading tender notice from website. It is advisable to inform BRPL technical Deptt, so as they can be contacted in case of any amendment in tender.

SECTION – II

INSTRUCTION TO BIDDERS (ITB)

RATE CONTRCAT FOR SUPPLY OF CT OPERATED HT, DT AND ABT METERS WITH FACTORY FITTED MODEMS AND BOX

CMC/BR/22-23/RB/PR/SN/1011

A. GENERAL

1.0 BSES RAJDHANI POWER LTD hereinafter referred to as the Purchaser "are desirous of implementing the various Systems Improvement/Repair & Maintenance works at their respective licensed area in Delhi The Purchaser has now floated this tender for procurement Single Phase meter with & without Box as notified earlier in this bid Document.

2.0 SCOPE OF WORK

The scope shall include Design, Manufacture, Testing at works conforming to the Technical Specifications enclosed along with Packing, Forwarding, Freight and Unloading and proper stacking at Purchaser's stores.

3.0 DISCLAIMER

3.01 This Document includes statements, which reflect various assumptions, which may or may not be correct. Each Bidder/Bidding Consortium should conduct its own estimation and analysis and should check the accuracy, reliability and completeness of the information in this Document and obtain independent advice from appropriate sources in their own interest.

3.02 Neither Purchaser nor its employees will have any liability whatsoever to any Bidder or any other person under the law or contract, the principles of restitution or unjust enrichment or otherwise for any loss, expense or damage whatsoever which may arise from or be incurred or suffered in connection with anything contained in this Document, any matter deemed to form part of this Document, provision of Services and any other information supplied by or on behalf of Purchaser or its employees, or otherwise a rising in anyway from the selection process for the Supply.

3.03 Though adequate care has been taken while issuing the Bid document, the Bidder should satisfy itself that Documents are complete in all respects. Intimation of any discrepancy shall be given to this office immediately.

3.04 This Document and the information contained herein are Strictly Confidential and are for the use of only the person(s) to whom it is issued. It may not be copied or distributed by the recipient to third parties (other than in confidence to the recipient's professional advisors).

4.0 **COST OF BIDDING**

The Bidder shall bear all cost associated with the preparation and submission of its Bid and Purchaser will in no case be responsible or liable for those costs. **Further the Purchaser has a right to get Sample Meter's tested by any reputed independent lab like CPRI/ERDA/NABL at the cost of bidder.**

5.0 **BIDDING DOCUMENTS**

5.01 The Scope of Work, Bidding Procedures and Contract Terms are described in the Bidding Documents. In addition to the covering letter accompanying Bidding Documents, the Bidding Documents include:

Volume -I

(a) Request for Quotation (RFQ) - Section - I
(b) Instructions to Bidders (ITB) - Section – II
(c) General Conditions of Contract - Section -III
(d) Quantity and delivery requirement - Section –IV

(e) Technical Specifications (TS) - Section –V

Volume - II

(a) Acceptance form for Reverse Auction - Annexure –A
(b) Bid Form - Annexure –I
(c) Bid Format - Annexure -II
(d) Price Schedule - Annexure –III
(e) Commercial Terms & Conditions - Annexure -IV
(f) No Deviation Sheet - Annexure –V
(g) Qualification Criterion - Annexure –VI

5.02 The Bidder is expected to examine the Bidding Documents, including all Instructions, Forms, Term and Specifications. Failure to furnish all information required by the Bidding documents or submission of a Bid not substantially responsive to the Bidding Documents in every respect will may result in the rejection of the Bid.

6.00 **AMENDMENT OF BIDDING DOCUMENTS**

6.01 At any time prior to the deadline for submission of Bids, the Purchaser may for any reasons, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the Bidding Documents by Amendment.

6.02 The Amendment shall be part of the Bidding Documents, pursuant to Clause 5.01,and it will be notified in writing by Fax/e-mail to all the Bidders who have received the Bidding Documents and confirmed their participation to Bid, and will be binding on them .

6.03 In order to afford prospective Bidders reasonable time in which to take the Amendment into account in preparing their Bids, the Purchaser may, at its discretion, extend the deadline for the submission of Bids.

C. **PREPARATION OF BIDS**

7.0 **LANGUAGE OF BID**

The Bid prepared by the Bidder, and all correspondence and documents relating to the Bid exchanged by the Bidder and the Purchaser, 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.

8.0 **DOCUMENTS COMPRISING THE BID**

The Bid prepared and submitted by the Bidder shall comprise the following components:

(a) Bid Form ,Price & other Schedules (STRICTLY AS PER FORMAT)and Technical Data Sheets completed in accordance with Clause 9.0, 10.0, 11.0 and Technical Specification ;

(b) All the Bids must be accompanied with the required EMD as mentioned in the Section-I against each tender.

(c) Tender documents duly signed and stamped on each page by authorized signatory.

9.0 **BID FORM**

9.01 The Bidder shall complete an ″Original‵ and another one ″Copy‵ of the Bid Form and the appropriate Price & Other Schedules and Technical Data Sheets.

9.02 **EMD**

Pursuant to Clause 8.0(b) above ,the bidder shall furnish, as part of its bid, a EMD amounting to 2 % of the total bid value(FOR Destination) i.e **Rs 3,00,000 /**. The EMD is required to protect the Purchaser against the risk of Bidder's conduct which would warrant the security's forfeiture.
The EMD shall be denominated in the currency of the bid, and shall be in the following form**:**

(a) A bank guarantee issued by any scheduled bank strictly as per the form at enclosed and shall be valid for a period of thirty (30) days beyond the validity of the bid

(b) Bank Draft in favour of BSES RAJDHANI POWER LTD, payable at Delhi.

Unsuccessful bidders'EMD will be discharged or returned as promptly as possible but not later than thirty (30) days after the expiration of the period of bid validity.

The successful bidder's EMD will be discharged upon furnishing the performance security. The EMD may be forfeited:

(a) If the Bidder:

(i) Withdraws its bid during the period of bid validity specified by the Bidder in the Bid Form ; or

(b) In the case of a successful Bidder, if the Bidder fails:

(i) to sign the Contractor

(ii) to furnish the required performance security.

10.0 **BID PRICES**

10.01 Bidders shall quote for the entire Scope of Supply with a break-up of prices for individual items. The total Bid Price shall also cover all the Supplier's obligations mentioned in or reasonably to be inferred from the Bidding Documents in respect of Design, Supply, Transportation to site, all in accordance with the requirement of Bidding Documents The Bidder shall complete the appropriate Price Schedules included herein , stating the Unit Price for each item & total Price.

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

Prices quoted by the Bidder shall be—Firm "and not subject to any price adjustment during the performance of the Contract. A Bid submitted with an adjustable price quotation will be treated as non -responsive and rejected.

11.0 **BID CURRENCIES**

Prices shall be quoted **in Indian Rupees (RS) Only.**

12.0 **PERIOD OF VALIDITY OF BIDS**

12.01 Bids shall remain valid for **120 days** post bid date.

12.02 Not withstanding Clause12.01 above, the Purchaser may solicit the Bidder's consent to an extension of the Period of Bid Validity. The request and the responses thereto shall be made in writing by Fax/e-mail.

13.0 **ALERNATIVE 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 of Clause 22.03 & 22.04 regarding the rejection of Bids, which are not substantially responsive to the requirements of the Bidding Documents.

14.0 **FORMAT AND SIGNING OF BID**

14.01 The original Bid Form and accompanying documents (as specified in Clause9.0), clearly marked "Original Bid", plus one duplicate copy must be received by the Purchaser at the date, time and place specified pursuant to Clauses15.0 and16.0. In the event of any discrepancy between the original and the copies, the original shall govern.

14.02 The original and copy of the Bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to sign on behalf of the Bidder. Such authorization shall be indicated by written Power-of-Attorney accompanying the Bid.

14.03 The Bid shall contain no interlineations, erasures or overwriting except as necessary to correct errors made by the Bidder, in which case such corrections shall be initialed by the person or persons signing the Bid.

D. SUBMISSION OF BIDS

15.0 **SEALING AND MARKING OF BIDS**

15.01 Bid submission: One original & one duplicate Copy (hard copies) of all the Bid Documents shall be sealed and submitted to the Purchaser before the closing time for submission of the bid.

15.02 The Technical Documents and the EMD shall be enclosed in a sealed envelope and the said envelope shall be superscribed with —**Technical & EMD**". The Financial bid shall be inside another sealed envelope with superscription — **Financial Bid** ".Both these envelopes shall be sealed inside another big envelope. All the envelopes should bear the Name and Address of the Bidder and marking for the Original and Copy. The envelopes should be superscribed with — **"Tender Notice No, Due date of submission, Tender opening date**.

15.03 The Bidder has the option of sending the Bids in person. Bids submitted by Telex/Telegram /Fax will not be accepted. No request from any Bidder to the Purchaser to collect the proposals from Airlines/Cargo Agents etc shall be entertained by the Purchaser.

15.04 The Bidder, along with the bid documents has to submit two samples along with detailed GTP & Drawings. The sample should clearly indicate (i) Name of the bidder (ii)TenderNo.,(iii) Group & Item Sr.N o.etc. Samples will be submitted at BRPL Laboratory Near substation no .15 , sector – 7 , Pushpa Vihar , Saket ,New Delhi – 110017 on or before the due date of tender submission. Bidders are required to submit the receipt of sample submission along with the technical bid. The samples shall not be returned back to the bidder. Sample submission is not applicable for existing vendor and for vendor who has supplied meter in the past 6 months(unless supplier wants to it)

16.0 **DEADLINE FOR SUBMISSION OF BIDS**

16.01 The original Bid, together with the required copies, must be received by the Purchaser at the address specified **at 1500 Hrs on 28.03.2022**

16.02 The Purchaser may, at its discretion, extend the deadline for the submission of Bids by amending the Bidding Documents in accordance with Clause9.0,in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

17.0 **ONE BID PER BIDDER**

Each Bidder shall submit only one Bid either by itself, or as a partner in a Joint Venture. A Bidder who submits or participates in more than one Bid will cause all those Bids to be rejected.

18.0 **LATE BIDS**

Any Bid received by the Purchaser after the deadline for submission of Bids prescribed by the Purchaser, pursuant to Clause 16.0, will be declared "Late" and rejected and returned unopened to the Bidder.

19.0 **MODIFICATIONS AND WITHDRAWAL OF BIDS**

19.01 The Bidder is not allowed to modify or withdraw its Bid after the Bid's submission.

E. EVALUATION OF BID

20.0 **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 Purchaser's processing of Bids or award decisions may result in the rejection of the Bidder's Bid.

21.0 **CLARIFICATION OF BIDS**

To assist in the examination, evaluation and comparison of Bids, the Purchaser may, at its discretion, ask the bidder for a clarification of its Bid. 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.

22.0 **PRELIMINARY EXAMINATION OF BIDS / RESPONSIVENESS**

22.01 Purchaser 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.

22.02 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.

22.03 Prior to the detailed evaluation, Purchaser 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.

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

23.0 **EVALUATION AND COMPARISON OF BIDS**

23.01 The evaluation of Bids shall be done based on the delivered cost competitiveness basis.

23.02 The evaluation of the Bids shall be a stage-wise procedure. The following stages are identified for evaluation purposes: In the first stage, the Bids would be subjected to a responsiveness check. The Technical Proposals and the Conditional ties of the Bidders would be evaluated.

Subsequently, the Financial Proposals along with Supplementary Financial Proposals, if any, of Bidders with Techno-commercially Acceptable Bids shall be considered for final evaluation .

23.03 The Purchaser's evaluation of a Bid will take into account, in addition to the Bid price, the following factors, in the manner and to the extent indicated in this Clause:

(a) Supply Schedule

(b) Deviations from Bidding Documents

Bidders shall base their Bid price on the terms and conditions specified in the Bidding Documents. The cost of all quantifiable deviations and omissions from the specification , terms and conditions specified in Bidding Documents shall be evaluated. The Purchaser will make its own assessment of the cost of any deviation for the purpose of ensuring fair comparison of Bids.

23.04 Any adjustments in price, which result from the above procedures, shall be added for the purposes of comparative evaluation only to arrive at an "Evaluated Bid Price". Bid Prices quoted by Bidders shall remain unaltered.

F. AWARD OF CONTRACT

24.0 **CONTACTING THE PURCHASER**

24.01 From the time of Bid submission to the time of contract award, if any Bidder wishes to contact the Purchaser on any matter related to the Bid, it should do so in writing.

24.02 Any effort by a Bidder to influence the Purchaser‘s decisions in respect of Bid evaluation, Bid comparison or Contract Award, will result in the rejection of the Bidder‘s Bid.

25.0 **THE PURCHASER ’S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR A LL BIDS**

The Purchaser reserves the right to accept or reject any Bid and to annul the Bidding process and reject all Bids at anytime prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for the Purchaser‘s action.

26.0 **AWARD OF CONTRACT**

The Purchaser will award the Contract to the successful Bidder whose Bid has been Determined to be the lowest-evaluated responsive Bid, provided further that the Bidder has been determined to be qualified to satisfactorily perform the Contract. Purchaser reserves the right to award order other bidders in the tender, provided it is required for progress of project & provided he agrees to come to the lowest rate.

27.0 **THE PURCHASER ’S RIGHT TO VARY QUANTITIES**

The Purchaser reserves the right to vary the quantity i.e. increase or decrease the numbers/quantities without any change in terms and conditions during the execution of the Order.

28.0 **LETTER OF INTENT/ NOTIFICATION OF AWARD**

The letter of intent/ Notification of Award shall be issued to the successful Bidder whose bids have been considered responsive, techno-commercially acceptable and evaluated to be the lowest (L1). The successful Bidder shall be required to furnish a letter of acceptance with in 7 days of issue of the letter of intent /Notification of Award by Purchaser.

29.0 **PERFORMANCE BANK GUARANTEE**

The successful Bidder shall furnish the Performance Bank Guarantee for an amount of 5% (Five percent) of the Contract Price in accordance with the format provided. The Performance Bond shall be valid for a period of Sixty months (60) from the date of the commissioning or Sixty six months (66) from the last date of receipt of material (last consignment) at site/stores whichever is earlier plus 3 months towards claim period. Upon submission of the performance security, the EMD shall be released.

30.0 **CORRUPT OR FRADULENT PRACTICES**

30.01 The Purchaser requires that the Bidders observe the highest standard of ethics during the procurement and execution of the Project. In pursuance of this policy, the Purchaser:

(a) Defines, for the purposes of this provision , the terms set forth below as follows:

(i) "Corrupt practice" means behavior on the part of officials in the public or private sectors by which they improperly and unlawfully enrich themselves and/or those close to them ,or induce others to do so, by misusing the position in which they are placed, and it includes the offering, giving, receiving, or soliciting of anything of value to influence the action of any such official in the procurement process or in contract execution; and

(ii) "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or
the execution of a contract to the detriment of the Purchaser, and includes collusive practice among Bidders(prior to or after Bid submission) designed to establish Bid prices at artificial non -competitive levels and to deprive the Purchaser of the benefits of free and open competition .

(b) Will reject a proposal foraward if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question;

(c) Will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a contract.

30.02 Furthermore, Bidders shall be aware of the provision stated in the General Conditions of Contract.

SECTION- III

GENERAL CONDITIONS OF CONTRACT (GCC)

RATE CONTRCAT FOR SUPPLY OF CT OPERATED HT, DT AND ABT METERS WITH FACTORY FITTED MODEMS AND BOX

CMC/BR/22-23/RB/PR/SN/1011

GENERAL TERMS AND CONDITION

1.0 General Instructions

1.01 All the Bids shall be prepared and submitted in accordance with these instructions.

1.02 Bidder shall bear all costs associated with the preparation and delivery of its Bid, and the Purchaser will in no case shall be responsible or liable for these costs.

1.03 The Bid should be submitted by the Bidder in whose name the bid document has been issued and under no circumstances it shall be transferred/sold to the other party.

1.04 The Purchaser reserves the right to request for any additional information and also reserves the right to reject the proposal of any Bidder, if in the opinion of the Purchaser, the data in support of RFQ requirement is incomplete.

1.05 The Bidder is expected to examine all instructions, forms, terms & conditions and specifications in the Bid Documents. Failure to furnish all information required in the Bid Documents or submission of a Bid not substantially responsive to the Bid Documents in every respect may result in rejection of the Bid. However, the Purchaser's decision in regard to the responsiveness and rejection of bids shall be final and binding without any obligation, financial or otherwise, on the Purchaser.

2.0 Definition Of Terms

2.01 "Purchaser" shall mean BSES RAJDHANI POWER LTD Limited, on whose behalf this bid enquiry is issued by its authorized representative / officers.

2.02 "Bidder" shall mean the firm who quotes against this bid enquiry issued by the Purchaser. "Supplier" or "Supplier" shall mean the successful Bidder and/or Bidders whose bid has been accepted by the Purchaser and on whom the "Letter of Acceptance" is placed by the Purchaser and shall include his heirs, legal representatives, successors and permitted assigns wherever the context so admits.

2.03 "Supply" and " shall mean the Scope of Contract as described.

2.04 "Specification" shall mean collectively all the terms and stipulations contained in those portions of this bid document known as RFQ, Commercial Terms & Condition, Instructions to Bidders, Technical Specifications and the Amendments, Revisions, Deletions or Additions, as may be made by the Purchaser from time to time.

2.05 "Letter of Acceptance" shall mean the official notice issued by the Purchaser notifying the Supplier that his proposal has been accepted and it shall include amendments thereto, if any, issued by the Purchaser. The "Letter of Acceptance" issued by the Purchaser shall be binding on the "Supplier" The date of Letter of Acceptance shall be taken as the effective date of the commencement of contract.

2.06 "Month" shall mean the calendar month and "Day" shall mean the calendar day.

2.07 "Codes and Standards" shall mean all the applicable codes and standards as indicated in the Specification.

2.08 "Offer Sheet" shall mean Bidder's firm offer submitted to BSES RAJDHANI POWER LTD in accordance with the specification.

2.09 "Contract" shall mean the "Letter of Acceptance" issued by the Purchaser.

2.10 "Contract Price" shall mean the price referred to in the "Letter of Acceptance".

2.11 "Contract Period" shall mean the period during which the "Contract" shall be executed as agreed between the Supplier and the Purchaser in the Contract inclusive of extended contract period for reason beyond the control of the Supplier and/or Purchaser due to force majeure.

2.12 "Acceptance" shall mean and deemed to include one or more of the following as will be stipulated in the specification:

a) The written acceptance of material by the inspector at suppliers works to ship the materials.
b) Acceptance of material at Purchaser site stores after its receipt and due inspection/ testing and release of material acceptance voucher.
c) Where the scope of the contract includes supply, acceptance shall mean issue of necessary equipment / material takeover receipt after installation & commissioning and final acceptance.

3.0 Contract Documents & Priority

3.01 Contract Documents: The terms and conditions of the contract shall consist solely of these RFQ conditions and the offer sheet.

3.02 Priority: Should there be any discrepancy between any term hereof and any term of the Offer Sheet, the terms of these RFQ shall prevail.

4.0 Scope Of Supply -General

4.01 The "Scope of Supply" shall be on the basis of Bidder's responsibility, completely covering the obligations, responsibility and supplies provided in this Bid enquiry whether implicit or explicit.

4.02 Bidder shall have to quote for the Bill of quantities as listed in Section – IV of this RFQ.

4.03 Quantity variation and additional requirement if any shall be communicated to successful bidder during project execution.

4.04 All relevant drawings, data and instruction manuals.

5.0 Quality Assurance and Inspection

5.01 Immediately on award of contract, the bidder shall prepare detailed quality assurance plan / test procedure identifying the various stages of manufacture, quality checks performed at each stage, raw material inspection and the Customer hold points. The document shall also furnish details of method of checking, inspection and acceptance standards / values and get the approval of Purchaser before proceeding with manufacturing. However, Purchaser shall have right to review the inspection reports, quality checks and results of suppliers in house inspection department which are not Customer hold points and the supplier shall comply with the remarks made by purchaser or his representative on such reviews with regards to further testing, rectification or rejection, etc.

5.02 Witness and Hold points are critical steps in manufacturing, inspection and testing where the supplier is obliged to notify the Purchaser in advance so that it may be witnessed by the Purchaser. Final inspection is a mandatory hold point. The supplier to proceed with the work past a hold point only after clearance by purchaser or a witness waiver letter from **BSES RAJDHANI POWER LTD.**

5.03 The performance of waiver of QA activity by Purchaser at any stage of manufacturing does not relieve the supplier of any obligation to perform in accordance with and meet all the requirements of the procurement documents and also all the codes & reference documents

Mentioned in the procurement document nor shall it preclude subsequent rejection by the purchaser.

5.04 On completion of manufacturing the items can be dispatched only after issue of shipping release by the Purchaser.

5.05 All testing and inspection shall be done without any extra cost.

5.06 Purchaser reserve the right to send any material out of the supply to any recognized laboratory for testing and the cost of testing shall be borne by the Purchaser. In case the material is found not in order with the technical requirement / specification, the charges along with any other penalty which may be levied is to be borne by the bidder. To avoid any complaint the supplier is advised to send his representative to the stores to see that the material sent for testing is being sealed in the presence of bidders representative.

5.07 Bidder has to sign quality agreement before supply of the material.

6.0 Packing, Packing List & Marking

6.01 **Packing:** Supplier shall pack or shall cause to be packed all Commodities in boxes and containers and otherwise in such a manner as shall be reasonably suitable for shipment by road or rail to BSES RAJDHANI POWER LTD without undue risk of damage in transit.

6.02 **Packing List:** The contents of each package shall be itemized on a detailed list showing the exact weight and the extreme outside dimensions (length, width and eight) of each container or box. One copy of the packing list shall be enclosed in each package delivered. There shall also be enclosed in one package a master packing list identifying each individual package, which is part of the shipment. On any packaging where it is not feasible to place the packing list inside the container, all pertinent information shall be stenciled on the outside and will thus constitute a packing list.

7.01 Prices basis for supply of materials

Bidder to quote their prices on Landed Cost Basis.
For Supply to BSES RAJDHANI POWER LTD Delhi the price shall be inclusive of packing, forwarding, Freight & Goods & Service Tax (GST).

The above supply prices shall also **include unloading** at site stores.
Transit and storage insurance will be arranged by BSES RAJDHANI POWER LTD, however bidder to furnish required details in advance for arranging the same by BSES RAJDHANI POWER LTD.

8.0 Variation in taxes, duties & levies:

8.01 The total order value shall be adjusted on account of any variations in Statutory Levies imposed by Competent Authorities by way of fresh notification(s) within the stipulated delivery period only. However, in case of reduction in taxes, duties and levies, the benefits of the same shall be passed on to BUYER.

8.02 No other Taxes, Duties & Levies other than those specified above will be payable by BUYER except in case of new Levies, Taxes & Duties imposed by the Competent Authorities by way of fresh notification(s) subsequent to the issue of PURCHASE ORDER but within the stipulated delivery period.

8.03 Notwithstanding what is stated above, changes in Taxes, Duties & Levies shall apply only to that portion of PURCHASE ORDER not executed on the date of notification by Competent Authority. Further, changes in taxes, Duties & Levies after due date of Delivery shall not affect PURCHASE ORDER Terms and value.

8.04 PURCHASE ORDER value shall not be subject to any variation on account of variation in Exchange rate(s).

9.0 Taxes & Duties on raw materials & bought out components:

9.01 Taxes & Duties on raw materials & bought out components are included in Order Value and are not subject to any escalation or variation for any reason whatsoever.

9.02 Taxes & Duties on raw materials & bought out components procured indigenously are included in Order Value and are not subject to any escalation or variation for any reason whatsoever.

10.0 Terms of payment and billing

10.01 For Supply of Equipments:

- 100% payment shall be made within 45 days from the date of receipt of material at store/ site against submission of 5 % performance bank guarantee. (Refer 12.01)

10.02 Bidder to submit the following documents against dispatch of each consignment:

i. Consignee copy of LR
ii. Supplier detailed invoice showing commodity description, quantity, unit price, total price and basis of delivery.
iii. Original certificate issued by BSES RAJDHANI POWER LTD confirming receipt of material at site and acceptance of the same.
iv. Dispatch clearance / inspection report in original issued by the inspection authority
v. Packing List.
vi. Test Reports
vii. Guarantee Certificate.

11.0 Price Validity

11.01 All bids submitted shall remain valid, firm and subject to unconditional acceptance by BSES RAJDHANI POWER LTD Delhi for 120 days post bid-date. For awarded suppliers, the prices shall remain valid and firm till contract completion.

12.0 Performance Guarantee

12.01 Supplier shall establish a performance bond in favor of BSES RAJDHANI POWER LTD in an amount not less than Five percent (5%) of the total price of the Contract (the "Performance Bond"). The Performance Bond shall be valid for a period of Sixty months (60) from the date of the commissioning or Sixty six months (66) from the last date of receipt of material (last consignment) at site/stores whichever is earlier plus 3 months towards claim period. It shall be in accordance with one of the following terms:

(a) Depositing pay order /demand draft of the relevant amount directly with BSES RAJDHANI POWER LTD at the address listed above or as otherwise specified by BSES RAJDHANI POWER LTD, either of which shall constitute the Performance Bond hereunder; or

(b) Bank guarantee from any nationalized bank in favour of BSES RAJDHANI POWER LTD. The performance Bank guarantee shall be in the format as specified by BSES RAJDHANI POWER LTD.

13.0 Forfeiture

13.01 Each Performance Bond established under Clause 10.0 shall contain a statement that it shall be automatically and unconditionally forfeited without recourse and payable against the presentation by BSES RAJDHANI POWER LTD of this Performance Bond to the ICICI Bank at Mumbai, or to the relevant company/ correspondent bank referred to above, as the case may be, together with a simple statement that supplier has failed to comply with any term or condition set forth in the Contract.

13.02 Each Performance Bond established under will be automatically and unconditionally forfeited without recourse if BSES RAJDHANI POWER LTD in its sole discretion determines that supplier has failed to comply with any term or condition set forth in the contract.

14.0 Release

All Performance Bonds will be released without interest within seven (7) days from the last date up to which the Performance Bond has to be kept valid (as defined in Clause 10.0) except for the case set forth in Clause 21.0.

15.0 Guarantee Period

15.01 The bidder to Guarantee the Meter with Box supplied against any defect of failure, which arise due to faulty materials, workmanship or design for the entire defects liability period. The Defect liability period shall be 60 months from the date of commissioning or 66 months from the last date of delivery whichever is earlier. If during the Guarantee period any materials / items are found to be defective, these shall be replaced with New Meter with Box free of cost by the bidder at his own cost within 30 days from the date of receipt of intimation.

The analysis of defective meter within Guarantee period shall be provided by meter OEM's to BRPL. OEM shall ensure to establish a system where he will visit BRPL premises, in every 15 days or on accumulation of 250 defective meter (whichever comes first) and provide the detailed analysis report of faulty meters .

16.0 Return, Replacement or Substitution.

BSES RAJDHANI POWER LTD shall give Supplier notice of any defective Commodity promptly after becoming aware thereof. BSES RAJDHANI POWER LTD may in its discretion elect to return defective Commodities to Supplier for replacement, free of charge to BSES RAJDHANI POWER LTD, or may reject such Commodities and purchase the same or similar Commodities from any third party. In the latter case BSES RAJDHANI POWER LTD shall furnish proof to Supplier of the cost of such substitute purchase. In either case, all costs of any replacement, substitution, shipping, labour and other related expenses incurred in connection with the return and replacement or for the substitute purchase of a Commodity hereunder should be for the account of Supplier. BSES RAJDHANI POWER LTD may set off such costs against any amounts payable by BSES RAJDHANI POWER LTD to Supplier. Supplier shall reimburse BSES RAJDHANI POWER LTD for the amount, if any, by which the price of a substitute Commodity exceeds the price for such Commodity as quoted in the Bid.

17.0 Effective Date of Commencement of Contract:

17.01 The date of the issue of the Letter of Acceptance shall be treated as the effective date of the commencement of Contract.

18.0 Time – The Essence Of Contract

18.01 The time and the date of completion of the "Supply"" as stipulated in the Letter Of Acceptance / Purchase order issued to the Supplier shall be deemed to be the essence of the "Contract". The Supply has to be completed not later than the aforesaid Schedule and date of completion of supply .

19.0 The Laws and Jurisdiction of Contract:

19.01 The laws applicable to this Contract shall be the Laws in force in India.

19.02 All disputes arising in connection with the present Contract shall be settled amicably by mutual consultation failing which shall be finally settled as per the rules of Arbitration and Conciliation Act, 1996 at the discretion of Purchaser. The venue of arbitration shall be at Mumbai in India

20.0 Events of Default

20.01 Events of Default. Each of the following events or occurrences shall constitute an event of default ("Event of Default") under the Contract:

(a) Supplier fails or refuses to pay any amounts due under the Contract;

(b) Supplier fails or refuses to deliver Commodities conforming to this RFQ/ specifications, or fails to deliver Commodities within the period specified in P.O. or any extension thereof

(c) Supplier becomes insolvent or unable to pay its debts when due, or commits any act of bankruptcy, such as filing any petition in any bankruptcy, winding-up or reorganization proceeding, or acknowledges in writing its insolvency or inability to pay its debts; or the Supplier's creditors file any petition relating to bankruptcy of Supplier;

(d) Supplier otherwise fails or refuses to perform or observe any term or condition of the Contract and such failure is not remediable or, if remediable, continues for a period of 30 days after receipt by the Supplier of notice of such failure from BSES RAJDHANI POWER LTD

21.0 Consequences of Default.

(a) If an Event of Default shall occur and be continuing, BSES RAJDHANI POWER LTD may forthwith terminate the Contract by written notice.

(b) In the event of an Event of Default, BSES RAJDHANI POWER LTD may, without prejudice to any other right granted to it by law, or the Contract, take any or all of the following actions;

(i) present for payment to the relevant bank the Performance Bond;
(ii) purchase the same or similar Commodities from any third party; and/or recover any losses and/or additional expenses BSES RAJDHANI POWER LTD may incur as a result of Supplier's default.

22.0 Penalty for Delay

22.01 If supply of items / equipments is delayed beyond the supply schedule as stipulated in purchase order then the Supplier shall be liable to pay to the Purchaser as penalty for delay, a sum of 1% (one percent) of the Basic price for every week delay or part thereof for individual mile stone deliveries.

22.02 The total amount of penalty for delay under the contract will be subject to a maximum of ten percent (10%) of the total basic price of pending quantity.

22.03 The Purchaser may, without prejudice to any method of recovery, deduct the amount for such damages from any amount due or which may become due to the Supplier or from the Performance Bond or file a claim against the supplier.

23.0 <u>Force Majeure</u>

23.01 General

An "Event of Force Majeure" shall mean any event or circumstance not within the reasonable control directly or indirectly, of the Party affected, but only if and to the extent that:

(i) Such event or circumstance materially and adversely affects the ability of the affected Party to perform its obligations under this Contract, and the affected Party has taken all reasonable precautions, due care and reasonable alternative measures in order to prevent or avoid the effect of such event on the affected party's ability to perform its obligations under this Contract and to mitigate the consequences thereof.

(ii) For the avoidance of doubt, if such event or circumstance would not have materially and adversely affected the performance of the affected party had such affected party followed good industry practice, such event or circumstance shall not constitute force majeure.

(iii) Such event is not the direct or indirect result of the failure of such Party to perform any of its obligations under this Contract.

(iv) Such Party has given the other Party prompt notice describing such events, the effect thereof and the actions being taken in order to comply with above clause.

23.02 Specific Events of Force Majeure subject to the provisions of above clause, Events of Force Majeure shall include only the following to the extent that they or their consequences satisfy the above requirements :

(i) The following events and circumstances:

a) Effect of any natural element or other acts of God, including but not limited to storm, flood, earthquake, lightning, cyclone, landslides or other natural disasters.

b) Explosions or fires

(ii) War declared by the Government of India, provided that the ports at Mumbai are declared as a war zone.

(iii) Dangers of navigation, perils of the sea.

23.03 Notice of Events of Force Majeure If a force majeure event prevents a party from performing any obligations under the Contract in part or in full, that party shall:

i) Immediately notify the other party in writing of the force majeure events within 7(seven) working days of the occurrence of the force majeure event

ii) Be entitled to suspend performance of the obligation under the Contract which is affected by force majeure event for the duration of the force majeure event.

iii) Use all reasonable efforts to resume full performance of the obligation as soon as practicable

iv) Keep the other party informed of all such efforts to resume full performance of the obligation on a regular basis.

v) Provide prompt notice of the resumption of full performance or obligation to the other party.

23.04 Mitigation of Events of Force Majeure Each Party shall:

(i) Make all reasonable efforts to prevent and reduce to a minimum and mitigate the effect of any delay occasioned by an Event of Force Majeure including recourse to alternate methods of satisfying its obligations under the Contract;
(ii) Use its best efforts to ensure resumption of normal performance after the termination of any Event of Force Majeure and shall perform its obligations to the maximum extent practicable as agreed between the Parties; and
(iii) Keep the other Party informed at regular intervals of the circumstances concerning the event of Force Majeure, with best estimates as to its likely continuation and what measures or contingency planning it is taking to mitigate and or terminate the Event of Force Majeure.

23.05 Burden of Proof In the event that the Parties are unable in good faith to agree that a Force Majeure event has occurred to an affected party, the parties shall resolve their dispute in accordance with the provisions of this Agreement. The burden of proof as to whether or not a force majeure event has occurred shall be upon the party claiming that the force majeure event has occurred and that it is the affected party.

23.06 Termination for Certain Events of Force Majeure. If any obligation of any Party under the Contract is or is reasonably expected to be delayed or prevented by a Force Majeure event for a continuous period of more than 3 months, the Parties shall promptly discuss in good faith how to proceed with a view to reaching a solution on mutually agreed basis. If a solution on mutually agreed basis cannot be arrived at within a period of 30 days after the expiry of the period of three months, the Contract shall be terminated after the said period of 30 days and neither Party shall be liable to the other for any consequences arising on account of such termination.

23.07 Limitation of Force Majeure event. The Supplier shall not be relieved of any obligation under the Contract solely because cost of performance is increased, whether as a consequence of adverse economic consequences or otherwise.

23.08 Extension of Contract Period due to Force Majeure event The Contract period may be extended by mutual agreement of Parties by way of an adjustment on account of any period during which an obligation of either Party is suspended due to a Force Majeure event.

23.09 Effect of Events of Force Majeure. Except as otherwise provided herein or may further be agreed between the Parties, either Party shall be excused from performance and neither Party shall be construed to be in default in respect of any obligations hereunder, for so long as failure to perform such obligations shall be due to and event of Force Majeure."

24.0 Transfer And Sub-Letting

24.01 The Supplier shall not sublet, transfer, assign or otherwise part with the Contract or any part thereof, either directly or indirectly, without prior written permission of the Purchaser.

25.0 Recoveries

25.01 When ever under this contract any money is recoverable from and payable by the bidder, the purchaser shall be entitled to recover such sum by appropriating in part or in whole by detecting any sum due to which any time thereafter may become due from the supplier in this or any other contract. Should the sum be not sufficient to cover the full amount recoverable the bidder shall pay to the purchaser on demand the remaining balance.

26.0 Waiver

26.01 Failure to enforce any condition herein contained shall not operate as a waiver of the condition itself or any subsequent breach thereof.

27.0 Indemnification

27.01 Notwithstanding contrary to anything contained in this RFQ, Supplier shall at his costs and risks make good any loss or damage to the property of the Purchaser and/or the other Supplier engaged by the Purchaser and/or the employees of the Purchaser and/or employees of the other Supplier engaged by the Purchaser whatsoever arising out of the negligence of the Supplier while performing the obligations under this contract.

SECTION – IV:

QUANTITY AND DELIVERY REQUIREMENT

Sr. No.	Item Description	Specification	Requirement		Location
			Total Qty.	Delivery Schedule	
BSES RAJDHANI POWER LIMITED					
1	HT Smart Meter 5A_ Factory Fitted Modem and configurable for net Metering	SECTION V & VI	225 Nos	As per BSES Requirement	Stores BSES RAJDHANI POWER LTD Delhi
	HT Smart Meter1A_ Factory Fitted Modem and configurable for net Metering		40 Nos		
	DT Smart Meter1A_ Factory Fitted Modem and configurable for net Metering		1000 Nos		
	ABT Smart Meter 5A_ Factory Fitted Modem and configurable for net Metering		10 Nos		
	ABT Smart Meter1A_ Factory Fitted Modem and configurable for net Metering		5 Nos		

SECTION – V:

Technical Specification of 3 Phase 4 Wire Smart CT operated Distribution Transformer Meters with Cellular Communication (4G or NBIOT), Software and accessories

RATE CONTRCAT FOR SUPPLY OF CT OPERATED HT, DT AND ABT METERS WITH FACTORY FITTED MODEMS AND BOX

CMC/BR/22-23/RB/PR/SN/1011

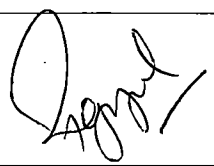
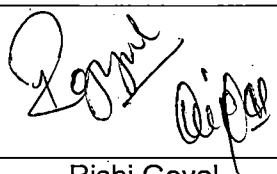
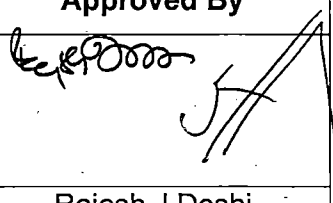
Detailed Meter Specification No. : GN101-03-SP-335-00

BSES Rajdhani Power Limited

GN101-03-SP-335-00

Technical Specification of 3 Phase 4 Wire Smart CT operated Distribution Transformer Meters with Cellular Communication (4G or NBIOT), Software and accessories

Document number: GN101-03-SP-335-00

Prepared By	Reviewed by	Approved By	
			**Rev. No: 0** **Date: 19.02.22**
Rishi Goyal	Rishi Goyal Vikas Srivastava	Rajesh J Doshi Gopal Nariya	

VERSION CONTROL

SN	Date	Previous Version No.	Current Version No.	Author
1	NA	NA	GN101-03-SP-334-00	Rishi Goyal

Contents

1.0 SCOPE

This specification covers design, engineering, manufacture, assembly, inspection, testing at manufacturers' works before dispatch, supply of 3 phase 4 wire, Class 0.5 accuracy, lag only HT CT-PT operated smart energy meter with plug in cellular communication module (4G with fallback on 2G or NB-IoT with fallback on 2G), related Head End Software and accessories required for successful operation of the meter in post paid mode or special application such as bidirectional net meters (configurable remotely).

2.0 APPLICABLE STANDARDS

The meter shall be ISI marked (vendor shall be BIS certified) and conform to CEA Metering (Installation and Operation of Meters) Regulation 2006 and latest amendments, Indian Electricity Acts and Indian Electricity Rules.

SN	Standard	Title
a.	IS14697	AC static transformer operated watt-hr and Var-hr meters Class 0.2s, 0.5s specifications
b.	IS- 16444 (Part 2)	AC Static Transformer Operated Watt-hour And Var-hour Smart Meters, Class 0.2 S, 0.5 S And 1.0 S Part 2 Specification Transformer Operated Smart Meters
c.	CEA Regulation:2006 and latest amendments	Installation and Operation of meters or latest amendment
d.	IS15959 and its latest amendment	Data Exchange for Electricity Meter, Reading, Tariff and Load Control – Companion Specification
e.	IS-15959 (Part 1)	Data Exchange for Electricity Meter - Reading Tariff and Load Control - Companion Specification
f.	IS-15959 (Part 2)	Data Exchange for Electricity Meter - Reading Tariff and Load Control (Part 2)- Companion Specification for smart meter
g.	IS-15959 (Part 2)	Data Exchange For Electricity Meter Reading, Tariff And Load Control-Companion Specification Part 3 Smart Meter (Transformer Operated Kwh And KVARh Class 0.2 S, 0.5 S And 1.0 S
h.	IEC 62056	Electricity metering data exchange- The DLMS/COSEM Suit-Part 5-3: DLMS/ COSEM application layer
i.	CBIP Manual (Pub no.- 325)	Standardization of AC Static Electrical Energy Meters
j.	IEC 62052-11	General Requirement, tests and test conditions
k.	IEC 62053-22	Static Meters for active energy for class 0.2S and .5S

3.0 TECHNICAL SPECIFICATION

SN	Parameters	Technical Requirements
3.1	Voltage	63.5 V (P-N) with +20% to -30% Vref.
3.2	Rated secondary current	-/1A for 0.2s and -/5 A for 0.5s
3.3	Display	LCD with backlit
3.4	Display parameters	a) LCD (Seven digits) b) Height: 10 mm X 5 mm min. c) Pin Type d) Viewing angle min. 60 degrees *Phasor diagram/ wiring error*: Offered meter shall have connection check display parameter for this requirement, also meter shall have phase enunciators to indicate the availability of phases on display. However meter should have phase association event to capture phase association error.
3.5	Power Consumption	As per relevant IS.
3.6	Starting current	0.1 % of I_b for Class 0.5s and 0.2s class
3.7	Frequency	50 Hz with + / - 5% variation
3.9	Test Output Device	Flashing LED visible from the front for KWh, KVAH, KVArH
3.10	Billing data	a) Display parameters: LCD test, date & time, cumulative KWH, cumulative KVAH & KVArH, MD in KW & KVA, PF, V, I (cumulative KWH, kVAh and other parameter with pushbutton.) b) Display order shall be as per Annexure-1
3.11	MD Registration	a) Meter shall store MD in every 15/30 min. period along with date & time with sliding window (5 min interval) programmable. At the end of every 15/30 min, new MD shall be previous MD and store whichever is higher and the same shall be displayed. MD and load survey to be programmable in future. On a later date both MD and load survey can be programmed for 15/30 minutes. However accordingly load survey days shall vary. b) It shall be possible to reset MD automatically at the defined date (or period) or through MRI or through manual MD resetting push button.

SN	Parameters	Technical Requirements
		c) MD reset button shall be sealable.
3.12	Auto Reset of MD	Default auto reset date: 00:00 hrs on 1st day of the month however provision shall be made to change MD reset date through MRI even after installation of meter on site.
3.13	TOD metering	Meter shall be capable of doing TOD metering for KWH, KVARH, KVAH and MD in KW and KVA with 7 time zones (programmable on site through CMRI). Bidder to ensure latest DERC Tariff as well as specific requirement of BRPL to be updated in meters before delivery TOD parameters as per DERC should be programmable on site through CMRI or AMR remotely. At Display as well as BCS end meter TOD values shall be shown as per cumulative values of TOD Zones of respective registers.
3.14	Load survey	15/30 min integration period, load profile of phase voltage (R, Y, B) with instant and average value and line, active and reactive current (R, Y, B) with instant and average value, and all three phase active, reactive (lag and lead) and apparent power and energy of 60 days (MD integration should be 15/30 min.) Apparent Energy, load, PF, THD in both current and voltage, phase-wise demand, power-off time integration period.
3.15	Diagnostic feature	Self-diagnostic for time, calendar, RTC battery all display segments and NVM.
3.16	Security feature	Programmable facility to restrict the access to the information recorded at different security level such as read communication, communication write etc.
3.17	Optical Port	a. Meter shall have an optical port with a metal ring to hold magnet of probe. Optical port shall comply with hardware specifications provided in IEC-62056-21. b. The Supplier shall supply Software required for

SN	Parameters	Technical Requirements
		hand held device. c. The Vendor shall provide software to BRPL IT team and get approval to read meter data locally in case of remote communication failure.
3.18	Memory	Non volatile memory independent of battery backup, memory should be retained up-to 10 year in case of power failure.
3.19	Climatic Conditions	a) The meter should function satisfactorily in India with temperature ranging from 0 - 60ºC and humidity upto 96% as per IS: 14697. b) Also refer IS: 14697 for climatic conditions.
3.20	Calibration	Meters shall be software calibrated at factory and modification in calibration shall not be possible at site by any means.
3.21	Computation of KVAh	KVAh shall be computed as Modulus of Active and reactive energy. However incase of capacitive Reactive energy, the KVA shall be same as KW. The polarity of KVA is same as KW. At no given instant, the KVAH should be less than KWH. Meter should have calibration LED to check meter accuracy in field condition both for Active and Apparent Energy.
3.22	Mode of metering	It should be possible to configure meters in following modes of metering: a. Forwarded Only: In this mode any export active energy shall be treated as import energy and shall be recorded in forward only register. Apparent energy calculation in this mode shall be as per clause no. 6.4. b. Bidirectional: Both Import and export energy recording shall be applicable in this mode of metering and relevant registers shall be updated. Any change in metering mode shall be logged in events

SN	Parameters	Technical Requirements
		with date and time stamp. Default mode of metering shall be as per the purchase order and will be configurable on field and remote and all parameters and events shall be recorded in the meter and back end software. Meter readings for kwh, kvarh and kvah in high resolution are required.
3.23	Communication	a. Meter should have the provision for 01 no's modular and pluggable communication module compatible with Cellular (4G with fallback on 2G) or NBIOT with fallback on 2G etc. b. Meter shall have mechanism to log communication module removal and insert as an event in its memory with date and time stamp. c. Meter shall have separate indications on display/ for remote and local communication. d. Communication module shall held in a casing which can be directly plugged in the meter. Sealing screw shall be provided.
3.24	First breath and last gasp	a. In Last Gasp endpoint shall send the power outage notification with Time Stamp. In case of power failure meter communication module shall not draw power from the backup battery. b. For the purpose of sending the Last Gasp, communication module shall have proper power backup (like a super capacitor).
3.25	Periodic push (Smart meter to HES)	a. Meter shall be able to push instantaneous parameters to HES at predefined intervals. Parameters required for push shall be intimated during detailed engineering in the vent of order. b. Other attributes as per IS 15959 (Part 3) i.e. Send Destination, Communication window, Randomization time interval, number of retries and repeat delay shall be decided in the event of manufacturing.

SN	Parameters	Technical Requirements
3.26	Event Push (Smart meter to HES)	a. Meter is able to report HES, the status change of any of the identified events mapped in to event status word (ESW) of size 128 bits by pushing following objects to HES. i. Device ID ii. Push Setup ID iii. Real time clock- Date and Time iv. Event Status Word 1 (ESW 1). b. Each of the bits in ESW shall reflect the current state of the event and are mapped against each of the identified events. c. An event status word filter (ESWF) of 128 bit shall also be provided to configure events for event push. Events which are supported in meter shall only be configured for event push. Bit value 1 in ESWF shall indicate that the event is supported and value 0 indicates that event is not supported for event push. Position of the event bit in ESWF shall be same as in ESW.
3.27	Integration with HES	a. Bidder shall work with BRPL IT team/ BRPL designated system integrator to integrate its meter with BRPL HES system. b. Bidder shall prepare detailed documents as mentioned in above clause and submit it for BRPL approval and integration with HES.
3.28	Energy measurement	a. Fundamental energy and Energy due to harmonics b. Meter shall not go in sleep mode and display shall be always on when powered up.

4.0 CONSTRUCTION FEATURES

SN	Parameters	Technical Requirements
4.1	Body of Meter	a) Top transparent and base opaque material polycarbonate of LEXAN 143 or equivalent grade. b) Front cover & base should be ultrasonically welded.

		c) Top cover shall be transparent with white name plate. It should so be designed so as the internal components should not be visible.
4.2	Terminal Block	Made of polycarbonate of grade 500 R or equivalent grade and shall form Integral part of the meter base, brass terminal inserts & MS screws.
4.3	Terminal cover	Transparent terminal cover with provision of sealing through sealing screw.
4.4	Diagram of connections	Diagram of external connections to be shown on terminal cover from inside.
4.5	Marking on name plates	Meter should have clearly visible, indelible and distinctly name plate marked in accordance with IS & offer.
4.6	Meter Sealing	The supplier shall affix one seal on side of Meter body and record should be forwarded to Buyer.
4.7	Guarantee	66 months from the date of dispatch or 60 months from date of commissioning, whichever is earlier
4.8	Insulation	A meter shall withstand A C Voltage test of 4KV and impulse test at 8 kV.
4.9	Resistance to heat and fire	The terminal block and Meter case shall have safety against the spread of fire. They shall not be ignited by thermal overload of live parts in contact with them as per the relevant IS 14697.
4.10	IP rating	The meter shall conform to degree of protection IP51 (as specified in IS 12063) for protection against ingress of dust, moisture and vermin.

5.0 TAMPER AND ANTI-FRAUD FEATURES

Total no of tamper events logged by meter shall be at least 200 nos., compartment wise division of each event and their persistence time shall be indicated at the time of finalizing GTP.

The meter shall not get affected by any remote control devices and shall continue recording energy under any one or combinations of the following conditions:

- **Phase sequence reversal**: The meters shall work accurately irrespective of the phase sequence of the supply.
- **Detection of missing potential**: In case someone intentionally takes out a potential lead, the date and time of such occurrence shall be recorded by the meter. The last restoration of normal

supply shall also be similarly recorded. The threshold of the voltages should be factory programmable.

- **Reversal of C.C. Polarity**: Meter shall record the reversal of C.C. polarity with time and date, and also the time of restoration. Meter shall however register the energy in forwarded energy register with any one, or all two, three phase c.c. reversal.
- **C.C. Shorting/ Bypass:** Meter shall record C.C. terminal shorting/ bypass with time and date and time of restoration. The threshold value of currents should be programmable. Logging of neutral current is most important.
- **Unbalance Voltage:** Meter shall record all events when the voltage difference between the two phase is more than 8%.
- **Power On / off: -** Meter shall detect power OFF (minimum power off period 5 mins). This event shall be recorded at the time of each power OFF. At the same time power ON event shall be recorded. This logging shall be available in Tamper details along with cumulative time of failure. Meter should have provision to record last 100 such events minimum.
- **Snap shots:** Meter shall log all three-phase voltage, current (line, active and reactive), Reading (Active and Apparent), power factor etc. at the time of tamper attempt for all such occurrences.
- **External Magnetic tamper**: Meter should log on the events of attempt of tampering by external magnetic field & should function as mentioned in the CBIP Technical report no. 325 with latest amendments.
- **Over Load/Low Load**: Meter shall record Over Load/Low load as an event, in terms of defined % threshold value of load (Programmable at field)
- **Voltage High/Voltage Low**: Meter shall record case of High Voltage/Low Voltage in terms of defined value Voltage Threshold (Vref.)
- *Vendor has to define Tamper Logic, Occurrence and restoration time before supply and take approval before supply. Further when ever meter switch to Imax mode due to tamper the event should be logged and no MD should be computed for that period.*
- **Influence Quantities:** The meter shall work satisfactorily with guaranteed accuracy limit under the presence of the following influence quantities as per IS: 14697, and CBIP Technical Report No.325 with latest amendment.
    - The influence quantities are:
        a. External Magnetic field – 0.2 tesla (with log on feature)
        b. Electromagnetic field induction,
        e. Radio frequency interference,
        f. Unbalanced load,
        g. Vibration etc,
        c. Wave form 10% of 3rd harmonics,
        d. Phase sequence,
        h. Voltage unbalance,
        i. Electro Magnetic H.F. Field

- **RTC Drift:** In case of TOD tariff the proper RTC functioning shall be of prime importance. In view of this software to adjust the RTC drift to be provided.
- **Protection against HV spark**: Meter shall continue to record energy incase it is disturbed externally using a spark gun/ ignition coil. Upto 35 KV meter should be immune.
- **Recording of Neutral disturbance: -** In case of spurious signal injected in neutral of the meter, offered meter shall be either immune or if gets affected register energy on reference voltage, actual current and UPF.
- **Power off:** Offered meter shall have Power Off event logging in case all the three phase are not available.
- **Abnormal voltage (invalid voltage):** Offered meter shall record invalid voltage and if either the angle between two phases is beyond 120 +/- 10deg.
- **Top cover open:** The meter shall have top cover opening detection mechanism. The top cover opening event shall be indicated display continuously in auto scroll mode with kWh and kVAh or through additional LED and shall be logged in memory. The detection and logging mechanism shall work even when meter is not energized. In case of indication of display, meter display shall get reset in 150 days.
- **Wiring connection Display:** Incase of abnormal wiring like sequence error. Phase association error, CT reversal, Phase- CT mismatch, one/two phase no voltage- An indication, clearly indicating type of fault should appear and get logged in meter.

Note:

- Vendor has to define Tamper Logic, Occurrence and restoration time before supply.
- Tamper and fraud protection test shall be part of acceptance test.
- Cumulative power off hours shall be logged by the meter.
- Meter shall log all three phases voltage, current, power factor etc. at the time of tamper attempt for all such occurrences.
- Bidder to extend complete support to generate XML file according to BRPL requirement and may vary from time to time

6.0 COMPONENT SPECIFICATIONS

SN	Component Function	Requirement	Makes and Origin
6.1	Current Transformers	The Meters should be with the current transformers as measuring elements. The current transformer should withstand for the relevant clauses.	The current transformer should withstand relevant clauses.
6.2	Measurement or	The Measurement or computing chips	USA: Anolog Devices, Cyrus Logic,

SN	Component Function	Requirement	Makes and Origin
	computing chips	used in the Meter should be with the Surface mount type along with the ASICs.	Atmel, Phillips,Texas Instruments. Free scale semiconductor South Africa: SAMES Japan: NEC
6.3	Memory chips	The memory chips should not be affected by the external parameters like sparking, high voltage spikes or electrostatic discharges.	USA: Atmel, National Semiconductors, Texas Instruments, Phillips, ST,Microchip Japan: Hitachi or Oki
6.4	Display modules	a) The display modules should be well protected from the external UV radiations. b) The display visibility should be sufficient to read the Meter mounted at height of 0.5 meter as well as at the height of 2 meters (refer 3.2.d for Viewing angle). c) The construction of the modules should be such that the displayed quantity should not disturbed with the life of display (PIN Type). d) It should be trans-reflective HTN or STN type industrial grade with extended temperature range.	Hongkong: Genda Singapore: Bonafied Technologies Everlight, Truly semiconductor Korea: Advantek China: Sucess Japan: Hitachi, Sony Holland / Korea: Phillips
6.5	Communication modules	Communication modules should be compatible for the two RS 232 ports (one for optical port for communication with Meter reading instruments & the other - for the hardwired RS 232 port to communicate with various modems for AMR)	USA: National Semiconductors, HP, Optonica,ST, Holland / Korea: Phillips Japan: Hitachi Taiwan: Ligitek, Everlight Germany: Siemens
6.6	Optical port	Optical port should be used to transfer the meter data to meter	USA: National Semiconductors ,HP Holland / Korea: Phillips

SN	Component Function	Requirement	Makes and Origin
		reading instrument. The mechanical construction of the port should be such to facilitate the data transfer easily.	Japan: Hitachi, Taiwan: Ligitek, Everlight
6.7	Power Supply	The power supply should be with the capabilities as per the relevant standards. The power supply unit of the meter should not be affected in case the maximum voltage of the system appears to the terminals due to faults or due to wrong connections.	SMPS Type
6.8	Electronic components	The active & passive components should be of the surface mount type & are to be handled & soldered by the state of art assembly processes.	USA: National Semiconductors, Atmel, Phillips, Texas Instruments,ST,Onsemi, Vishay Japan: Hitachi, Oki, AVX or Ricoh Korea: Samsung
6.9	Mechanical parts	a) The internal electrical components should be of electrolytic copper & should be protected from corrosion, rust etc. b) The other mechanical components should be protected from rust, corrosion etc. by suitable plating/painting methods.	
6.10	Battery	Lithium with guaranteed life of 15 years	Varta, Tedirun, Sanyo or National , Vitzrocell, Tekcell, Xeno energy
6.11	RTC & Micro controller	The accuracy of RTC shall be as per relevant IEC / IS standards	Built into microcontroller

SN	Component Function	Requirement	Makes and Origin
6.12	P.C.B.	Glass Epoxy, fire resistance grade FR4, with minimum thickness 1.6 mm	

7.0 GENERAL REQUIREMENTS

7.1 On the meter nameplate:

a. Manufacturer name and place of manufacturing
b. Meter rating and Class
c. Meter serial number should be of 8 digits
d. Size of the digit of the meter serial number should be minimum 5mm X 3mm. (Laser printing shall be preferred)
e. Bar code should be of fine quality printed below the meter serial number
f. BIS registration mark (ISI mark)
g. Property of "BRPL"
h. Manufacturing date (mm/yyyy)
i. Guaranty period
j. Meter constant (Impulse/kWh, kVArh)
k. PO no. and date

7.2 Meter Sr. Nos. to be printed in black on the name plate, instead of embossing. (Good quality of printing)

7.3 The supplier should seal (double lock approved seal) meters on both sides. The Buyer shall approve the method of sealing.

7.4 Deliverable with Meters.

i. Hard copies for Routine test certificates with each meter till alternate is provided by vendor and approved BRPL.
ii. Terminal cover should be fixed on the meter before dispatch.
iii. Report of seal & initial reading record. (soft copy as per BRPL format)

7.5 Box number, meter serial number, type, rating should be mentioned on cases / cartons.

7.6 Meters shall be suitably packed with environmental friendly material in order to avoid damage or disturbance during transit or handling and to prevent in grace of moisture and dust. Also refer CEA Metering Regulation 2006.

7.7 In case battery removal/ total discharge same should not affect the energy recording in the meter.

7.8 The bidder shall maintain a web site where routine test results of all meter supplied against these tender will be maintained and will be accessible to buyer/ buyer representative. Alternatively bidder can provide physical copy of the test results.

7.9 Delivery of software for reading through HHU/CMRI is also required before meter delivery to ensure local reading in case of remote failure.

7.10 The supplier shall give 15 day advanced intimation to enable BRPL to depute representative for lot inspection.

7.11 Vendor shall ensure that future upgrades of software required within 4 weeks of intimation. Vendor shall also ensure to deliver solution to meet DERC mandate within mutually agreed timeline.

7.12 For any false events recorded in meter, vendor shall depute their representative for field visit within one week and provide the root cause analysis in 4 weeks time.

7.13 For HT Meters (-/5A smart), bidder to supply nut-bolt (quantity-3 Nos., dia – 4mm, length – 20mm) for meter installation on channel fixed in metering cubicle.

8.0 DRAWINGS AND DOCUMENTS

Following drawings & Documents shall be submitted with the bid:

a. Completely filled-in Technical Parameters
b. General arrangement drawing of the meter
c. Rating plate
d. Terminal Block dimensional drawing
e. Mounting arrangement drawings
f. Meter box drawing and dimensions
g. Component list
h. Display parameter
i. Type Test Certificates from NABL approved laboratories.
j. Tamper details
k. Manual and SOP/DWI for operation

9.0 DISPLAY SEQUENCE FOR THE PARAMETERS

9.1 Default Display: (Auto scroll mode, Scroll time 6 Sec.)

1. All Segment on display (LCD Test)
2. Meter Serial no.
3. Date
4. Real Time
5. Cumulative kWh
6. Cumulative kVARh Lag
7. Cumulative kVARh lead
8. Cumulative kVAh
9. Current Max. demand in kW & kVA
10. Instantaneous Average Power Factor
11. Instantaneous voltage R phase

12. Instantaneous voltage Y phase
13. Instantaneous voltage B phase
14. Instantaneous current R phase
15. Instantaneous current Y phase
16. Instantaneous current B phase
17. THD for phase wise Voltage
18. THD for phase wise Current
19. Neutral Current
20. Temperature
21. Battery status
22. PT/CT status
23. Self diagnostic flag
24. Cumulative Tamper Count
25. Cumulative Power off hours
26. TOD Apparent Forward MD Register
27. Total Active Forward Energy Register (Absolute)
28. TOD Total Active Forward MD Register (Reg 0-24hrs)
29. Reactive Lag Forward Energy Register
30. TOD Total Active Forward Energy Register(Reg 1)
31. TOD Total Active Forward Energy Register(Reg 2)
32. TOD Total Active Forward Energy Register(Reg 3)
33. TOD Total Active Forward Energy Register(Reg 4)
34. TOD Total Active Forward Energy Register(Reg 5)
35. TOD Total Active Forward Energy Register(Reg 6)
36. TOD Total Active Forward Energy Register(Reg 7)
37. TOD Total Active Forward Energy Register(Reg 8)
38. TOD Apparent Forward Energy Register(Reg 1)
39. TOD Apparent Forward Energy Register(Reg 2)
40. TOD Apparent Forward Energy Register(Reg 3)
41. TOD Apparent Forward Energy Register(Reg 4)
42. TOD Apparent Forward Energy Register(Reg 5)
43. TOD Apparent Forward Energy Register(Reg 6)
44. TOD Apparent Forward Energy Register(Reg 7)
45. TOD Apparent Forward Energy Register(Reg 8)
46. TOD Reactive Lag Forward Energy Register(Reg 1)
47. TOD Reactive Lag Forward Energy Register(Reg 2)

48. TOD Reactive Lag Forward Energy Register(Reg 3)
49. TOD Reactive Lag Forward Energy Register(Reg 4)
50. TOD Reactive Lag Forward Energy Register(Reg 5)
51. TOD Reactive Lag Forward Energy Register(Reg 6)
52. TOD Reactive Lag Forward Energy Register(Reg 7)
53. TOD Reactive Lag Forward Energy Register(Reg 8)

9.2 On-demand Display:

After using pushbutton the following parameters should be displayed.

1. Meter Serial Number
2. Date
3. Real time
4. Cumulative kWh
5. Cumulative kVARh Lag
6. Cumulative kVARh lead
7. Cumulative kVAh
8. Current Max. demand in kW & kVA
9. Instantaneous power factor combined and phase wise.
10. Instantaneous kW, kVAR, kVA
11. High resolution readings of kwh, kvarh and kvah
12. Phase To Neutral Voltage R
13. Phase To Neutral Voltage Y
14. Phase To Neutral Voltage B
15. R Phase Line Current
16. Y Phase Line Current
17. B Phase Line Current
18. Cumulative Tamper count
19. Cumulative Power off hours
20. History 1 Total Active Forward Energy Register
21. History 1 Reactive Lag Forward Energy Register
22. History 1 Apparent Forward Energy Register
23. History 1 TOD Total Active Forward MD Register(Reg 0-24hrs)
24. History 1 TOD Total Active Forward MD Occurrence Time and Date(Reg 0-24hrs)
25. History 1 TOD Apparent Forward MD Register(Reg 0-24hrs)
26. History 1 TOD Apparent Forward MD Occurrence Time and Date(Reg 0-24hrs)
27. Present PT Status

28. Present CT Status
29. Connection check (Phase sequence)
30. Manufacturer name/identity
31. Date of manufacturing
32. Software version number

Note: The meter display should return to Default Display mode (mentioned above) if the 'push button' is not operated for more than 6 seconds.

10.0 HEAD END SOFTWARE – General Specifications

1. The bidder shall provide HES license free of cost for remote reading of data with BRPL logo in the website and reports generated.
2. Bidder shall install the HES within BRPL premises and integrate the HES with BRPL billing system without any cost.
3. HES shall be developed based on open platform and distributed architecture for scalability without degradation of the performance.
4. HES shall also manage the module on field, have user access rights management, dashboard for viewing in graphical mode, analysis & reporting, Security features and audit trail.
5. HES system shall have user friendly GUI to monitor communication status, energy, demand, MD, instantaneous parameters, tampers, parameters like voltages, current, active power, power factor, events, consumption, etc.
6. HES system shall support TCP/IP, UDP, HTTP, FTP, SMTP etc; HES system should be compatible to RDBMS Oracle 12C/My SQL database.
7. HES shall have option to export CDF as per MIOS standard as well as user defined report generation in format of Excel, PDF, XML and CSV for further integration with system.
8. Alerts (for Alarms and Events) shall be displayed in HES for further action and shall be configurable
9. HES shall have facility for On Demand acquisition of meter data and at user selectable periodicity
10. HES system shall display phasor diagram as applicable, consumption/load profiles by configurable period (15/30 min, hour, day, month, year etc.) day type, tariff, customer type, or any user specified collection of meters.
11. HES system shall provide energy usage profile for a single meter or group of meters. The load profile shall illustrate energy consumption and peak demand in user defined intervals for a user-specified time period.
12. HES will pop up alerts for tampers & events, non communication of meters, non billed meters, RTC issues of meters or modems etc.

13. HES shall be capable of accessing complete data stored in modem through remote or have provision to upload meter data of CMRI/PDS or android based devices.
14. HES shall maintain data of at least 12 months according to desired hierarchy. Archival policy shall be decided along with IT at the time of award of contract.
15. HES shall manage geographical, administrative, regional, and the network hierarchy of the utility. These hierarchies shall be imported from external source and / or shall be configurable in the system.
16. HES system shall have necessary security features as per existing and comply in future to cyber laws as mandated by Government of India. HES shall have mechanism to identify fraud, data breach and manipulation of data. All configurations of User Management / Access Rights shall be as per the requirements of BRPL.
17. System should be able to generate user specific reports for billing, monitoring and export in excel, pdf, csv formats.
18. HES must have built-in redundancy & fail over architecture to ensure seamless system recovery.
19. Supplier shall agree to integrate devices from other manufacturers in future.
20. Supplier shall be responsible to ensure 100% billing is done each month.
21. Supplier shall troubleshoot in case of non communication, erratic behavior and non receipt of alerts for both field and back end activities.
22. The Supplier shall also provide training for the use of software, installation, downloading and troubleshooting free of cost to BRPL.
23. HES shall be integrated with other applications of BRPL such as analytics, SAP, GIS etc

11.0 METER REPLACEMENT

a) Manufacturer shall undertake to replace meter in case of failure within the guarantee period.

b) Faulty meters under Guarantee shall be verified by manufacturer at site and rectify wherever possible.

c) Manufacturer will replace the meters with the Serial numbers provided by BRPL and manufacturer shall provide an excel sheet with details of returned meters, replaced meter, PO no., PO date, seals etc for mapping purpose by BRPL. Format of the same can be taken from Stores if required.

d) Manufacturer will bear the cost of replacement of faulty meter and site verification.

e) Manufacturer shall lift the Faulty Meters from BSES Stores within 30 days of intimation.

f) Manufacturer shall inspect the meter within 10 days of intimation at Stores and inform authorized representative of BRPL of any observation in writing. If manufacturer fails to inform BRPL then all meters will be considered for replacement.

g) The meters which are found defective/inoperative within the guarantee period, shall be replaced within six weeks of receipt of report for such defective/inoperative meters.

h) If the defective meters are not replaced within the specified period then the same shall be treated as breach of performance and shall be liable for penalty.

i) Following are minimum conditions for replacement of meters and boxes under Guarantee:

Bidder return Cases for Meters	
Sr no	**Case**
1.	Display faulty, back lit not glowing
2.	Erratic pulse
3.	Meter data not downloaded through optical port
4.	No Pulse
5.	Abnormal active energy (jump in reading)
6.	Data Corruption of any type, MD courruption
7.	Tamper not restored
8.	RTC Fail
9.	Wrong or No serial number download
10.	Communication module failure & replacement not possible
11.	Voltage/current missing
12.	Abnormal voltage
13.	Meter stop/counter reset
14.	Meter burnt internally
15.	Water and rust mark
16.	Reverse reset
17.	Clock fail flag, cover open flag, memory failure
18.	Push button not working

Notwithstanding anything stated above, BRPL reserves the right to assess bidder's capability to carry out the work stated and add, modify or delete part or whole of the specifications in the overall interest of the purchaser. In this regard the decision of the purchaser is final and binding.

--End of document

BSES Rajdhani Power Limited

SECTION – VI:

Technical Specification of 3 Phase 4 Wire Smart HT Meters with Cellular Communication (4G or NBIOT) and accessories for class 0.2s and 0.5s

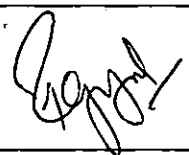
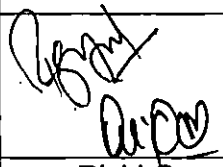
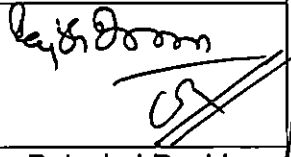
RATE CONTRCAT FOR SUPPLY OF CT OPERATED HT, DT AND ABT METERS WITH FACTORY FITTED MODEMS AND BOX

CMC/BR/22-23/RB/PR/SN/1011

Detailed Meter Specification No. : GN101-03-SP-334-00

Technical Specification of 3 Phase 4 Wire Smart HT Meters with Cellular Communication (4G or NBIOT) and accessories for class 0.2s and 0.5s

Document number: GN101-03-SP-334-00

Prepared By	Reviewed by	Approved By	
			**Rev. No: 0** **Date: 10.03.22**
Rishi Goyal	Rishi Goyal Vikas Srivastava	Rajesh J Doshi Gopal Nariya	

VERSION CONTOL

SN	Date	Previous Version No.	Current Version No.	Author
1	19.02.22	NA	GN101-03-SP-335-00	Rishi Goyal

CONTENTS

1.0 SCOPE

This specification covers the design, manufacture, assembly, inspection, testing and delivery of supply of Accuracy Class 0.5S (Active & Reactive), 3 x 240 V and -/5 A static smart energy meter for DT with plug in cellular communication module (4G with fallback on 2G or NB-IoT with fallback on 2G), related Head End Software and accessories required for successful operation of the meter.

2.0 STANDARDS

The meter shall be ISI marked (Bidder shall be BIS certified) and conform to CEA Metering (Installation and Operation of Meters) Regulation 2006 and latest amendments, Indian Electricity Acts and Indian Electricity Rules.

SN	Standard	Title
l.	IS14697	AC static transformer operated watt-hr and Var-hr meters Class 0.2s, 0.5s specifications
m.	IS- 16444 (Part 2)	AC Static Transformer Operated Watt-hour And Var-hour Smart Meters, Class 0.2 S, 0.5 S And 1.0 S Part 2 Specification Transformer Operated Smart Meters
n.	CEA Regulation:2006 and latest amendments	Installation and Operation of meters or latest amendment
o.	IS15959 and its latest amendment	Data Exchange for Electricity Meter, Reading, Tariff and Load Control – Companion Specification
p.	IS-15959 (Part 1)	Data Exchange for Electricity Meter - Reading Tariff and Load Control - Companion Specification
q.	IS-15959 (Part 2)	Data Exchange for Electricity Meter - Reading Tariff and Load Control (Part 2)- Companion Specification for smart meter
r.	IS-15959 (Part 2)	Data Exchange For Electricity Meter Reading, Tariff And Load Control-Companion Specification Part 3 Smart Meter (Transformer Operated Kwh And KVARh Class 0.2 S, 0.5 S And 1.0 S
s.	IEC 62056	Electricity metering data exchange- The DLMS/COSEM Suit- Part 5-3: DLMS/ COSEM application layer
t.	CBIP Manual (Pub no.-325)	Standardization of AC Static Electrical Energy Meters
u.	IEC 62052-11	General Requirement, tests and test conditions
v.	IEC 62053-22	Static Meters for active energy for class 0.2 S and .5 S

3.0 TECHNICAL SPECIFICATION

SN	Parameters	Technical Requirements
1.	Voltage	3x240V(P-N) with +20% to -40%
2.	Current	-/5 A, Max. continuous current 10 A
3.	Power factor range	Zero lag – Unity – Zero lead
4.	Display	LCD with backlit
5.	Display parameters	a) Display parameters: LCD test, date & time, cumulative kWh, kVAh & kVARh, MD in kW & kVA, PF, V, I and Neutral current b) Phasor diagram/ wiring error: Meter should indicate/ display wiring error with fault type. Fault related to phase association error should be clearly tagged. c) EL display with LED or LCD
6.	Measuring parameters	a) Basic parameters: Date, Real time, Self diagnostics. b) Energy and power parameters: Cumulative & Phase wise kWh, kVAh, kVARh, MD in KW, kVAR and kVA. Note (kVAR lead and lag shall be clearly identified able) c) Instantaneous parameters: Phase wise V, I, pf., Neutral current, Total KVAh, KWh, defraud consumption during any event / tamper d) Phasor diagram: Both for amplitude and angle of all 3V & I wrt to R phase voltage. e) Power On/off: Calendar month wise power ON/ Off time.
7.	History data	Last 12 months data regarding energy, power factor, power On/OFF and MD shall be stored in meter.
8.	MD Registration	Meter shall store MD in every 30 for all three type of Power. MD should reset on 00:00 hrs on define date. By default this date is 1st day of month however it should be programmable.
9.	Load Survey	30 min integration period, load profile of phasewise voltage and current, phasewise active & reactive power, cumulative active energy & power off in IP for 45 days.
10.	Diagnostic Feature	Self-diagnostic for time, calendar, RTC battery all display segments and NVM.
11.	Security Feature	Meter should have enough security specially in context to write/

SN	Parameters	Technical Requirements
		parameter change facility. All write transaction should be logged.
12.	Communication	d. Meter should have the provision for 01 no's modular and pluggable communication module compatible with Cellular (4G with fallback on 2G) or NBIOT with fallback on 2G etc. e. Interface shall support data transfer between meter and network interface card over UART/ RS232. f. Meter shall have mechanism to log communication module removal and insert as an event in its memory with date and time stamp. g. Meter shall have separate indications on display/ for remote and local communication. h. Communication module shall held in a casing which can be directly plugged in the meter. Sealing screw shall be provided.
13.	First breath and last gasp	c. In Last Gasp endpoint shall send the power outage notification with Time Stamp. In case of power failure meter communication module shall not draw power from the backup battery. d. For the purpose of sending the Last Gasp, communication module shall have proper power backup (like a super capacitor).
14.	Remote firmware update	a. Smart meter shall support remote firmware upgrade feature for meter firmware without loss of any data and metrology for a part or complete firmware of meter. b. Broad cast facility shall be supported in HES for simultaneously upgrading the firmware of a group of meters installed in field. c. Firmware upgrade feature shall be provided with proper security. The design shall take into account field scenarios such as power failure during F/W upgrade. d. In case of failure of firmware update, the meter shall use the previous version. e. Once the firmware is upgraded, meter shall send an acknowledgment to HES. It shall also log it as an event in

SN	Parameters	Technical Requirements
		its memory. f. There shall be no loss of data due to firmware update. g. Meter shall support capability to self register the meter with new firmware. a. The execution time of the change of the firmware within the meter should be below 2 minutes.
15.	Memory	Non-volatile memory independent of battery backup, memory should be retained upto 10 years in case of power failure.
16.	Climatic conditions	Max Temp – 60°C, relative humidity – 96%. In general meters will be installed in box in outdoor condition and thus exposed to worst weather condition
17.	Calibration	Adjustment of error shall not be possible at site by any means.
18.	Additional feature (Mandatory)	a) Meter should measure Voltage between Earth and Neutral and for the same have an additional terminal which can be connected to earth potential. The VNE can be part of inst parameter group. b) When ever meter experiences a sudden change in load i.e. sudden reduction by 30%, it should log last 10 such events.
19.	Digital Output (DO), Digital Input (DI) , Analog Input (AI)	a) Meter should have 2 no. of Digital Output (DO) ports to remotely connect/ disconnect the load via suitable mechanism. b) Meter should have 2 no. of Digital Input (DI) and 2 no. of AI ports for measurement of various sensor parameters like ambient temperature, oil temperature, oil level etc.
20.	Periodic push (Smart meter to HES)	c. Meter shall be able to push instantaneous parameters to HES at predefined intervals. Parameters required for push shall be intimated during detailed engineering in the vent of order. d. Other attributes as per IS 15959 (Part 3) i.e. Send Destination, Communication window, Randomization time interval, number of retries and repeat delay shall be decided in the event of manufacturing.
21.	Event Push (Smart meter to HES)	d. Meter is able to report HES, the status change of any of the identified events mapped in to event status word (ESW) of size 128 bits by pushing following objects to HES.

SN	Parameters	Technical Requirements
		i. Device ID ii. Push Setup ID iii. Real time clock- Date and Time iv. Event Status Word 1 (ESW 1). e. Each of the bits in ESW shall reflect the current state of the event and are mapped against each of the identified events. f. An event status word filter (ESWF) of 128 bit shall also be provided to configure events for event push. Events which are supported in meter shall only be configured for event push. Bit value 1 in ESWF shall indicate that the event is supported and value 0 indicates that event is not supported for event push. Position of the event bit in ESWF shall be same as in ESW.
22.	Integration with HES	c. Bidder shall work with BRPL IT team/ BRPL designated system integrator to integrate its meter with BRPL HES system. d. Bidder shall prepare detailed documents as mentioned in above clause and submit it for BRPL approval and integration with HES.

Note: Regarding definition of MD, Power OFF, TOD, Load survey, kVAh, meter output, Phasor diagram for field testing – also refer draft CBIP proposal for meter standardization. Same needs to be followed.

4.0 CONSTRUCTIONAL SPECIFICATIONS

SN	Parameters	Technical Requirements
1	Body of Meter	Normally top transparent and base opaque material polycarbonate of LEXAN 143A/943AA or equivalent grade. Should be ultrasonically welded.
2	Terminal Block	Made of polycarbonate of grade 500R or equivalent grade, Integral part of the meter base, brass or copper current terminals with flat end screw.
3	Terminal cover	Transparent terminal cover polycarbonate of LEXAN 143A/943AA or equivalent grade with provision of sealing through sealing screw.
4	Resistance of heat and	The terminal block and meter case shall have reasonable safety against the spread of fire. They shall not be ignited by thermal overload of live parts in

SN	Parameters	Technical Requirements
	fire	contact with them.
5	Marking on name plates	"DT Meter" should be BOLDLY marked on name plate. Design of Name plate will be approved by BRPL.
6	Meter Sealing	Supplier shall affix minimum one OWN hologram seal on side of meter body. Additionally will fix seals as provided by BRPL and record should be forwarded to BRPL.
7	Warrantee	66 months from the date of dispatch or 60 months from date of commissioning, whichever is earlier.
8	Insulation	Withstand AC voltage 4kV and impulse test (8kV)
9	IP rating	The meter shall conform to degree of protection IP51 (as specified in IS 12063) for protection against ingress of dust, moisture and vermin

5.0 TAMPER & ANTI-FRAUD DETECTION/ EVIDENCE FEATURES

The meter shall not be affected by any remote control device & extra high voltage/ field shall continue recording energy under any one or combinations of the following conditions:

a. **Phase sequence reversal:** The meters shall work accurately irrespective of the phase sequence of the supply.

b. **Detection of missing potential:** In case someone intentionally takes out a potential lead, the date and time of such occurrence shall be recorded by the Meter. The last restoration of normal supply shall also be similarly recorded. It is preferred if Meter can compute energy based on other phase data and store in separate register as ASSESSED ENERGY.

c. **Reversal of C.C. (Current Coil) Polarity:** Meter shall register the energy consumed correctly and only in forward direction with any one, two or all three phase C.C. reversal.

d. **Abnormal voltage condition:** Meter shall record the occurrences of voltage level beyond the tolerance limit with date & time. Default tolerance limit is <200V or ore than 250V.

e. **C.C. Shorting/ open:** Meter shall record C.C. terminal shorting/ open with time and date and time of restoration. . It is preferred if Meter can compute energy based on other phase data and store in separate register as ASSESSED ENERGY.

f. **Power On/Off:** Meter shall detect power OFF (minimum power off period 5 mins) if any of phase voltages are not present. This event shall be recorded at the time of each power OFF. At the same time power ON event shall be recorded. This logging shall be available in Tamper details along with cumulative time of failure.

g. Wiring connection Display: Incase of abnormal wiring like sequence error. Phase association error, CT reversal, Phase- CT mismatch, one/two phase no voltage- An indication, clearly indicating type of fault should be appear on meter.

h. Meter shall log all three phases voltage, current, power factor etc. at the time of tamper attempt for all such occurrences. Meter should never record energy in "Punishment/ Deterrent" mode.

5.1 Influence Quantities

The meter shall work satisfactorily with guaranteed accuracy limit under the presence of the following influence quantities as per CBIP Technical Report no. 325 with latest amendment.

a) External Magnetic Field
b) Electromagnetic Field Induction
c) Radio Frequency Interference
d) Unbalanced Load
e) Vibration
f) Waveform 10% of 3rd Harmonics
g) Phase Sequence
h) Voltage Unbalance
i) Electromagnetic H.F Field

6.0 COMPONENT SPECIFICATIONS

SN	Component Function	Requirement	Makes and Origin
6.1	Current Transformers	The meters should be with the current transformers as measuring elements. The current transformer should withstand as per specifications/standards.	The current transformer should withstand as per specifications/standards.
6.2	Measurement or computing chips	The measurement or computing chips used in the Meter should be with the Surface mount type along with the ASICs.	Any branded make- to be specified by meter manufacturer before hand
6.3	Memory chips	The memory chips should not be affected by the external parameters like sparking, high voltage spikes or electrostatic discharges.	Any branded make- to be specified by meter manufacturer beforehand.
6.4	Display modules	a) The display modules should be well protected from the external UV radiations.	Everlight Truly semiconductor, Tianma/ Haijing Electronics,

SN	Component Function	Requirement	Makes and Origin
		b) The display visibility should be sufficient to read the Meter mounted at height of 0.5 meter as well as at the height of 2 meters (refer 3.2.d for Viewing angle). c) The construction of the modules should be such that the displayed quantity should not disturbed with the life of display (PIN Type). d) It should be trans-reflective HTN or STN type industrial grade with extended temperature range minimum 70 ºC.	China/ Hitachi, Japan / Sony / Philips Or any other repeated make
6.5	Optical port	**a)** Optical port should be used to transfer the meter data to meter reading instrument. **b)** The mechanical construction of the port should be such to facilitate the data transfer easily. **c)** 9 pin connector of optical port shall be FCI copper type.	Everlight, Osram, Agillent, NFC Or any other repeated make
6.6	Power Supply	The power supply should be with the capabilities as per the relevant standards. The power supply unit of the meter should not be affected in case the maximum voltage of the system appears to the terminals due to faults or due to wrong connections.	SMPS Type (It should take care of relevant clause under Tech. Specifications)
6.7	Electronic components	The active & passive components should be of the surface mount type & are to be handled & soldered by the state of art assembly processes. The PTH components should be positioned such a way that the leads of components should not be under stress and not touching the internal wires. LED	USA: National Semiconductors, Atmel, Phillips, Texas Instruments, ST, Onsemi Japan: Hitachi, Oki, AVX or Ricoh Korea: Samsung EPCOS, Vishay

SN	Component Function	Requirement	Makes and Origin
			Everlight, Agillent
6.8	Mechanical parts	a) The internal electrical components should be of electrolytic copper & should be protected from corrosion, rust etc. b) The other mechanical components should be protected from rust, corrosion etc. by suitable plating/painting methods.	
6.9	Battery	Lithium with guaranteed life of 15 years.	Texcell, SAFT, Varta
6.10	RTC & Micro controller	The accuracy of RTC shall be as per relevant IEC / IS standards	Any branded make- to be specified by meter manufacturer before hand
6.11	P.C.B.	Glass Epoxy, fire resistance grade FR4, with minimum thickness 1.6 mm	

Note:

i. The components used by manufacturer shall have "Minimum Life" more than the 10 years.

ii. Incase Bidder want to use other make components; same shall be approved by BRPL before use. Deviation of component make is not allowed without prior approval.

iii. Even for existing/ par suppliers – fresh approval is needed for all deviations.

7.0 DRAWINGS AND DOCUMENTS

Following drawings & Documents shall be submitted with the bid:

l. Completely filled-in Technical Parameters
m. General arrangement drawing of the meter
n. Rating plate
o. Terminal Block dimensional drawing
p. Mounting arrangement drawings
q. Meter box drawing and dimensions
r. Component list
s. Display parameter
t. Type Test Certificates from NABL approved laboratories.
u. Tamper details
v. PIN configuration of Optical to RJ11 connector
w. Manual and SOP/DWI for operation

8.0 DISPLAY SEQUENCE FOR THE PARAMETERS

8.1 Default Display (Auto Mode)

Display Parameters

i. LCD test
ii. Meter serial no.
iii. Date
iv. Real time
v. Cumulative kWh
vi. Cumulative kVARh Lag
vii. Cumulative kVARh lead
viii. Cumulative kVAh
ix. Current Max. demand in kW & kVA
x. TOD MD for kWh and kVAh
xi. TOD MD occurrence for kWh and kVAh
xii. TOD Reactive Lag and Lead Forward MD Register
xiii. Inst. Avg. Power Factor and phase wise power factor
xiv. Inst. Voltage R,Y,B (Phase- Neutral)
xv. Inst. Line current R,Y, B
xvi. Neutral Current
xvii. Instantaneous kW, kVAR, kVA
xviii. Temperature
xix. Cumulative Power-Off duration
xx. Cumulative Power-On duration
xxi. Front cover open count

8.2 On-demand Display

After using pushbutton the following parameters should be displayed.

i. LCD test
ii. Meter serial no.
iii. Date
iv. Real Time
v. Cumulative kWh
vi. Cumulative kVARh
vii. Cumulative kVAh
viii. Current MD in kW
ix. Current MD in kVA
x. TOD MD for kWh and kVAh
xi. TOD MD occurrence for kWh and kVAh
xii. Instantaneous Power factor and phase wise power factor

xiii. Instantaneous kW, kVAr, kVA
xiv. High resolution readings of kwh, kvarh and kvah
xv. Instantaneous voltage R phase
xvi. Instantaneous voltage Y phase
xvii. Instantaneous voltage B phase
xviii. Instantaneous current R phase
xix. Instantaneous current Y phase
xx. Instantaneous current B phase
xxi. Last month billing Date
xxii. Last month billing kWh reading
xxiii. Last month billing kVARh reading
xxiv. Last month billing kVAh reading
xxv. Last month billing Maximum Demand in kW
xxvi. Last month billing Maximum Demand in kW occurrence Date
xxvii. Last month billing Maximum Demand in kW occurrence Time
xxviii. Last month billing Maximum Demand in kVA
xxix. Last month billing Maximum Demand in kVA occurrence Date
xxx. Last month billing Maximum Demand in kVA occurrence Time
xxxi. THD for both Voltage and Current
xxxii. Total Active Energy, Apparent Energy
xxxiii. Fundamental Reactive Lag and Fundamental Reactive Lead Energy
xxxiv. Neutral Current
xxxv. Temperature
xxxvi. Battery status
xxxvii. PT/CT status
xxxviii. Self diagnostic flag
xxxix. Cumulative Tamper count

Note: The meter display should return to Default Display mode (mentioned above) if the 'push button' is not operated for more than 6 seconds.

9.0 ADDITIONAL FEATURES

9.1 Mid night data: The meter should record midnight Cumulative kWh & kVAh reading for last 45 days load survey data.

9.2 Total Harmonic Distortion: Meter to record harmonic components in both current and voltage circuits. And should be available in on demand display.

9.3 Mobile App for mobile reading to be supplied by the bidder.

10.0 GENERAL REQUIREMENTS

11.1 On the meter name-plate: DT meter to be printed

l. Manufacturer name and place of manufacturing
m. Meter rating and Class
n. Meter serial number should be of 8 digits
o. Size of the digit of the meter serial number should be minimum 5mm X 3mm. (Laser printing shall be preferred)
p. Bar code should be of fine quality printed below the meter serial number
q. BIS registration mark (ISI mark)
r. Property of "BRPL"
s. Manufacturing date (mm/yy)
t. Guaranty period
u. Meter constant (Impulse/kWh,kVArh, kVAh)
v. PO no. and date

11.2 Meter Sr. Nos. to be printed in black on the name plate, instead of embossing. (Good quality of printing)

11.3 The supplier should seal (double lock approved seal) meters on both sides. The Buyer shall approve the method of sealing.

11.4 The internal potential links should be in closed position or link less meters will be preferred and there shall not be any external link.

11.5 Deliverable with Meters.

iv. Hard copies for Routine test certificates with each meter till alternate is provided by Bidder and approved BRPL.
v. Terminal cover should be fixed on the meter before dispatch.
vi. Report of seal & initial reading record. (soft copy as per BRPL format)

11.6 Box number, meter serial number, type, rating should be mentioned on cases / cartons.

11.7 Meters shall be suitably packed with environmental friendly material in order to avoid damage or disturbance during transit or handling and to prevent in grace of moisture and dust. Also refer CEA Metering Regulation 2006.

11.8 In case battery removal/ total discharge same should not affect the working & memory of the meter.

11.9 The bidder shall maintain a web site where routine test results of all meter supplied against these tender will be maintained and will be accessible to buyer/ buyer representative.

11.10 The supplier shall give 15 day advanced intimation to enable BRPL to depute representative for lot inspection.

11.11 Bidder shall ensure that patch required for HHU/CMRI shall be provided within 4 weeks. Bidder shall also ensure to deliver solution to meet DERC mandate within mutually agreed timeline.

11.12 Bidders may also offer Meters with factory fitted Cellular Modems (4G with fallback on 2G or NBIOT with fallback on 2G) if they are able to meet functional specifications as mentioned in this document, BRPL reserves the right to consider or reject such bids at their own discretion and will be binding on the bidder.

11.13 Delivery of software for reading through HHU/CMRI before meter delivery is required.

11.14 For any false events recorded in meter, Bidder shall depute their representative for field visit within one week and provide the root cause analysis in 4 weeks time.

11.0 HEAD END SOFTWARE – General Specifications

24. The bidder shall provide HES license free of cost for remote reading of data with BRPL logo in the website and reports generated.
25. Bidder shall install the HES within BRPL premises and integrate the HES with BRPL billing system without any cost.
26. HES shall be developed based on open platform and distributed architecture for scalability without degradation of the performance.
27. HES shall also manage the module on field, have user access rights management, dashboard for viewing in graphical mode, analysis & reporting, Security features and audit trail.
28. HES system shall have user friendly GUI to monitor communication status, energy, demand, MD, instantaneous parameters, tampers, parameters like voltages, current, active power, power factor, events, consumption, balance in Rs. etc.
29. HES system shall support TCP/IP, UDP, HTTP, FTP, SMTP etc; HES system should be compatible to RDBMS Oracle 12C/My SQL database.
30. HES shall have option to export CDF as per MIOS standard as well as user defined report generation in format of Excel, PDF, XML and CSV for further integration with system.
31. Alerts (for Alarms and Events) shall be displayed in HES for further action and shall be configurable
32. HES shall have facility for On Demand acquisition of meter data and at user selectable periodicity
33. HES system shall display phasor diagram as applicable, consumption/load profiles by configurable period (15/30 min, hour, day, month, year etc.) day type, tariff, customer type, or any user specified collection of meters.
34. HES system shall provide energy usage profile for a single meter or group of meters. The load profile shall illustrate energy consumption and peak demand in user defined intervals for a user-specified time period.
35. HES will pop up alerts for tampers & events, non communication of meters, non billed meters, RTC issues of meters or modems etc.
36. HES shall be capable of accessing complete data stored in modem through remote or have provision to upload meter data of CMRI/PDS or android based devices.

37. HES shall maintain data of at least 12 months according to desired hierarchy. Archival policy shall be decided along with IT at the time of award of contract.
38. HES shall manage geographical, administrative, regional, and the network hierarchy of the utility. These hierarchies shall be imported from external source and / or shall be configurable in the system.
39. HES system shall have necessary security features as per existing and comply in future to cyber laws as mandated by Government of India. HES shall have mechanism to identify fraud, data breach and manipulation of data. All configurations of User Management / Access Rights shall be as per the requirements of BRPL.
40. System should be able to generate user specific reports for billing, monitoring and export in excel, pdf, csv formats.
41. HES must have built-in redundancy & fail over architecture to ensure seamless system recovery.
42. Supplier shall agree to integrate devices from other manufacturers in future.
43. Supplier shall be responsible to ensure 100% billing is done each month.
44. Supplier shall troubleshoot in case of non communication, erratic behavior and non receipt of alerts for both field and back end activities.
45. The Supplier shall also provide training for the use of software, installation, downloading and troubleshooting free of cost to BRPL.
46. HES shall be integrated with other applications of BRPL such as analytics, SAP, GIS, MDMS etc

12.0 METER REPLACEMENT

j) Manufacturer shall undertake to replace meter in case of failure within the guarantee period.

k) Faulty meters under Guarantee shall be verified by manufacturer at site and rectify wherever possible.

l) Manufacturer will replace the meters with the Serial numbers provided by BRPL and manufacturer shall provide an excel sheet with details of returned meters, replaced meter, PO no., PO date, seals etc for mapping purpose by BRPL. Format of the same can be taken from Stores if required.

m) Manufacturer will bear the cost of replacement of faulty meter and site verification.

n) Manufacturer shall lift the Faulty Meters from BSES Stores within 30 days of intimation.

o) Manufacturer shall inspect the meter within 10 days of intimation at Stores and inform authorized representative of BRPL of any observation in writing. If manufacturer fails to inform BRPL then all meters will be considered for replacement.

p) The meters which are found defective/inoperative within the guarantee period, shall be replaced within six weeks of receipt of report for such defective/inoperative meters.

q) If the defective meters are not replaced within the specified period then the same shall be treated as breach of performance and shall be liable for penalty.

r) Following are minimum conditions for replacement of meters and boxes under Guarantee:

Bidder return Cases for Meters	
Sr no	**Case**
1.	Display faulty, backlit not glowing
2.	Erratic pulse
3.	Meter data not downloaded through optical port
4.	No Pulse
5.	Abnormal active energy (jump in reading)
6.	Data Corruption, MD corruption, Reverse reset, Meter stop/counter reset
7.	Tamper not restored
8.	RTC Fail, Clock fail flag, memory failure
9.	Wrong or No serial number download
10.	Communication module failure & replacement not possible
11.	Push button not working, cover open flag
12.	Abnormal voltage, Voltage/current missing
13.	Internally burnt
14.	Water and rust mark

Notwithstanding anything stated above, BRPL reserves the right to assess bidder's capability to carry out the work stated and add, modify or delete part or whole of the specifications in the overall interest of the purchaser. In this regard the decision of the purchaser is final and binding

--End of Doc--

BSES
RAJDHANI POWER LIMITED

Volume - II

FORMATS

Tender Notification for

RATE CONTRCAT FOR SUPPLY OF CT OPERATED HT, DT AND ABT METERS WITH FACTORY FITTED MODEMS AND BOX

CMC/BR/22-23/RB/PR/SN/1011

BSES
RAJDHANI POWER LIMITED

Annexure -A

ACCEPTANCE FORM FOR PARTICIPATION IN REVERSE AUCTION EVENT

(To be signed & stamped by the bidder along-with bid)

BSES Rajdhani Power Ltd (BRPL) intends to use reverse auction through SAP-SRM tool as an integral part of entire tendering process. All bidders who are techno-commercially qualified on the basis of tender requirements shall participate in the reverse auction.

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

1. In case of bidding through Internet medium, bidders are advised to ensure availability of all associated infrastructure as required to participate in the reverse auction event. Inability to bid due to telephone glitch, internet response issues, software & hardware hangs/failures, power failures or any other reason shall not be the responsibility of BRPL.

2. In case bidder fails to participate in the reverse auction event due to any reason whatsoever, it shall be presumed that the bidder has no further discounts to offer and the initial bid submitted by them as a part of tender shall be considered as bidder's Final No Regret offer. Any off-line price bids received from a bidder in lieu of non-participation in the reverse auction event shall be rejected by BRPL.

3. The bidder is advised to understand the auto bid process t safeguard themselves against any possibility of non-participation in the reverse auction event.

4. The bidder shall be prepared with competitive price quotes during the day of reverse auction event.

5. The prices quoted by bidder in reverse auction event shall be on FOR Landed cost BRPL Store/site basis inclusive of all relevant taxes, duties, levies, transportation charges etc.

6. The prices submitted by the bidder during reverse auction event shall be binding on the bidder.

7. The bidder agrees to non-disclosure of trade information regarding bid details e.g. purchase, identity, bid process/technology, bid documentation etc.

8. BRPL will make every effort to make the bid process transparent. However award decision of BRPL will be final and binding on the bidder.

9. The prices submitted during reverse auction event shall be binding on the bidder.

10. No request for Time extension of the reverse auction event shall be considered by BRPL.

Annexure -I

BID FORM

RATE CONTRCAT FOR SUPPLY OF CT OPERATED HT, DT AND ABT METERS WITH FACTORY FITTED MODEMS AND BOX

To
Head of the Department
Contracts & Materials
BSES Rajdhani Power Ltd
BSES Bhawan, Nehru Place
New Delhi– 110019
Sir,

We understand that BSES RAJDHANI POWER LTD is desirous of procuring" **RATE CONTRCAT FOR SUPPLY OF CT OPERATED HT, DT AND ABT METERS WITH FACTORY FITTED MODEMS AND BOX"** ` in it's licensed distribution network area in Delhi.

1 Having examined the Bidding Documents for the above named works, we the undersigned, offer to deliver the goods in full conformity with the Drawings, Conditions of Contract and specifications or as may be determined in accordance with the terms and conditions of the contract .The above Amounts are in accordance with the Price Schedules attached herewith and are made part of this bid.

2 If our Bid is accepted, we undertake to deliver the entire goods as per delivery schedule given by you from the date of award of purchase order/letter of intent

3 If our Bid is accepted, we will furnish a performance bank guarantee for an amount of 5% (Five) percent of the total contract value for due performance of the Contract in accordance with the General Conditions of Contract.

4 We agree to abide by this Bid for a period of 120 days from the date fixed for bid opening under clause 11.0 of GCC, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

5 We declare that we have studied the provision of Indian Income Tax Law and other Indian Laws for supply of equipments/materials and the prices have been quoted accordingly.

6 Unless and until Letter of Intent is issued, this Bid, together with your written acceptance there of, shall constitute a binding contract between us.

7 We understand that you are not bound to accept the lowest, or any bid you may receive.

8 There is provision for Resolution of Disputes under this Contract, in accordance with the Laws and Jurisdiction of Contract, Clause 19 of GCC.

Dated this..... day of..... 20 .....

Signature..... In the capacity of .....

.....duly authorized to sign for and on behalf of

(IN BLOCK CAPITALS) .....

BSES
RAJDHANI POWER LIMITED

Annexure -II

FORMAT FOR BID SECURITY BANK GUARANTEE

(To be issued in a Non Judicial Stamp Paper of Rs.50/-purchased in the name of the bank)

Whereas [name of the Bidder](hereinafter called the Bidder") has submitted its bid dated [date of submission of bid] for the supply of [name and/or description of the goods] (hereafter called ''the Bid").

KNOW ALL PEOPLE by these presents that WE [name of bank]at[Branch Name and address],having our registered office at[address of the registered office of the bank](herein after called —the Bank"),are bound unto BSES Rajdhani Power Ltd., with it's Corporate Office at BSES Bhawan Nehru Place, New Delhi -110019 ,(herein after called —the Purchaser")in the sum of Rs._____for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successors, and assigns by these presents. Sealed with the Common Seal of the said Bank this_____ day of_____ 20____.

THE CONDITIONS of this obligation are:

1. If the Bidder withdraws its Bid during the period of bid validity specified by the Bidder on the Bid Form ;or

2. If the Bidder, having been notified of the acceptance of its Bid by the Purchaser during the period of bid validity:

(a) fails or refuses to execute the Contract Form ,if required; or
(b) fails or refuses to furnish the performance security, In accordance with the Instructions to Bidders/GENERAL CONDITIONS.;

We undertake to pay to the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that is its demand the purchaser will note that amount claimed by it is due to it, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or condition s.

This guarantee will remain in force up to and including thirty (30) days after the period of bid validity, and any demand in respect thereof should reach the Bank not later than the above date.

(Signature of the bank)

Signature of the witness

BSES
RAJDHANI POWER LIMITED

Annexure –III

BSES

BSES Rajdhani Power Limited, New Delhi

PRICE FORMAT

ENQUIRY NO & DATE: CMC/BR/22-23/RB/PR/SN/1011 DT: 08.03.2022

Sr NO	HSN Code	Material Dispatch Location (GSTN no.)	Item Description	Uom	QTY	EX-WORKS RATE/No	C GST (%)	CGST %	S GST (%)	S GST %	I GST (%)	I GST	FREIGHT	LANDED COST/No. (Rs.) INR	TOTAL LANDED COST(Rs.) INR
A			HT Smart Meter 5A_ configurable for net Metering	Nos	225										
B			HT Smart Meter1A_ configurable for net Metering	Nos	40										
C			DT Smart Meter 5A	Nos	1000										
D			ABT Smart Meter 5A	Nos	10										
E			ABT Smart Meter1A	Nos	5										
F			Head end system License Including integration with BSES Billing and other application	Nos	50,000 nos end point										

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Sr NO	HSN Code	Material Dispatch Location (GSTN no.)	Item Description	Uom	QTY	EX-WORKS RATE/No	C GST (%)	CGST %	S GST (%)	S GST %	I GST (%)	I GST	FREIGHT	LANDED COST/No. (Rs.) INR	TOTAL LANDED COST(Rs.) INR
A			HT Meter 5A	Nos	225										
			Modem												
B			HT Meter1A	Nos	40										
			Modem												
C			DT Meter 5A	Nos	1000										
			Modem												
D			ABT Meter 5A	Nos	10										
			Modem												
E			ABT Meter1A	Nos	5										
			Modem												
F			Head end system License Including integration with BSES Billing and other application	Nos	50,000 nos end point										

Note: Individual line items prices are required, RA shall be done on package cost

Please attach the covering letter head along with the price format.

NAME OF THE BIDDER WITH STAMP

BSES
RAJDHANI POWER LIMITED

Annexure - IV

COMMERCIAL TERMS AND CONDITIONS

ENQUIRY NO & DATE : CMC/BR/22-23/RB/PR/SN/1011 DT: 08.03.2022

S/NO	ITEM DESCRIPTION	AS PER BRPL	CONFIRMATION OF BIDDER
1	Validity of prices	120 days from the date of offer	
2	Price basis	a) Firm, FOR Delhi store basis. Prices shall be inclusive of all taxes & duties, freight upto Delhi stores. b) Unloading at stores shall be in vendor's scope c) Transit insurance in BRPL scope for Indian portion only	
3	Payment terms	100% payment within 45 days after receipt of material at stores	
4	Delivery schedule	As per our requirement	
5	Defect Liability period	60 months after commissioning or 66 months from the last date of supply, whichever is earlier	
6	Penalty for delay	1% per week of delay of undelivered units or part thereof subject to maximum of 10% of total PO value of undelivered units	
7	Performance Bank Guarantee	5% of total PO value valid for 60 months after commissioning or 66 months from the last date of supply, whichever is earlier plus 3 months towards claim period	

Bidder should also furnish the below details for future communication:-

1) General Information
Name of Company:
Postal Address:

2) Technical Query:

Contact Person Name:
Contact No:
Email Address:

3) For Commercial Query
Contact Person Name:
Contact No:
Email Address:

ANNEXURE V

ENQUIRY NO & DATE : CMC/BR/22-23/RB/PR/SN/1011 DT:08.03.2022

NO DEVIATION SHEET

SL NO	SL NO OF TECHNICAL SPECIFICATION	DEVIATIONS,IF ANY

SIGNATURE & SEAL OF BIDDER

NAME OF BIDDER

BSES
RAJDHANI POWER LIMITED

Annexure – VI

S.No	Qualification Criteria	Declaration by bidder with qualifying the fulfillment	Documentary Evidence attached page no. details
1	The bidder must be a meter manufacturer of static meter		
2	The bidders shall either themselves be manufacturers of the equipment offered or accredited representatives of such manufacturers in India or of their Principals abroad with whom they may be having collaboration. **Such accreditation should be at least of one year preferably last year as on date of tender.** Authority letter from manufacturer shall be attached along with bid		
3	Relevant documents in support of the above must be furnished along with undertaking of the manufacturers. If these documents are not furnished along with the tenders the offer will be rejected summarily.		
4	Bidder should have supplied minimum 1000 Meters each type of Meters in last five years (from the date of technical bid opening) to Electricity Distribution Utility / Undertaking in India with electronic display and communication facility.		
5	Offered meters should be in successful operation from last 2 years as on the date of opening of technical Bid. This should be supported by the copies of purchase orders and performance reports from the SEBs / Power utilities (Copy should be enclosed).		
6	The bidder must possess valid ISO 9001:2000 certification for meter manufacturing and must possess valid BIS License.		
7	Firms who are debarred /blacklisted in other utilities in India will not be considered.		
8	The Bidder should have turnover of Rs.20 Crores in any one of the last three financial years (i.e. 2018-19,2019-20,2020-21) related to metering item only. Bidder should submit report on financial standing such as profit and loss statement, balance sheets for the last three years, banker's certificates only of metering item only. etc.		
9	The audited financial statements of accounts for the last three years submitted by bidder shall be evaluated and last year of audited accounts should show positive net worth.		
10	Bidder should have complete volume of type test reports as per IS 13779 (Including latest Amendments if any) and magnet test as per CBIP-88 from any NABL accredited lab. The type test report should not be older than 2 years as on the date of opening of tender.		
11	The manufacturer should have following facility to meet both quality and quantity requirement of supplies.		
a	**Computerized test bench**: The manufacturer should have sufficient Nos of Computerized test benches. The benches should have electronic supply, Isolated CT/ PT system and data should be directly stored in central server.		
b	**Seal tracking system:** The manufacturer has to put both his own seal and BSES seal on the meter. He should have a seal tracking software to ensure tracking of seal and no duplication of seals and meter nos.		
c	**Meter Burn In system:** In order to ensure the reliability of components and that there is no drift in meter accuracy with time; the manufacturer should have burn in facility --- Running meter with load at elevated temperature.		
d	**Routine test data** : During lot acceptance , all routine test data should be made available to inspector. In fact as per BIS, STI all test data should be offered to inspector for verification. **Routine test report should be packed with each meter**.		
e	**Test benches:** During the lot acceptance, BSES inspector can test up to 5% of offered quantity .The manufacturer should agree to provide all test facility to do so. Further he should allow BSES inspector to check shop floor process. The place of inspection should be clearly marked in tender and same should be well equipped.		
f	**Test equipments:** Since the meters has lot of anti theft features, the manufacturer should have test set up too check the working of all anti theft features. Same should be available during lot inspection; otherwise inspector has a right to withdraw inspection.		
g	**PCB assembly facility:** - The PCB facility should have auto- pick n place machine, in-circuit tester, Protection against static charge/ dust etc.; and process to ensure no corrosion of solder points/ tracks. Incase service is taken from other vendor than bidder shall arrange inspection of facility. The bidder should be taking the service from the vendor since last two years and so far have procured one million meter PCB from vendor.		
h	The manufacturer should send the compliance of above mentioned parameters in technical offer and has to give an undertaking about No Objection to verify his manufacturing facility as a part of tender process. Further in relevance to above clause vendor should submit details of facilities.		
The manufacturer should send the compliance of above mentioned parameters in technical offer and has to give an undertaking about No Objection to verify his manufacturing facility as a part of tender process.			

BSES
RAJDHANI POWER LIMITED

CHECK LIST

Sl No	Item Description	YES/NO
1	INDEX	YES/NO
2	COVERING LETTER	YES/NO
3	BID FORM (UNPRICED) DULY SIGNED	YES/NO
4	BILL OF MATERIAL (UNPRICED)	YES/NO
5	TECHNICAL BID	YES/NO
6	ACCEPTANCE TO COMMERCIAL TERMS AND CONDITIONS	YES/NO
7	FINANCIAL BID (IN SEALED ENVELOPE)	YES/NO
8	EMD IN PRESCRIBED FORMAT	YES/NO
9	DEMAND DRAFT OF RS 1180/- DRAWN IN FAVOUR OF	BSES.....POWER LTD
10	POWER OF ATTORNEY/AUTHORISATION LETTER FOR SIGNING THE BID	YES/NO