

Volume – I

Tender Notification for

**Supply of 33 kV CVT and 66 kV CVT for various sites of
BRPL**

CMC/BR/19-20/SV/RS/RJ/837

Due Date for Submission of Bids: 14.02.2020

**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/19-20/SV/RS/RJ/837

**Supply of 33 kV CVT and 66 kV CVT for various sites of
BRPL**

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SECTION – I: REQUEST FOR QUOTATION

1.0 Event Information

- 1.01** BRPL invites sealed tenders against Supply of 33 kV CVT and 66 kV CVT for various sites of BRPL from the manufacturers. The bidder must qualify the technical requirements as specified in Clause 2.0 stated below. The sealed envelopes shall be duly superscribed as — **“BID FOR SUPPLY OF 33 kV CVT AND 66 KV CVT FOR VARIOUS SITES OF BRPL, TENDER NOTICE/CMC/BR/19-20/SV/RS/RJ/837 DUE FOR SUBMISSION ON DT. 14.02.2020”**.

Sl. No.	Item Description	Specification	Requirement	Estimated Cost
			Total Qty.	
BRPL, DELHI				
1	Supply of 33 kV CVT and 66 kV CVT for various sites of BRPL	SECTION V	303 Nos	5.00 Cr

Note: Quantity may vary to any extent of +/- 30% of above mentioned total quantity.

- 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/- with GST-**, drawn in favour of **BSES RAJDHANI POWER LTD**, payable at New Delhi. The sale of tender documents will be issued from **01.02.2020** onwards on all working days upto **10.02.2020**. 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/19-20/SV/RS/RJ/837**”. This envelope should accompany the Bid Documents.

- 1.03** Offers will be received upto **1530 Hrs. on dt. 14.02.2020** as indicated earlier and will be opened at the address given below dt. **14.02.2020 at 1600 Hrs.** in the presence of authorized representatives of the bidders. 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 BRPL 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% (Two percent) of the Tender value i.e. **Rs. 10,00,000/-** is not deposited in shape of Bank Draft in favour of BSES RAJDHANI POWER LTD, payable at New Delhi or Bank Guarantee executed on favour of BSES RAJDHANI POWER LTD.
- ii) The offer does not contain “FOR, NEW DELHI price indicating break-up towards all taxes & duties”.
- iii) Complete Technical details are not enclosed.
- iv) Tender is received after due time due to any reason.

1.05 BRPL 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:-

1. QUALIFICATION CRITERIA for 33 KV CVT:-

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

1. The bidders must have the manufacturing/Assembly base in India for CVT's.
The bidders must be a manufacture of CVT of offered voltage level & above and must possess valid Type test report carried out at CPRI/ERDA/other reputed International Institution with in last 5 Years from the date of bid.
2. The bidder shall have servicing , repairing, testing & refurbishment facility in INDIA with necessary spares and testing equipment for providing prompt after sales service for CVT. Details of the set-up available shall be brought out in the offer, failing which the offer will be rejected. The bidder shall submit undertaking along with the bid to confirming compliance to qualifying criteria for bidder.
3. The bidder should have qualified technical and dedicated QA personnel at various stages of manufacture & testing.
4. The Bidder should have supplied at least 50% of the tendered quantity of same voltage or higher voltage CVT within the last 3 years and out of which 50% of the supplied quantity must be in successful operation for at least in the last 2 years for which performance Certificate shall be furnished.
5. Bidder should have Average Annual Sales Turnover of Rs 10.00 Crores or more in last 3 financial Years.
6. The Bidder shall submit an undertaking “No Litigation” is pending for the company and in case of any running litigation details and value to be provided (as per attached format).

7. The Bidder must possess valid ISO 9001:2000 certification or equivalent certificate.
8. An undertaking (self-certificate) that the bidder has not been blacklisted/debarred by any central/state government institution including electricity utilities.
9. The bidder must have valid PAN No., GST Registration Number, in addition to other statutory compliances. The bidder must submit the copy of registrations and submit an undertaking that the bidder shall comply all the statutory compliances as per the applicable laws/rules etc. before the start of the work.
10. In case of new bidders (not enlisted in BSES), Factory Inspection & evaluation may be carried out to ascertain bidders manufacturing capabilities and quality procedures. BRPL reserves the right to assess the capabilities /installed capacity

2. QUALIFICATION CRITERIA for 66 KV CVT:-

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

1. The bidders must have the manufacturing/Assembly base in India for CVT's.
The bidders must be a manufacture of CVT of offered voltage level & above and must possess valid Type test report carried out at CPRI/ERDA/other reputed International Institution within in last 5 Years from the date of bid.
2. The bidder shall have servicing , repairing, testing & refurbishment facility in INDIA with necessary spares and testing equipment for providing prompt after sales service for CVT. Details of the set-up available shall be brought out in the offer, failing which the offer will be rejected. The bidder shall submit undertaking along with the bid to confirming compliance to qualifying criteria for bidder.
3. The bidder should have qualified technical and dedicated QA personnel at various stages of manufacture & testing.
4. The Bidder should have supplied at least 50% of the tendered quantity of same voltage or higher voltage CVT within the last 3 years and out of which 50% of the supplied quantity must be in successful operation for at least in the last 2 years for which performance Certificate shall be furnished.
5. Bidder should have Average Annual Sales Turnover of Rs 10.00 Crores or more in last 3 financial years.
6. The Bidder shall submit an undertaking "No Litigation" is pending for the company and in case of any running litigation details and value to be provided (as per attached format).
7. The Bidder must possess valid ISO 9001:2000 certification or equivalent certificate.
8. An undertaking (self-certificate) that the bidder has not been blacklisted/debarred by any central/state government institution including electricity utilities.
9. The bidder must have valid PAN No., GST Registration Number, in addition to other statutory compliances. The bidder must submit the copy of registrations and submit an undertaking that the

bidder shall comply all the statutory compliances as per the applicable laws/rules etc. before the start of the work.

10. In case of new bidders (not enlisted in BSES) , Factory Inspection & evaluation may be carried out to ascertain bidders manufacturing capabilities and quality procedures. BRPL reserves the right to assess the capabilities /installed capacity

3.0 Bidding and Award Process

Bidders are requested to submit their questions regarding the RFQ or the bidding process after review of this RFQ. BRPL 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 12.02.2020 1500 Hrs.
2	Technical Offer	Documentary evidence in support of qualifying criteria. Technical Literature/ GTP/ Drawings/ Type test report, if any, etc., Testing facilities, any other relevant document, acceptance to commercial terms & conditions viz. delivery Schedule/ Period, Payment terms, PBG etc. Quality assurance plan, Deviation from the specification, list of plant & machinery and testing equipments Unpriced items.	14.02.2020, 1530 HRS
3	Commercial Offer	Prices for CVT's and Break up regarding basic price and taxes. Delivery commitment	14.02.2020, 1530 HRS
4	Opening of technical bid	As per RFQ	14.02.2020, 1600 HRS

This is a two part bid process. Bidders are to submit the bids (a) Technical Bid (b) Price Bid. Both these parts should be furnished in separate sealed covers superscribing with 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 (Technical Bid) - 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.**

- **The Part-II (Financial Bid)** - Qualified bidders will be intimated after technical evaluation of all the bids is completed. The date and time of same shall be intimated in due course to the qualified bidders. Notwithstanding anything stated above, the Purchaser reserves the right to assess bidder's 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.

4.0 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.

Splitting 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 case quantity needs to be distributed and order splitting is required, distribution of quantity shall be maximum among three (03) bidders.

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.

Quantity 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.

5.0 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.

6.0 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 BRPL. This includes all bidding information submitted.

All RFQ documents remain the property of BRPL and all suppliers are required to return these documents to BRPL 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. Sheshadri Krishnapura Copy to Ms. Fauzia Khalid	Mr. Robin Sebastian
Address	BSES RAJDHANI POWER LTD, 2nd Floor, B Block, Nehru Place, New Delhi – 110019	C&M Deptt. 1st floor, D- Block, BSES Rajdhani Power Limited, BSES Bhawan, Nehru Place, New Delhi -110019
Email-ID	sheshadri.krishnapura@relianceada.com	Robin.sebastian@relianceada.com

SECTION – II

INSTRUCTION TO BIDDERS (ITB)

**Supply of 33 kV CVT and 66 kV CVT for various sites of
BRPL**

CMC/BR/19-20/SV/RS/RJ/837

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 of 33 kV CVT and 66 kV CVT 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 arising in any way 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 the right to get sample of 33 kV CVT and 66 kV CVT tested by any reputed independent test lab (approved by BRPL) at the cost of bidder.

B. BIDDING DOCUMENT

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) | Bid Form | - Annexure – I |
| b) | Bid Format | - Annexure – II |
| c) | Price Schedule | - Annexure – III |
| d) | Commercial Terms & Conditions | - Annexure - IV |
| e) | No Deviation Sheet | - Annexure - V |
| f) | Qualification Criterion | - Annexure - VI |

- 5.02 The Bidder is expected to examine the Bidding Documents, including all Instructions, Forms, Terms 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.

6.0 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) Power of Attorney or Authorization letter indicating that the person(s) signing the Bid have the authority to sign the Bid and thus that the Bid is binding upon the Bidder during the full period of its validity, in accordance with clause 12.0.

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. **10,00,000/-**. 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 New Delhi.

Unsuccessful bidders’ EMD will be discharged or returned as promptly as possible as 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 Contract, or
 - 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 (INR) only**.

12.0 PERIOD OF VALIDITY OF BIDS

- 12.01 Bids shall remain valid for **120 days** post bid date.
- 12.02 Notwithstanding Clause 12.01 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 ALTERNATIVE BIDS

Bidders shall submit Bids, which comply with the Bidding Documents. Alternative Bids will not be considered. The attention of Bidders is drawn to the provisions 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 Clause 9.0), clearly marked "Original Bid", plus one copy must be received by the Purchaser at the date, time and place specified pursuant to Clauses 15.0 and 16.0. 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 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.

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 not later than **1530 HRS on 14.02.2020**.
- 16.02 The Purchaser may, at its discretion, extend the deadline for the submission of Bids by amending the Bidding Documents in accordance with Clause 9.0, 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 adjustment in price, which results from the above procedure, 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 and/or in 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 ALL 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 toward 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 within 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 10% (Ten percent) of the Contract Price in accordance with the format provided. The Performance Bond shall be valid for a period of twenty four months (24) from the date of the commissioning or thirty months (30) from the 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 forward 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)

**Supply of 33 kV CVT and 66 kV CVT for various sites of
BRPL**

CMC/BR/19-20/SV/RS/RJ/837

GENERAL TERMS AND CONDITIONS

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 BRPL 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" 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 BRPL 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 needs to proceed with the work past a hold point only after clearance by purchaser or a witness waiver letter from BRPL.
- 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 BRPL 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 height) 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.

7.0 Prices basis for supply of materials

Bidders require quoting their prices on Landed Cost Basis and separate price for each item. For Supply to BRPL Delhi the price shall be inclusive of packing, forwarding, GST and freights. The above supply prices shall also include unloading at site stores. Transit and storage insurance will be arranged by BRPL; however bidder to furnish required details in advance for arranging the same by BRPL.

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, incase 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 10 % performance bank guarantee. (Refer 10.01)

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 BRPL 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.
- viii) Insurance policy to be obtained by supplier

11.0 Price Validity

11.01 All bids submitted shall remain valid, firm and subject to unconditional acceptance by BRPL 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 BRPL in an amount not less than Ten percent (10%) of the total price of the Contract (the "Performance Bond"). The Performance Bond shall be valid for a period of twenty four months (24) from the date of the commissioning or thirty months (30) from the 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 BRPL at the address listed above or as otherwise specified by BRPL, either of which shall constitute the Performance Bond hereunder; or
- b) Bank guarantee from any nationalized bank in favour of BSES RAJDHANI POWER LTD (BRPL). The performance Bank guarantee shall be in the format as specified by BRPL.

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 BRPL 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 BRPL 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 Defects Liability Period

- 15.01 The bidder to Guarantee the materials / items 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 date of delivery whichever is earlier. If during the defects liability period any materials / items are found to be defective, these shall be replaced or rectified by the bidder at his own cost within 30 days from the date of receipt of intimation.

16.0 Return, Replacement or Substitution.

BRPL shall give Supplier notice of any defective Commodity promptly after becoming aware thereof. BRPL may in its discretion elect to return defective Commodities to Supplier for replacement, free of charge to BRPL, or may reject such Commodities and purchase the same or similar Commodities from any third party. In the latter case BRPL 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. BRPL may set off such costs against any amounts payable by BRPL to Supplier. Supplier shall reimburse BRPL 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 BRPL.

21.0 Consequences of Default.

- a) If an Event of Default shall occur and be continuing, BRPL may forthwith terminate the Contract by written notice.
- b) In the event of an Event of Default, BRPL 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
 - iii) recover any losses and/or additional expenses BRPL 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 contract price for every week delay or part thereof for undelivered quantities.

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

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 Force Majeure

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:

23.03 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.

23.04 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.

- 23.05 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.
- 23.06 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.
- 23.07 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.
- 23.08 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 Whenever 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

Sl. No.	Item Description	Specification	Requirement	Delivery Schedule	Location
BRPL,DELHI					
1	Supply of 33 kV CVT and 66 kV CVT	SECTION V	303 Nos	Delivery shall be 1-2 months from the date of ordering	Stores BRPL Delhi

Annexure –I

BID FORM

SUPPLY OF 33 KV CVT AND 66 KV CVT FOR VARIOUS SITES OF BRPL

To

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

Sir,

We understand that BRPL is desirous of procuring “33 kV CVT and 66 kV CVT” in its licensed distribution network area in Delhi. 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 for the sum of AS PER PRICE BID ENCLOSED or such other sums 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.

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.

If our Bid is accepted, we will furnish a performance bank guarantee for an amount of 10% (Ten) percent of the total contract value for due performance of the Contract in accordance with the General Conditions of Contract.

We agree to abide by this Bid for a period of 120 days from the date fixed for bid opening under clause 9.0 of GCC, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

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.

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

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

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).....

FORMAT FOR EMD 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 its Corporate Office at BSES Bhawan Nehru Place, New Delhi -110019, (herein after called —the “Purchaser”) in the sum of _____ 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:

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

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

fails or refuses to execute the Contract Form ,if required; or
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 conditions.

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

Annexure III

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.

Seal & Signature of Bidder

Annexure-IV

PRICE FORMAT

ENQUIRY NO & DATE: NIT: CMC/BR/19-20/SV/RS/RJ/837

PRICE SCHEDULE

ITEM DESCRIPTION	QTY AS PER RFQ	UOM	EX-WORKS RATE/ UNIT	CGST (%)	CGST AMOUNT	SGST (%)	SGST AMOUNT	IGST (%)	IGST AMOUNT	FREIGHT	LANDED RATE/ UNIT	TOTAL LANDED COST (INR)
33 kV CVT	147 nos											
66 kV CVT	156 nos											

- Note: 1. The prices received without break up of ex works, Freight, GST are liable for rejection
2. Pls. Indicate the exact percentage of taxes in figures and words.
3. If there is a discrepancy between the unit price and the total price THE UNIT PRICE shall prevail.
4. Bidders are requested to attach the covering letter head along with the price bid indicating reference no and date.

Bidders seal & signature

Enquiry No. : CMC/BR/19-20/SV/RS/RJ/835

COMMERCIAL TERMS AND CONDITIONS

S/NO	ITEM DESCRIPTION	AS PER BRPL	CONFIRMATION OF BIDDER
1	Validity of prices	120 days from date of offer	
2	Price basis	Firm, FOR Delhi store basis, Prices shall be inclusive of all taxes & duties, freight upto Delhi stores. Unloading at stores be in vendor's scope Transit insurance in BRPL scope	
3	Payment Terms	100% payment within 45 days after receipt of material at stores	
4	Delivery schedule	Delivery shall be 1-2 months from the date of ordering.	
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	10% of total PO value for 24 months after commissioning or 30 months from date of supply, whichever is earlier plus 3 months towards claim period	

ANNEXURE - VI

ENQUIRY NO: CMC/BR/19-20/SV/RS/RJ/837

NO DEVIATION SHEET

SL NO	SL NO OF TECHNICAL SPECIFICATION	DEVIATION, IF ANY

SIGNATURE & SEAL OF BIDDER

NAME OF BIDDER

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 COMMERCIAL TERMS TO & CONDITIONS	YES/NO
7	FINANCIAL BIDS (IN SEALED ENVELOPE)	YES/NO
8	EMD IN PRESCRIBED FORMAT	YES/NO
9	DEMAND DRAFT OF RS 1180/- DRAWN IN FAVOUR OF	BSES RAJDHANI POWER LTD
10	POWER OF ATTORNEY/ AUTHORISATION LETTER FOR SIGNING THE BID	YES/NO

SECTION – V

TECHNICAL SPECIFICATIONS (TS)

Supply of 33 kV CVT and 66 kV CVT for various sites of BRPL

CMC/BR/19-20/SV/RS/RJ/837

The detailed technical specifications of 33 kV CVT and 66 kV CVT

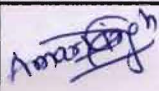

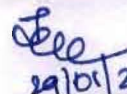
BSES

Specification for

33 kV OUTDOOR

CAPACITIVE VOLTAGE TRANSFORMER (CVT)

Specification no. GN101-03-SP-205-00

Prepared by:		Checked by :		Approved by:		Rev	Date
Name	Sign	Name	Sign	Name	Sign		
Amar Deep Singh		Abhinav Srivastava	 29/1/2020	Sheshadri Krishnapura	 29/01/2020		

Volume – I Technical Specification for 33 KV Outdoor CVT

1.0 CODES & STANDARDS:

Materials, equipment and methods used in the manufacture of Potential Transformer shall conform to the latest edition of following –

National Standard

Standard Code	Standard Description
IS-3156 (Part I to IV)	Specification for Voltage transformer.
IS-4146	Application guide for voltage transformer.
IS-2099	High voltage porcelain bushings
IS-731	Insulator for O/H power line
IS-335	New insulating oil for transformer and switchgear.
IS-9676	Reference ambient temperature of electrical equipment
IS-5561	Specification of electric power connectors
IS-5621	Hollow insulator for use in electrical equipments
IS-3156 (Part I to IV)	Specification for Voltage transformer.
IS-4146	Application guide for voltage transformer.
IS-2099	High voltage porcelain bushings
IS-731	Insulator for O/H power line
	Indian Electricity Rules (relevant safety regulation of CEA)
	Indian electricity act
	CBIP manual

2.0 MAJOR DESIGN CRITERIA & PARAMETERS OF THE CVT

	Description	Requirement / Rating
2.1.0	Rated Voltage	33 KV
2.1.1	Highest System Voltage	36 KV
2.1.2	Frequency	50HZ \pm 5%
2.1.3	Fault level	26.3KA for 3secs.
2.1.4	Earthing	Solidly grounded
2.2.1	Type	Single phase, outdoor, dead tank type, oil immersed, self cooled type.
2.2.2	Construction feature	Oil immersed CVT shall be hermetically sealed to eliminate breathing and to prevent ingress of air and moisture.

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Volume – I Technical Specification for 33 KV Outdoor CVT

2.3.0	Features	<p>a) Shall comprise a capacitor divider unit and an electromagnetic unit such that secondary voltage of electromagnetic unit is substantially proportional to and in phase with the primary voltage applied to capacitor divider units.</p> <p>b) Capacitors shall be oil impregnated type enclosed in inert gas atmosphere, hermetically sealed.</p> <p>c) The material and construction and assembly of CVT shall be such that the capacitance does not change with time and the effect of temperature is minimum.</p> <p>d) Provided with an over voltage suppressor</p> <p>e) No radio interference when operated at maximum service voltage</p> <p>f) Reactance to be provided to minimize draining of carrier signal in electromagnetic unit</p> <p>g) No radio interference when operated at maximum service voltage</p> <p>h) The CVT shall be designed to cover its rated output range without any adjustment of its electromagnetic unit.</p> <p>i) Material used in insulation and assembly of the winding shall be insoluble, non catalytic and chemically inactive in hot transformer oil and shall not be subjected to a shrinking and seasoning process</p> <p>j) CVT shall provide designed transient response requirement as per IEC / IS i.e. during transient oscillations following a short circuit on primary side, the secondary side output voltage shall not fall to a value less than 10% of peak value before short circuit within 20 milliseconds</p> <p>k) The secondary terminal box shall include necessary HRC fuses for protection of secondary circuits and both the sides of fuse shall be terminated on terminal block for fuse supervision.</p>
2.4.0	Major Parts	
2.4.1	Tank	
2.4.2	Material of Construction	Tank shall be of high quality steel and shall be Hot Dip Galvanized with galvanizing thickness of 610gm/sq mm minimum.
2.4.3	Tank Feature	The tank shall be provided with oil draining plug, Oil level gauge glass.
2.4.4	Oil Expansion	Stainless steel bellow or diaphragm shall be provided to take care of oil expansion
2.4.5	Core	High grade, non ageing, low loss, high

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Volume – I Technical Specification for 33 KV Outdoor CVT

		permeability, cold rolled grain oriented silicon steel lamination.
2.5.0	Winding	
2.5.1	Material	Electrolytic Copper
2.5.2	Winding Insulating material	Class A, non catalytic, inert to transformer oil, free from compounds liable to ooze out, shrink or collapse.
2.5.3	Winding Insulation	Uniform
2.5.4	Design features	Winding shall be capable of desired output as per specified limits without exceeding permissible temperature rise.
2.6.0	Insulating oil	
2.6.1	Type	Class 1 new mineral insulating oil as per IS 335, shall be certified not to contain PCBs. Anti oxidant inhibitor if recommended shall be subject to Owner's approval.
2.7.0	Bushings and Terminations	
2.7.1	Type	Porcelain bushing
2.7.2	Termination on HV side bushing	The HV Terminal shall be of copper. Termination shall be by bimetallic of Aluminum alloy grade A6 suitable for Twin Zebra ACSR conductor/ 3inch Pipe Bus.
2.7.3	Termination of LV side	The secondary terminals shall be provided in IP55 Box with Brass/copper stud type terminals accessible from front with removable cover.
2.7.4	Termination of Earth terminal of HV winding	The earth terminal of HV winding shall be bought out in secondary Terminal box by bushing. This shall be connected with body earth terminal with flexible copper lead through a link.
2.7.5	Terminal marking	Terminals shall be marked as per IS 3156
2.8.1	Minimum creepage distance of bushing	31 mm/KV
2.8.1	Protected creepage distance	At least 50 % of total creepage distance
2.9.1	Over Voltage factor	1.2 times for continuous rating and 1.5 times for 30 seconds.
2.10.1	Atmospheric protection for clamp and fitting of iron and steel	Hot dip galvanizing as per IS 2633
2.10.2	Gland Plate	Min. 3 mm thick detachable with three knockout holes of 3/4 inch.
2.10.3	Cable entry	Bottom for all cables
2.11.1	Earthing	The CVT assembly comprising of the chassis, frame work and fixed parts of metal casing shall be provided with two separate body earthing terminals.
2.12.1	External finish	Shall be Hot Dip galvanized

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Volume – I Technical Specification for 33 KV Outdoor CVT

3.0 FITTINGS & ACCESSORIES ON POTENTIAL TRANSFORMER

3.1.0	Rating and Diagram Plate	Required
3.1.1	Material	Anodized Aluminum 16SWG
3.1.2	Background	SATIN SILVER
3.1.3	Letters, diagram & border	Black
3.1.4	Process	Etching
3.2.5	Name plate details	Required
3.3.6	Terminal marking of Primary and secondary terminals.	Required
3.4.0	Drain Plug on tank Base	Required

4.0 APPROVED MAKE OF COMPONENTS

4.1.0	Insulator	CJI/JSI/WSI/Modern/Saravana/BHEL/ABIL
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5.0 TESTING & INSPECTION

5.1.0	Inspection and Testing during manufacture	
5.2.0	Tank	i) Checking of dimensions as per approved drawing. ii) Checking for leakage by pressure testing. iii) Thickness of Paint or Galvanization, as applicable
5.3.0	Porcelain	i) Check dimension. ii) Check finish of sealing surface. iii) Check creepage distance. iv) Check for routine electrical test. v) Check for porosity and temperature cycle test.
5.4.0	Insulating Materials	i) Sample check for physical properties of materials. ii) Check for dielectric strength. iii) Visual and dimensional checks.
5.5.0	Copper conductor	i) Check for dimension. ii) Check for elongation. iii) Check for unidirectional scrap. iv) Check for heat shock.
5.6.0	Oil	i) Check for break down voltage. ii) Check for density. iii) Check for flash point. iv) Check for moisture content. v) Check for neutralization value. vi) Check for inter facial tension at 27 Deg c. vii) Check for sludge content. viii) Check for specific resistance. ix) Check for pour point.
5.7.0	Secondary terminals	i) Check for one min AC Test
5.8.0	Routine tests	Tests shall be carried out in accordance with IS 3156
5.9.0	Type Tests	a) On one CVT of each rating and type (In CPRI/ERDA) b) All the test as per IS 3156

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Volume – I Technical Specification for 33 KV Outdoor CVT

		b) In case the product is never type tested earlier, seller has to conduct the type tests from CPRI/ERDA test labs on BSES order at their own cost, before commencement of supply.
5.10.0	Acceptance test	<p>To be performed in presence of Owner at manufacturer works:-</p> <ul style="list-style-type: none">i) Physical inspection of dimensions and BOM.ii) Verification of terminal marking and polarity.iii) Power frequency dry withstand tests on primary winding.iv) Power frequency dry withstand tests on<ul style="list-style-type: none">• <i>secondary winding</i>• <i>Capacitor voltage divider</i>• <i>Low-voltage terminal of the capacitor voltage divider.</i>• <i>Electromagnetic unit</i>v) Partial discharge test (this shall be only for future reference)vi) Determination of ratio and phase angle errors according to the appropriate designation or accuracy class.

6.0 DEVIATIONS

Deviation from this specification, if any, shall be clearly brought out in the offer. Unless owner explicitly accepts such deviations, it shall be considered that the offer fully complies with the specification.

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Volume – I Technical Specification for 33 KV Outdoor CVT**Annexure –A Scope of supply**

- 1.0 The scope of supply shall include following
- 1.1 Design, manufacture, assembly, testing at storages of manufacturing as per C I. 12 of this specification, final testing at manufacturer works on completely assembled transformer before dispatch, packing delivery and submission of all documentation for the Power transformer with all accessories as below

Sr. No.	Description	Scope of Supply
1.0	Fully assembled PT with all major parts like Tank, bushing, Primary terminal with connector and secondary terminal box.	YES
1.1	Galvanised steel structure for PT	NO
1.2	Fixing Bolts for PT	YES
1.3	Routine testing as per this specification	YES
1.4	Type testing as per this specification	YES
1.5	Submission of Documentation as detailed below	YES

- 1.2 Supervision of testing & commissioning of PT as site

- 1.3 BOQ as following-

Sr. No.	Purchaser Equipment Tag No. / SAP code	Location / Substation name	Unit	Quantity
1		e.g. Santacruz	No	e.g. 1
2		e.g. Alaknanda	No	e.g. 1
3				
4				
5				

- 2.0 Submission of documents

Submission of drawing, calculations, manual, catalogues, test report shall be as follows

	Along with offer	For Approval after award of contract	Final after approval	Remarks
Drawing	3 copies (Typical drgs)	4 copies	6 copies + 1 soft copy in CD	See clause 5.0 for various drawing required
Calculations	3 copies (Typical)	4 copies	6 copies + 1 soft copy in CD	See clause 5.0 for details
Catalogues	1 copy		6 copies + 1 soft copy in CD	
Instruction manual for the transformer	1 copy		6 copies + 1 soft copy in CD	
Test Report	2 copy		6 copies + 1 soft copy in CD	Type test and sample routine test reports

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Volume – I Technical Specification for 33 KV Outdoor CVT

3.0 Delivery Schedule

- | | | | |
|-----|-----------------------------|---|--|
| 3.1 | Delivery Period start date | - | from data of purchase order |
| 3.2 | Delivery Period end date | - | as agreed with supplier |
| 3.3 | Material dispatch clearance | - | after inspection by purchaser and written dispatch clearance for purchaser |

Approved

Volume – I Technical Specification for 33 KV Outdoor CVT**Annexure – B****SERVICE CONDITIONS**

2.0.0	Delhi Atmospheric conditions	
a)	Average grade atmosphere	Heavy polluted , dry
	Maximum altitude above sea level	1000 M
b)	Ambient Air temperature	Highest 50 deg C, Average 40 deg C
	Minimum ambient air temperature	0 deg C
c)	Relative Humidity	100 % Max
d)	Thermal Resistivity of Soil	150 deg. C cm/W
e)	Seismic Zone	4 as per IS 1893
f)	Rainfall	750 mm concentrated in four months
g)	Wind Pressure	195 Kg/m ² up to 90 M elevation as per IS 875-1975



Volume – I Technical Specification for 33 KV Outdoor CVT

Annexure – C: Guaranteed Technical Particulars 33 KV OUT DOOR CAPACITIVE

VOLTAGE TRANSFORMER

	Description	Data By Purchaser	Data By Supplier
1.0	Location of Equipment	Project specific to be filled up	
2.0	Name of Manufacturer		
3.0	Address & Contact details		
4.0	Type	Single phase, outdoor, dead tank type, oil immersed, self-cooled, hermetically sealed type	
5.0	Manufacturer Model No		
6.0	Reference design ambient temperature	50 Deg C	
7.0	Reference Standard	IS: 3156 (Part1 to 4)	
8.0	Nominal system voltage	33KV	
9.0	Highest system voltage	36KV	
10.0	Basic Insulation level	170KVp	
11.0	Power frequency voltage	70KV	
12.0	Type of cooling	ONAN	
13.0	Rated frequency (Hz)	50 Hz	
14.0	Insulation Class	A	
15.0	Rated Primary voltage	33KV / $\sqrt{3}$	
16.0	Rated secondary voltage	110V / $\sqrt{3}$	
17.0	Number of secondary cores	Two	
18.0	CORE Specifications		
18.1	Core - 1		
18.2	Purpose	Metering	
18.3	Rated Output	50 VA	
18.4	Class of accuracy	0.2	
18.5	Ratio error	As per IS	
18.6	Phase angle error	As per IS	
19.0	Core - 2		
19.1	Purpose	Protection	
19.2	Rated Output	50 VA	
19.3	Class of accuracy	3P	
19.4	Total Simultaneous Burden		
19.5	Total Thermal Burden		
19.4	Ratio error	As per IS	
19.5	Phase angle error	As per IS	
20.0	Rated over voltage factor		
20.1	- Continuous	1.2 times	
20.2	- 30 Seconds	1.5 times	
21.0	Capacitor Divider		
21.1	High voltage Capacitor	C1(pf)	
21.2	Intermediate Voltage Capacitor	C2(pf)	
21.3	Total Equivalent Capacitance	Pf	
21.4	Rated temperature at which above values are indicated.	Deg C	
21.5	Capacitance temperature coefficient		
21.6	Tan delta value of capacitance		

As per IS

Volume – I Technical Specification for 33 KV Outdoor CVT

21.7	Carrier frequency coupling	Pf	
21.8	Rated Intermediate Voltage		
22.0	Natural frequency of coupling	kHz	
23.0	Band Width	kHz	
24.0	Series reactance/choke rated Voltage & power frequency withstand voltage		
24.0	Temperature rise above an ambient of 50Deg C at 1.2 times voltage factor for 30 seconds rating		
24.1	- For Winding	Deg C	
24.2	- For Oil	Deg C	
25.0	Temperature rise above an ambient of 50Deg C at 1.5 times voltage factor for 30 seconds rating		
25.1	- For Winding	Deg C	
25.2	- For Oil	Deg C	
26.0	Short Circuit Rating	26.3 kA	
27.0	One minute power frequency dry & wet withstand voltage of capacitor	70 kVrms	
28.0	One minute power frequency withstand voltage of H.F terminal		
29.0	1.2/50 microsecond impulse withstand test voltage	170 KVp	
30.0	One minute Power frequency withstand voltage on secondary winding	3KV	
31.0	Corona extinction voltage	kV	
32.0	Max Radio Interference voltage at 1.1xUm/v3	V	
33.0	Minimum creepage distance in mm	1116 mm	
34.0	Protective creepage distance in mm	558 mm	
35.0	Partial discharge test	< 5 pC	
36.0	Weight of core		
37.0	Weight of oil		
38.0	Total weight		
39.0	Mounting details		
40.0	Overall dimensions		

Volume – I Technical Specification for 33 KV Outdoor CVT

Annexure –D RECOMMENDED SPARES (DATA BY SUPPLIER)

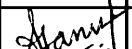
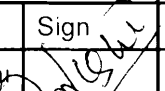
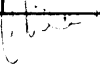
List of recommended spares as following –

Sr. No.	Description of spare part	Unit	Quality
1			
2			
3			
4			
5			
6			

As per

Specification for
66KV OUTDOOR
CAPACITIVE VOLTAGE TRANSFORMER
(CVT)

Specification no. SP-CVT-01-R0

Prepared by:		Checked by		Approved by		Rev	Date
Name	Sign	Name	Sign	Name	Sign		
Tanu		Meenaksh		K.K.Alla		00	16 J . . .

1.0 CODES & STANDARDS:

Materials, equipment and methods used in the manufacture of Potential Transformer shall conform to the latest edition of following –

National Standard

Standard Code	Standard Description
IS-3156 (Part I to IV)	Specification for Voltage transformer.
IS-4146	Application guide for voltage transformer.
IS-2099	High voltage porcelain bushings
IS-731	Insulator for O/H power line
IS-335	New insulating oil for transformer and switchgear.
IS-9676	Reference ambient temperature of electrical equipment
IS-5561	Specification of electric power connectors
IS-5621	Hollow insulator for use in electrical equipments
IS-3156 (Part I to IV)	Specification for Voltage transformer.
IS-4146	Application guide for voltage transformer.
IS-2099	High voltage porcelain bushings
IS-731	Insulator for O/H power line
	Indian Electricity Rules
	Indian electricity act
	CBIP manual

2.0 MAJOR DESIGN CRITERIA & PARAMETERS OF THE CVT

	Description	Requirement / Rating
2.1.0	Rated Voltage	66KV
2.1.1	Highest System Voltage	72.5kV
2.1.2	Frequency	50HZ \pm 5%
2.1.3	Fault level	31.5KA for 3secs.
2.1.4	Earthing	Solidly grounded
2.2.1	Type	Single phase, outdoor, dead tank type, oil immersed, self cooled type.
2.2.2	Construction feature	Oil immersed CVT shall be hermetically sealed to eliminate breathing and to prevent ingress of air and moisture.

2.3.0	Features	<ul style="list-style-type: none"> a) Shall comprise a capacitor divider unit and an electromagnetic unit such that secondary voltage of electromagnetic unit is substantially proportional to and in phase with the primary voltage applied to capacitor divider units. b) Capacitors shall be oil impregnated type enclosed in inert gas atmosphere, hermetically sealed. c) The material and construction and assembly of CVT shall be such that the capacitance does not change with time and the effect of temperature is minimum. d) Provided with an over voltage suppressor e) No radio interference when operated at maximum service voltage f) Reactance to be provided to minimize draining of carrier signal in electromagnetic unit g) No radio interference when operated at maximum service voltage h) The CVT shall be designed to cover its rated output range without any adjustment of its electromagnetic unit. i) Material used in insulation and assembly of the winding shall be insoluble, non catalytic and chemically inactive in hot transformer oil and shall not be subjected to a shrinking and seasoning process j) CVT shall provide designed transient response requirement as per IEC / IS i.e. during transient oscillations following a short circuit on primary side, the secondary side output voltage shall not fall to a value less than 10% of peak value before short circuit within 20 milliseconds k) The secondary terminal box shall include necessary HRC fuses for protection of secondary circuits and both the sides of fuse shall be terminated on terminal block for fuse supervision.
2.4.0	Major Parts	
2.4.1	Tank	
2.4.2	Material of Construction	Tank shall be of high quality steel and shall be Hot Dip Galvanized with galvanizing thickness of 610gm/sq mm minimum.
2.4.3	Tank Feature	The tank shall be provided with oil draining plug, Oil level gauge glass.
2.4.4	Oil Expansion	Stainless steel bellow or diaphragm shall be provided to take care of oil expansion
2.4.5	Core	High grade, non ageing, low loss, high permeability, cold rolled grain oriented silicon steel lamination.

2.5.0	Winding	
2.5.1	Material	Electrolytic Copper
2.5.2	Winding Insulating material	Class A, non catalytic, inert to transformer oil, free from compounds liable to ooze out, shrink or collapse.
2.5.3	Winding Insulation	Uniform
2.5.4	Design features	Winding shall be capable of desired output as per specified limits without exceeding permissible temperature rise.
2.6.0	Insulating oil	
2.6.1	Type	Class 1 new mineral insulating oil as per IS 335, shall be certified not to contain PCBs. Anti oxidant inhibitor if recommended shall be subject to Owner's approval.
2.7.0	Bushings and Terminations	
2.7.1	Type	Porcelain bushing
2.7.2	Termination on HV side bushing	The HV Terminal shall be of copper. Termination shall be by bimetallic of Aluminum alloy grade A6 suitable for Twin Zebra ACSR conductor/ 3inch Pipe Bus.
2.7.3	Termination of LV side	The secondary terminals shall be provided in IP55 Box with Brass/copper stud type terminals accessible from front with removable cover. Box shall be of adequate size with proper clearance between the terminals for ease of working and maintenance. Gasket for Box shall be Neoprene.
2.7.4	Termination of Earth terminal of HV winding	The earth terminal of HV winding shall be bought out in secondary Terminal box by bushing. This shall be connected with body earth terminal with flexible copper lead through a link.
2.7.5	Terminal marking	Terminals shall be marked as per IS 3156
2.8.1	Minimum creepage distance of bushing	31 mm/KV
2.8.1	Protected creepage distance	At least 50 % of total creepage distance
2.9.1	Over Voltage factor	1.2 times for continuous rating and 1.5 times for 30 seconds.
2.10.1	Atmospheric protection for clamp and fitting of iron and steel	Hot dip galvanizing as per IS 2633
2.10.2	Gland Plate	Min. 3 mm thick detachable with three knockout holes of 3/4 inch.
2.10.3	Cable entry	Bottom for all cables
2.11.1	Earthing	The CVT assembly comprising of the chassis, frame work and fixed parts of metal casing shall be provided with two separate body earthing terminals.
2.12.1	External finish	Shall be Hot Dip galvanized

3.0 FITTINGS & ACCESSORIES ON POTENTIAL TRANSFORMER

3.1.0	Rating and Diagram Plate	Required
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3.1.1	Material	Anodized Aluminum 16SWG
3.1.2	Background	SATIN SILVER
3.1.3	Letters, diagram & border	Black
3.1.4	Process	Etching
3.2.5	Name plate details	Required
3.3.6	Terminal marking of Primary and secondary terminals.	Required
3.4.0	Drain Plug on tank Base	Required

4.0 APPROVED MAKE OF COMPONENTS

4.1.0	Insulator	JSI/WSI/Modern/Saravana/BHEL/ABIL
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5.0 TESTING & INSPECTION

5.1.0	Inspection and Testing during manufacture	
5.2.0	Tank	i) Checking of dimensions as per approved drawing. ii) Checking for leakage by pressure testing. iii) Thickness of Paint or Galvanization, as applicable
5.3.0	Porcelain	i) Check dimension. ii) Check finish of sealing surface. iii) Check creepage distance. iv) Check for routine electrical test. v) Check for porosity and temperature cycle test.
5.4.0	Insulating Materials	i) Sample check for physical properties of materials. ii) Check for dielectric strength. iii) Visual and dimensional checks.
5.5.0	Copper conductor	i) Check for dimension. ii) Check for elongation. iii) Check for unidirectional scrap. iv) Check for heat shock.
5.6.0	Oil	i) Check for break down voltage. ii) Check for density. iii) Check for flash point. iv) Check for moisture content. v) Check for neutralization value. vi) Check for inter facial tension at 27 Deg c. vii) Check for sludge content. viii) Check for specific resistance. ix) Check for pour point.
5.7.0	Secondary terminals	i) Check for one min AC Test
5.8.0	Routine tests	Tests shall be carried out in accordance with IS 3156
5.9.0	Type Tests	a) On one CVT of each rating and type (In CPRI/ERDA) b) All the test as per IS 3156
		b) In case the product is never type tested earlier, seller has to conduct the type tests from CPRI/ERDA test labs on BSES order at their own cost, before commencement of supply.
5.10.0	Acceptance test	To be performed in presence of Owner at manufacturer works:-

		<ul style="list-style-type: none">i) Physical inspection of dimensions and BOM.ii) Verification of terminal marking and polarity.iii) Power frequency dry withstand tests on primary winding.iv) Power frequency dry withstand tests on<ul style="list-style-type: none">• <i>secondary winding</i>• <i>Capacitor voltage divider</i>• <i>Low-voltage terminal of the capacitor voltage divider.</i>• <i>Electromagnetic unit</i>v) Partial discharge test (this shall be only for future reference)vi) Determination of ratio and phase angle errors according to the appropriate designation or accuracy class.

6.0 DEVIATIONS

Deviation from this specification, if any, shall be clearly brought out in the offer. Unless owner explicitly accepts such deviations, it shall be considered that the offer fully complies with the specification.

Annexure –A Scope of supply

1.0 The scope of supply shall include following

1.1 Design, manufacture, assembly, testing at storages of manufacturing as per C I. 12 of this specification, final testing at manufacturer works on completely assembled transformer before dispatch, packing delivery and submission of all documentation for the Power transformer with all accessories as below

Sr. No.	Description	Scope of Supply
1.0	Fully assembled PT with all major parts like Tank, bushing, Primary terminal with connector and secondary terminal box.	YES
1.1	Galvanised steel structure for CVT	NO
1.2	Fixing Bolts for CVT	YES
1.3	Routine testing as per this specification	YES
1.4	Type testing as per this specification	YES
1.5	Submission of Documentation as detailed below	YES

1.2 Supervision of testing & commissioning of PT as site

1.3 BOQ as following-

Sr. No.	Purchaser Equipment Tag No. / SAP code	Location / Substation name	Unit	Quantity
1		e.g. Santacruz	No	e.g. 1
2		e.g. Alaknanda	No	e.g. 1
3				
4				
5				

2.0 Submission of documents

Submission of drawing, calculations, manual, catalogues, test report shall be as follows

	Along with offer	For Approval after award of contract	Final after approval	Remarks
Drawing	3 copies (Typical drgs)	4 copies	6 copies + 1 soft copy in CD	See clause 5.0 for various drawing required
Calculations	3 copies (Typical)	4 copies	6 copies + 1 soft copy in CD	See clause 5.0 for details
Catalogues	1 copy		6 copies + 1 soft copy in CD	
Instruction manual for the transformer	1 copy		6 copies + 1 soft copy in CD	

Test Report	2 copy		6 copies + 1 soft copy in CD	Type test and sample routine test reports
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3.0 Delivery Schedule

- 3.1 Delivery Period start date - from data of purchase order
- 3.2 Delivery Period end date - as agreed with supplier
- 3.3 Material dispatch clearance - after inspection by purchaser and written dispatch clearance for purchaser

Annexure – B SERVICE CONDITIONS

1.0.0	Delhi Atmospheric conditions	
a)	Average grade atmosphere	Heavy polluted , dry
	Maximum altitude above sea level	1000 M
b)	Ambient Air temperature	Highest 50 deg C, Average 40 deg C
	Maximum ambient air temperature	0 deg C
c)	Relative Humidity	100 % Max
d)	Thermal Resistivity of Soil	150 deg. C cm/W
e)	Seismic Zone	4 as per IS 1893
f)	Rainfall	750 mm concentrated in four months
g)	Wind Pressure	195 Kg/m ² up to 90 M elevation as per IS 875-1975

**Annexure — C: Guaranteed Technical Particulars 66 KV OUT DOOR CAPACITIVE
VOLTAGE TRANSFORMER**

	Description	Data By Purchaser	Data By Supplier
1.0	Location of Equipment	Project specific to be filled up	
2.0	Name of Manufacturer		
3.0	Address & Contact details		
4.0	Type	Single phase, outdoor, dead tank type, oil immersed, self-cooled, hermetically sealed type	
5.0	Manufacturer Model No		
6.0	Reference design ambient temperature	50 Deg C	
7.0	Reference Standard	IS: 3156 (Part1 to 4)	
8.0	Nominal system voltage	66KV	
9.0	Highest system voltage	72.5KV	
10.0	Basic Insulation level	325KVp	
11.0	Power frequency voltage	140KV	
12.0	Type of cooling	ONAN	
13.0	Rated frequency (Hz)	50 Hz	
14.0	Insulation Class	A	
15.0	Rated Primary voltage	66KV / $\sqrt{3}$	
16.0	Rated secondary voltage	110V / $\sqrt{3}$	
17.0	Number of secondary cores	Two	
18.0	CORE Specifications		
18.1	Core - 1		
18.2	Purpose	Metering	
18.3	Rated Output	50 VA	
18.4	Class of accuracy	0.2	
18.5	Ratio error	As per IS	
18.6	Phase angle error	As per IS	
19.0	Core - 2		
19.1	Purpose	Protection	
19.2	Rated Output	50 VA	
19.3	Class of accuracy	3P	
19.4	Total Simultaneous Burden		
19.5	Total Thermal Burden		
19.4	Ratio error	As per IS	
19.5	Phase angle error	As per IS	
20.0	Rated over voltage factor		
20.1	- Continuous	1.2 times	
20.2	- 30 Seconds	1.5 times	
21.0	Capacitor Divider		
21.1	High voltage Capacitor	C1(pf)	
21.2	Intermediate Voltage Capacitor	C2(pf)	
21.3	Total Equivalent Capacitance	Pf	
21.4	Rated temperature at which above values are indicated.	Deg C	

21.5	Capacitance temperature coefficient		
21.6	Tan delta value of capacitance		
21.7	Carrier frequency coupling	Pf	
21.8	Rated Intermediate Voltage		
22.0	Natural frequency of coupling	kHz	
23.0	Band Width	kHz	
24.0	Series reactance/choke rated Voltage & power frequency withstand voltage		
24.0	Temperature rise above an ambient of 50Deg C at 1.2 times voltage factor for 30 seconds rating		
24.1	- For Winding	Deg C	
24.2	- For Oil	Deg C	
25.0	Temperature rise above an ambient of 50Deg C at 1.5 times voltage factor for 30 seconds rating		
25.1	- For Winding	Deg C	
25.2	- For Oil	Deg C	
26.0	One minute power frequency dry& wet withstand voltage of capacitor	140kVrms	
27.0	One minute power frequency withstand voltage of H.F terminal		
28.0	1.2/50 microsecond impulse withstand test voltage	325 KVp	
29.0	One minute Power frequency withstand voltage on secondary winding	3KV	
30.0	Corona extinction voltage	kV	
31.0	Max Radio Interference voltage at $1.1 \times U_m / \sqrt{3}$	V	
32.0	Minimum creepage distance in mm	2250 mm	
33.0	Protective creepage distance in mm	1125 mm	
34.0	Partial discharge test, whether will be carried out Yes / No		
35.0	Weight of core		
36.0	Weight of oil		
37.0	Total weight		
38.0	Mounting details		
39.0	Overall dimensions		

Annexure –D RECOMMENDED SPARES (DATA BY SUPPLIER)

List of recommended spares as following –

Sr. No.	Description of spare part	Unit	Quality
1			
2			
3			
4			
5			
6			