

NOTICE INVITING TENDER (NIT)

FOR

SUPPLY

OF

**SINGLE PHASE NATURAL ORGANIC ESTER OIL
FILLED COMPLETELY SELF PROTECTED (CSP)
TRANSFORMER OF RATING 25KVA 6.35/0.240kV**

NIT NO: CMC/BY/22-23/RS/SV/51

Due Date for Submission: 02.12.2022, 14:00 HRS

**BSES YAMUNA POWER LIMITED (BYPL)
CONTRACTS & MATERIALS DEPT.,
SHAKTI KIRAN BUILDING, KARKARDOOMA,
DELHI-110032**

CIN: U40109DL2001PLC111525

WEBSITE: www.bsesdelhi.com

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VOLUME – I: INFORMATION TO BIDDER (ITB)

INFORMATION TO BIDDER (ITB)
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Bidders seal & Signature

SECTION – I: REQUEST FOR QUOTATION

1.00 EVENT INFORMATION

- 1.01 BSES Yamuna Power Ltd (hereinafter referred to as "BYPL") invites sealed tenders in 2 envelopes from reputed manufacturers.

Sl. No.	Item Description	Estimated Cost (₹)	Cost of EMD (₹)	Delivery at
1	SUPPLY OF SINGLE PHASE NATURAL ORGANIC ESTER OIL FILLED COMPLETELY SELF PROTECTED (CSP) TRANSFORMER OF RATING 25KVA 6.35/0.240kV	6.00 Crore	6.00 Lakh	Delhi Stores

The bidder must qualify the requirements as specified in clause 2.0 stated below.

All envelopes shall be duly super scribed "**BID FOR SUPPLY OF SINGLE PHASE NATURAL ORGANIC ESTER OIL FILLED COMPLETELY SELF PROTECTED (CSP) TRANSFORMER OF RATING 25KVA 6.35/0.240kV**"

Bid shall be submitted in two (02) parts. Details of part are as follow:

Part A – Techno Commercial Bid
Part B – Price Bid

- 1.1. The schedule of specifications with detail terms & conditions can be obtained from address given below against submission of non-refundable demand draft of ₹ 1,180/- drawn in favour of BSES Yamuna Power Ltd, payable at Delhi or Online transfer of requisite amount through IMPS/ NEFT/ RTGS. The tender documents & detail terms and conditions can also be downloaded from the website www.bsesdelhi.com --> **BSES YAMUNA POWER LTD --> Tender --> Open Tenders** 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.
- 1.2. Bids will be received up to **02.12.2022, 14:00 Hr.** at the address given below.
Part A of the Bid shall be opened on **02.12.2022, 16:30 Hr.**

Part B of the Bid will be opened in case of Techno-Commercially Qualified Bidders and the date of opening of same shall be intimated in due course. It is the sole responsibility of the bidder to ensure that the bid documents reach this office on or before the last date.

Head of Department
Contracts & Materials Deptt.
BSES Yamuna Power Ltd
Reception, Ground Floor
Shaktikiran Building, Karkardooma
Delhi 110032

- 1.3 BSES Yamuna Power Ltd reserves the right to accept/reject any or all tenders without assigning any reason thereof in the event of following:
- Tender is received after due date and time.
 - Tender fee of requisite value is not submitted.

- c) Earnest Money Deposit (EMD) of requisite value & validity is not deposited in shape of Bank Guarantee drawn in favor of BSES Yamuna Power Ltd, payable at Delhi or Online transfer of requisite amount through NEFT/RTGS.
- d) Price Bid as per the Price Schedule mentioned in Annexure-I is not submitted.
- e) Incomplete Bids.
- f) Necessary documents against compliance to Qualification Requirements mentioned at Section 1 Clause 2.0 of this Tender Document.
- g) Complete Technical details are not enclosed as per the Technical Bid Submission Checklist.
- h) Filled in Schedule of Deviations as per Annexure.

2.00 QUALIFICATION CRITERIA

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

2.01 Technical Criteria:

SI No.	Criteria	Documents to be submitted by bidder
1	The bidder should have own manufacturing facility in India for Distribution transformer of similar rating or higher since last 3 years.	manufacturing and factory incorporation certificate / Undertaking The details of manufacturing units, locations and works from where supply against this tender shall be proposed to be furnished.
2	The Bidder should have supplied at least 500 Nos of transformers of similar rating or higher in last 5 years from the date of bid opening to any utilities/ SEB's/ PSU's/ reputed company wherein the end user shall be utilities/ SEB's/ PSU's.	i. Summary list of executed Purchase orders ii. Purchase order copies iii Material delivery clearance certificate copy or Delivery completion certificates or Invoice Copies
3	Performance certificate for minimum 2 year satisfactory performance for similar rating or higher rating supplied in last 7 years from the date of bid opening from at least two utilities/ SEB's/ PSU's/ reputed company wherein the end user shall be utilities/ SEB's/ PSU's. In case of bidder has a previous association with BRPL/BYPL for similar product and service, the performance feedback for that bidder by BRPL/BYPL shall only be considered irrespective of performance certificate issued by any third organization.	Performance certificates
4	The bidder should have servicing , repairing, testing & refurbishment facility in INDIA with necessary spares and testing equipments for providing prompt after sales service for Distribution Transformer.	Relevant Details/certificates/Undertaking (Details of the set-up available shall be brought out in the

		offer. the bidder shall also submit undertaking along with the bid confirming the infrastructure details submitted)
5	The bidder should have plant installed capacity to supply of 200 nos of transformer per month for similar or higher rating.	Installed Capacity Certificate
6	The Bidder must possess valid ISO 9001:2015 certification.	Valid copy of Certification

2.02 Commercial Criteria:

SI No.	Criteria	Documents to be submitted by bidder
1	Bidder should have Average Annual Sales Turnover of Rs 6.0 Crores or more in last three (3) Financial Years (i.e., FY 2019-20, 2020-21 & 2021-22).	Balance Sheet / Duly certified CA certificate to be submitted
2	The Bidder shall submit an undertaking that "No Litigation" is pending with the BYPL or its Group/Associates Companies.	Undertaking
3	An undertaking (self-certificate) that the bidder has not been blacklisted/debarred by any central/state government institution/Electricity utilities.	Undertaking
4	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 laws/rules etc. before the start of the supply/work.	Relevant Statutory Documents Copy/ Undertaking

The subsidiaries of global/Indian companies are also eligible to bid if the qualification requirements stated above are met independently or in combination with parent/sister concern/group Company. However, the bidder should have an establishment of permanent nature in India.

Notwithstanding anything stated above, BYPL reserves the right to assess bidder's capability to perform the contract, assess the capability and installed capacity of the Bidder for carrying out the supplies, should the circumstances warrant such assessment in the overall interest of the purchaser. In this regard the decision of the purchaser is final.

3.00 BIDDING AND AWARD PROCESS

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

3.01 BID SUBMISSION

Please mention our NIT Number: - on the Tender and drop the same in our Tender Box placed at:

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BSES Yamuna Power Ltd, Reception, Ground Floor, Shaktikiran Building, Karkardooma, Delhi 110032

The bids and the outer envelope shall be addressed to:

Head of Department

Contracts & Materials Deptt.

BSES Yamuna Power Ltd, Shaktikiran Building, Karkardooma, Delhi 110032

Kindly Note:

- Bidder will inform BYPL through email immediately after the submission or before the due date & time of submission to TPC & Buyer:
 1. Mr Rakesh Sharma, E-mail: Rakesh.Ku.Sharma@relianceada.com
 2. Mr Sumit Verma, E-mail: sumit.ra.verma@@relianceada.com
- Tender documents shall be submitted at main gate in tender box.
- Authorized person of TPC will collect the documents from tender box at scheduled time of tender submission and verify the bid documents with mails received. A confirmation of receipt shall be sent to bidder through mail by TPC on the same day.
- Bidder has to ensure that tender copy is dropped in correct box designated for tender submission only.
- BYPL shall not be responsible for any wrong placement of tender document by bidder.

PART A :: TECHNICAL **BID** comprising of following:

Sr. No	Descriptions	Type of Documents
Commercial :		
1	Tender Fee - Demand Draft (Rs.1180/-) (Incl GST)	Non-refundable demand draft for Rs 1180/- in case the forms are downloaded from website
2	EMD	In prescribed stamp paper & format
3	Power-of-Attorney	In prescribed stamp paper & format
4	PQR Compliances	Documentary evidence in support of qualifying criteria like: 1. Details of constitution of the company (Proprietary/Limited/etc along with the details), Memorandum of Association of the company 2. Bidders shall submit the certified annual Balance sheets for the last completed three (3) financial years 3. Supportive document on Positive Net worth. Credit rating/solvency certificate from competent authority. 4. Copies of Orders, Execution /Performance Certificate & Other Documents to support qualification Criteria
5	Signed Tender document	Original Tender documents duly stamped & signed on each page as token of acceptance
6	Black listing undertaking	Bidder should submit a Self-undertaking signed by its Authorized Signatories that the Bidder or any of their sub-contractor has not been blacklisted/barred by any Govt. Organization or Regulatory Agencies in India or abroad.

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Bidders seal & Signature

Sr. No	Descriptions	Type of Documents
7	Commercial Terms and Conditions	Acceptance on Commercial Terms and Conditions viz Delivery schedule/period, Payment terms, PBG etc.
8	Acceptance on Reverse Auction	Duly signed Acceptance Form For Participation In Reverse Auction Event as per attached format
9	Bid Form (Unpriced) Duly Signed	Duly Signed Bid Form as per attached format
10	Un price Bid Duly Signed	Duly Signed Un price Bid as per attached format
Technical:		
11	Technical Details/ Filled in GTP/Drawings	Bidder shall submit duly filled GTP with all Technical documents and Drawings.
12	Type Test Reports	Bidders shall submit the copy of type test reports in their technical bids in support of technical specifications
13	Testing Facilities	Bidder shall submit the details of testing facilities available at their works/factory.
14	Organization Chart & Manpower Details.	Bidder shall submit the details of Organization & Manpower with qualification and experience.

- PART B** :: **FINANCIAL BID** comprising of (01 original only)
- Price strictly in the Format enclosed indicating Break up of basic price, taxes & duties, transportation etc

3.02 TIME SCHEDULE

The bidders should complete the following within the dates specified as under:

S. No.	Events	Due date & Time
1	Last date of sale/ availability of tender documents from BYPL Website	upto 02.12.2022, 14:00 Hours
2	Last Date of receipt of pre-bid queries, if any (Queries to be submitted via e-mail)	26.11.2022 up to 17:00 Hours
3	Last Date of replies to all the pre-bid queries as received	29.11.2022 up to 18:00 Hours
4	Last date and time of receipt of Complete Bids (Tender Fees, EMD, Part A & Part B)	02.12.2022, 14:00HRS
5	Date & Time of Opening of PART A – EMD and Technical Bid	02.12.2022, 16:30HRS
6	Date & Time of opening of Price/RA of qualified bids	Will be notified to the qualified bidders through our website / e-mail

Note :- In the event of last date specified for submission of bids and date of opening of bids is declared as a closed holiday for BSES office, the last date of submission of bids and date of opening of bids will be the following working day at appointed times.

This is a two part bid process. Bidders are to submit the bids in 2(Two) parts
Both these parts should be furnished in separate sealed covers super scribing NIT no. DUE DATE OF SUBMISSION, with particulars as **PART-A TECHNICAL BID & COMMERCIAL TERMS & CONDITIONS** and **Part-B FINANCIAL BID** and these sealed envelopes should again be placed in another sealed cover which shall be submitted before the due date & time specified.

Part – A:: Technical Bid should not contain any cost information whatsoever and shall be submitted within the due date.

PART B:: This envelope will be opened internally after techno-commercial evaluation and only of the qualified bidders.

Bidder has to submit the item wise price bifurcation in bid. Un priced copy must be attached with the Part A (Technical Bid). Reverse Auction will be carried out on individual item wise rates.

REVERSE AUCTION CLAUSE :: Purchaser reserves the right to use reverse auction as optional tool through SAP – SRM as an integral part of the entire tendering process. All techno-commercially qualified bidders shall participate in reverse auction.

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. Bidder to submit their acceptance as per format attached ANNEXURE-C

BIDS RECEIVED AFTER DUE DATE AND TIME MAY BE LIABLE TO REJECTION

4.00 AWARD DECISION

- 4.01 Purchaser intends to award the business on a lowest bid basis, so suppliers are encouraged to submit the bid competitively. The decision to place purchase order/LOI 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.
- 4.02 In the event of your bid being selected by purchaser (and / or its affiliates) and you 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 NIT/RFQ.
- 4.03 In case any supplier is found unsatisfactory during the delivery process, the award may be cancelled and BYPL reserves the right to award other suppliers who are found fit.
- 4.04 Rate shall remain FIRM till the validity of Contract.
- 4.05 Quantity Variation: The purchaser reserves the rights to vary the quantity by (±) 30% of the tender quantity during the execution of the rate contract.
- 4.06 Quantity Splitting: The purchaser reserves the right to distribute the procurable quantity on one or more than one of the eligible tenders. If the quantity is to be split, quantity distribution shall be in the manner detailed below:
 - a) If the quantity is to be split among 2 bidders, it will be done in the ratio of 70:30 on L1 price.
 - b) If the quantity is to be split among 3 bidders, it will be done in the ratio of 50:30:20 on L1 price.Note: In case quantity needs to be distributed and order splitting is required, distribution of quantity shall be maximum among three (3) bidders

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5.00 MARKET INTEGRITY

We have a fair and competitive marketplace. The rules for bidders are outlined in the Terms & Conditions. Bidders must agree to these rules prior to participating. In addition to other remedies available, we reserve 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/NIT.

6.00 SUPPLIER CONFIDENTIALITY

All information contained in this RFQ is confidential and shall not be disclosed, published or advertised in any manner without written authorization from BYPL. This includes all bidding information submitted.

All RFQ documents remain the property of BYPL and all suppliers are required to return these documents to BYPL upon request.

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

7.00 CONTACT INFORMATION

Technical clarification, if any, as regards this RFQ shall be sought in writing and sent by e-mail/post/courier to following addresses. The same shall not be communicated through phone

Address	Name/ Designation	E-mail Address
Technical		
CES Dept. 3 rd Floor, B-Block, BSES Yamuna Power Ltd Shaktikiran Building, Karkardooma, Delhi 110032	Jeena Borana DGM (CES)	Jeena.Borana@relianceada.com
	Srinivas Gopu GM (CES)	srinivas.gopu@relianceada.com
	Gaurav Sharma AVP (HOD-CES)	gaurav.a.sharma@relianceada.com
Commercial		
C&M Dept. 3 rd Floor, A-Block, BSES Yamuna Power Ltd Shaktikiran Building, Karkardooma, Delhi 110032	Sumit Verma GM (C&M)	sumit.ra.verma@relianceada.com
	Santosh Singh Addl. VP (Head-Procurement)	santosh.kum.singh@relianceada.com
	Robin Sebastian VP (HOD-C&M)	robin.sebastian@relianceada.com

SECTION – II: INSTRUCTION TO BIDDERS

A. GENERAL

1.00 BSES Yamuna 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 material notified earlier in this bid document.

2.00 SCOPE OF WORK

The scope shall include Design, Manufacture, testing at works conforming to the Technical Specifications/IS along with Packing, Forwarding, Transportation and Unloading and proper stacking at Purchaser's stores/site.

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 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.

B. 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:

- (a) Request for Quotation (RFQ)
- (b) Instructions to Bidders
- (c) General Terms & Conditions of Contract (T&C)
- (d) Delivery schedule
- (e) Price Formats & Summary T&C
- (f) Bid Form

- (g) Acceptance Format – RA
- (h) EMD BG Format
- (i) Vendor code of conduct
- (j) Appendix
- (k) Technical Specifications (TS)

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 web site www.bsedelhi.com and the same 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. The same shall be published as a corrigendum in website www.bsedelhi.com

6.04 Purchaser shall reserve the rights to following:

- a) extend due date of submission,
- b) modify tender document in part/whole,
- c) cancel the entire tender

6.05 Bidders are requested to visit website regularly for any modification/clarification/corrigendum/addendum of the bid documents.

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 Technical Specification.
- (b) All the Bids must be accompanied with the required EMD as mentioned in the Section-I against each tender.
- (c) Tender documents duly stamped and signed on each page by authorized signatory.

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9.0 **BID FORM**

9.01 The Bidder shall submit Bid Form and the appropriate Price Schedules and Technical Data Sheets duly filled in as per attached specification enclosed with the Bidding Documents.

9.02 **EMD**

Pursuant to Clause 8.0(b) above, the bidder shall furnish, as part of its bid, a EMD amounting to as specified in the Section-I. The EMD is required to protect the Purchaser against the risk of Bidder's conduct which would warrant forfeiture.

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

- (a) Bank Guarantee drawn in favour of BSES Yamuna Power Ltd, payable at Delhi.
- (b) EMD shall be valid for One Hundred Twenty (120) days after due date of submission drawn in favour of BSES Yamuna Power Ltd

The EMD may be forfeited in case of:

- (a) the Bidder withdraws its bid during the period of specified bid validity
- or
- (b) the case of a successful Bidder, if the Bidder does not
 - (i) Accept the Purchase Order, or
 - (ii) Furnish the required performance security BG.

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/ Price Variation Clause will be treated as non -responsive and rejected.**

11.0 **BID CURRENCIES**

11.01 Prices shall be quoted in Indian Rupees Only.

12.0 **PERIOD OF VALIDITY OF BIDS**

12.01 Bids shall remain valid for 120 days from the due date of submission of the Bid.

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 and

sent by post/courier

13.0 ALTERNATIVE BIDS

13.01 Bidders shall submit Bids, which comply with the Bidding Documents. Alternative Bids will not be considered. The attention of Bidders is drawn to the provisions regarding the rejection of Bids in the terms and conditions, which are not substantially responsive to the requirements of the Bidding Documents.

14.0 FORMAT AND SIGNING OF BID

14.01 The original Bid Form and accompanying documents (as specified in Clause 5.0), clearly marked "Original Bid" plus Duplicate Soft copy in USB flash drive 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. The Bid submitted on behalf of companies registered with the Indian Companies Act, for the time being in force, shall be signed by persons duly authorized to submit the Bid on behalf of the Company and shall be accompanied by certified true copies of the resolutions, extracts of Articles of Association, special or general Power of Attorney etc. to show clearly the title, authority and designation of persons signing the Bid on behalf of the Company. Satisfactory evidence of authority of the person signing on behalf of the Bidder shall be furnished with the bid. A bid by a person who affixes to his signature the word 'President', 'Managing Director', 'Secretary', 'Agent' or other designation without disclosing his principal will be rejected.

The Bidder's name stated on the Proposal shall be the exact legal name of the firm.

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 (hard copies) & One Duplicate Soft copy in USB flash drive 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 Bid & EMD". The price bid shall be inside another sealed envelope with superscribed "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 opening".

15.03 The Bidder has the option of sending the Bids in person. Bids submitted by Email/Telex/Telegram /Fax will be rejected. No request from any Bidder to the Purchaser to collect the proposals from Courier/Airlines/Cargo Agents etc shall be entertained by the Purchaser.

16.0 DEADLINE FOR SUBMISSION OF BIDS

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16.01 The original Bid, together with the required copies, must be received by the Purchaser at the address on or before the due date & time of submission.

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 6.0, 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

17.01 Each Bidder shall submit only one Bid by itself. No Joint venture is acceptable. A Bidder who submits or participates in more than one Bid will cause all those Bids to be rejected.

18.0 LATE BIDS

18.01 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 may be 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 subject to any corrigendum/addendum/modifications in the tender documents uploaded in website.

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. Purchaser may ask for submission of original documents in order to verify the documents submitted in support of qualification criteria.

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.

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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 & qualifying 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) Delivery Schedule

(b) Conformance to Qualifying Criteria

(c) Deviations from Bidding Documents

Bidders shall base their Bid price on the terms and conditions specified in the Bidding Documents.

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

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

F. AWARD OF CONTRACT

24.0 **CONTACTING THE PURCHASER**

24.01 If any Bidder wishes to contact the Purchaser on any matter related to the Bid, from the time of Bid opening to the time of contract award, the same shall be done in writing only.

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**

Submission of bids shall not automatically construe qualification for evaluation. The Purchaser reserves the right to accept or reject any Bid and to annul the Bidding process and reject all Bids

at anytime prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for the Purchaser's action.

26.0 AWARD OF CONTRACT

The Purchaser will award the Contract to the successful Bidder whose Bid has been Determined to be the lowest-evaluated responsive Bid, provided further that the Bidder has been determined to be qualified to satisfactorily perform the Contract. Purchaser reserves the right to award order to other bidders in the tender, provided it is required for timely execution of project & provided he agrees to come to the lowest rate. Purchaser reserves the right to distribute the entire tender quantity at its own discretion without citing any reasons thereof.

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 GAURANTEE

Within 15 days of the receipt of Notification of Award/ Letter of Intent / PO from the Purchaser, the successful Bidder shall furnish the Performance Bank Guarantee for an amount of 10% (Ten percent) of the Contract Price. The Performance Bond shall be valid for a period of 30 months from the date of last receipt plus 3 months 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 for award 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 Terms and Conditions of Contract.

BIDDERS

APPENDIX I

(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*] (herein after called the "Bidder") has submitted its bid dated [*date of submission of bid*] for the supply of [*name and/or description of the goods*] (here after 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 Yamuna Power Ltd., with its Corporate Office at Shaktikiran Building, Karkardooma, Delhi - 110032, (herein after called —the "Purchaser") in the sum of Rs..... (Rupees..... only) for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successors, and assigns by these presents.

Sealed with the Common Seal of the said Bank this _____ day of _____ 20_____.

The conditions of this obligation are:

- 1 If the Bidder withdraws its Bid during the period of bid validity specified by the Bidder on the Bid Form; or
2. If the Bidder, having been notified of the acceptance of its Bid by the Purchaser during the period of bid validity:
 - (a) fails or refuses to execute the Contract Form, if required; or
 - (b) fails or refuses to furnish the performance security, In accordance with the Instructions to Bidders/ Terms and 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 condition(s), specifying the occurred condition or condition(s).

This guarantee will remain in force up to and including One Hundred Twenty (120) days after the due date of submission bid, and any demand in respect thereof should reach the Bank not later than the above date.

(Stamp & signature of the bank)

Signature of the witness

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BID FORM

To

Head of Department
Contracts & Material Deptt.
BSES Yamuna Power Ltd
Shaktikiran Building, Karkardooma,
Delhi 110032

Sir,

1 We understand that BYPL is desirous of procuring..... for it's licensed distribution network area in Delhi

2 Having examined the Bidding Documents for the above named works, we the undersigned, offer to deliver the goods in full conformity with the Terms and Conditions and technical specifications for the sum indicated in Price Bid or such other sums as may be determined in accordance with the terms and conditions of the contract. The amounts are in accordance with the Price Schedules attached herewith and are made part of this bid.

3 If our Bid is accepted, we under take to deliver the entire goods as) as per delivery schedule mentioned in Section IV from the date of award of purchase order/letter of intent.

4 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 Terms and Conditions.

5 We agree to abide by this Bid for a period of 120 days from the due date of bid submission and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

6 We declare that we have studied the provision of Indian Laws for supply of equipments/materials and the prices have been quoted accordingly.

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

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

9 There is provision for Resolution of Disputes under this Contract, in accordance with the Laws and Jurisdiction of Contract.

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

Signature..... In the capacity of

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

(IN BLOCK CAPITALS)

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ACCEPTANCE FORM FOR PARTICIPATION IN REVERSE AUCTION EVENT

(To be signed and stamped by the bidder)

BSES Yamuna Power Ltd (hereinafter referred to as "**BYPL**") intends to use the reverse auction through SAP-SRM tool as an integral part of the entire tendering process. All the bidders who are found as techno commercial qualified based on the tender requirements shall be eligible to participate in the reverse auction event.

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

1. BYPL shall provide the user id and password to the authorized representative of the bidder. (Authorization letter in lieu of the same be submitted along with the signed and stamped acceptance form)
2. BYPL will make every effort to make the bid process transparent. However, the award decision by BYPL would be final and binding on the bidder.
3. The bidder agrees to non-disclosure of trade information regarding the purchase, identity of BYPL, bid process, bid technology, bid documentation, bid details, and etc.
4. The bidder is advised to understand the auto bid process to safeguard themselves against any possibility of non-participation in the auction event.
5. In case of bidding through internet medium, bidders are further advised to ensure availability of the entire infrastructure as required at their end to participate in the auction event. Inability to bid due to telephone line glitch, internet response issues, software or hardware hangs; power failure or any other reason shall not be the responsibility of BYPL.
6. In case of intranet medium, BYPL shall provide the infrastructure to bidders, further, BYPL has sole discretion to extend or restart the auction event in case of any glitches in infrastructure observed which has restricted the bidders to submit the bids to ensure fair & transparent competitive bidding. In case of an auction event is restarted, the best bid as already available in the system shall become the start price for the new auction.
7. In case the bidder fails to participate in the auction event due any reason whatsoever, it shall be presumed that the bidder has no further discounts to offer and the initial bid as submitted by the bidder as a part of the tender shall be considered as the bidder's final no regret offer. Any offline price bids received from a bidder in lieu of non-participation in the auction event shall be out rightly rejected by BYPL.
8. The bidder shall be prepared with competitive price quotes on the day of the reverse auction event.
9. The prices as quoted by the bidder during the auction event shall be inclusive of all the applicable taxes, duties and levies and shall be FOR Landed Cost basis at BYPL site.
10. The prices submitted by a bidder during the auction event shall be binding on the bidder.
11. No requests for time extension of the auction event shall be considered by BYPL.
12. The original price bids of the bidders shall be reduced on pro-rata basis against each line item based on the final all-inclusive prices offered during conclusion of the auction event for arriving at contract amount.

Signature & seal of the Bidder

ANNEXURE - SCHEDULE OF DEVIATIONS

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

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

Technical Deviations:-

SL No.	Clause No.	NIT Page No.	NIT Clause descriptions	Details of Clarification/deviation with justifications

Commercial Deviations:-

SL No.	Clause No.	NIT Page No.	NIT Clause descriptions	Details of Clarification/deviation with justifications

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

Seal of the Bidder:

Signature:

Name:

Technical Bid Submission Check List

S. No.	Description	BYPL Requirement	Bidder's Compliance
1	Tender No.	Required	
2	Technical Specification reference number	Required	
3	Communication Details		
3.1	Name of the Bidder	Required	
3.2	Name of Authorized contact person	Required	
3.3	Contact No. of Authorized contact person	Required	
3.4	E-mail id of Authorized contact person	Required	
4	Document Submission Format		
4.1	Documents shall be submitted in Box file/spiral binding. Any other format is not acceptable	Required	
4.2	Index of documents with page numbers for each document	Required	
4.3	Separator with document description shall be provided before each document	Required	
5	Qualifying Requirement Compliance		
5.1	Summary of compliance of qualifying criteria in tabular form along with summary of documentary proof provided	Required	
5.2	Detailed Documents supporting compliance of qualifying criteria	Required	
6	Drawings/ Documents as per Technical Specification.		
6.1	Signed copy of technical specification	Required	
6.2	Type Test reports of offered model/ type/ rating	Required	
6.3	Guaranteed Technical particulars (GTP)	Required	
6.4	Deviation Sheet	Required	
6.5	Detailed Drawings	Required	
6.6	Manufacturer's quality assurance plan	Required	
6.7	Other drawing/ documents mentioned in technical specification	Required	
7	Soft copy of complete technical bid in pen drive	Required	
8	Samples as per technical specification	Required	

Note: Submission of Technical bid check list along with all items mentioned in the check list is mandatory. Order of documents shall be strictly as per the technical bid check list. Bids with incomplete/ wrong information are liable for rejection.

VENDOR CODE OF CONDUCT

Purchaser is committed to conducting its business in an ethical, legal and socially responsible manner. To encourage compliance with all legal requirements and ethical business practices, Purchaser has established this Vendor Code of Conduct (the "Code") for Purchaser's Vendors. For the purposes of this document, "Vendor" means any company, corporation or other entity that sells, or seeks to sell goods or services, to Purchaser, including the Vendor's employees, agents and other representatives.

Fundamental to adopting the Code is the understanding that a business, in all of its activities, must operate in full compliance with the laws, rules and regulations of the countries in which it operates. This Code encourages Vendors to go beyond legal compliance, drawing upon internationally recognized standards, in order to advance social and environmental responsibility.

I. Labour and Human Rights

Vendors must uphold the human rights of workers, and treat them with dignity and respect as understood by the international community.

- Fair Treatment - Vendors must be committed to a workplace free of harassment. Vendors shall not threaten workers with or subject them to harsh or inhumane treatment, including sexual harassment, sexual abuse, corporal punishment, mental coercion, physical coercion, verbal abuse or unreasonable restrictions on entering or exiting company provided facilities.

- Antidiscrimination - Vendors shall not discriminate against any worker based on race, colour, age, gender, sexual orientation, ethnicity, disability, religion, political affiliation, union membership, national origin, or marital status in hiring and employment practices such as applications for employment, promotions, rewards, access to training, job assignments, wages, benefits, discipline, and termination. Vendors shall not require a pregnancy test or discriminate against pregnant workers except where required by applicable laws or regulations or prudent for workplace safety. In addition, Vendors shall not require workers or potential workers to undergo medical tests that could be used in a discriminatory way except where required by applicable law or regulation or prudent for workplace safety.

- Freely Chosen Employment - Forced, bonded or indentured labour or involuntary prison labour is not to be used. All work will be voluntary, and workers should be free to leave upon reasonable notice. Workers shall not be required to hand over government-issued identification, passports or work permits as a condition of employment.

- Prevention of Under Age Labor - Child labor is strictly prohibited. Vendors shall not employ children. The minimum age for employment or work shall be 15 years of age, the minimum age for employment in that country, or the age for completing compulsory education in that country, whichever is higher. This Code does not prohibit participation in legitimate workplace apprenticeship programs that are consistent with Article 6 of ILO Minimum Age Convention No. 138 or light work consistent with Article 7 of ILO Minimum Age Convention No. 138.

- Juvenile Labor - Vendors may employ juveniles who are older than the applicable legal minimum age for employment but are younger than 18 years of age, provided they do not perform work likely to jeopardize their health, safety, or morals, consistent with ILO Minimum Age Convention No. 138.

- Minimum Wages - Compensation paid to workers shall comply with all applicable wage laws, including those relating to minimum wages, overtime hours and legally mandated benefits. Any Disciplinary wage deductions are to conform to local law. The basis on which workers are being paid is to be clearly conveyed to them in a timely manner.

- Working Hours - Studies of good manufacturing practices clearly link worker strain to reduced productivity, increased turnover and increased injury and illness. Work weeks are not to exceed maximum set by local law. Further, a work week should not be more than 60 hours per week, including overtime, except in emergency or unusual situations. Workers should be allowed at least one day off per seven-day week.

. Freedom of Association - Open communication and direct engagement between workers and management are the most effective ways to resolve workplace and compensation issues. Vendors are to respect the rights of workers to associate freely and to communicate openly with management regarding working conditions without fear of reprisal, intimidation or harassment. Workers' rights to join labour unions seek representation and or join worker's councils in accordance with local laws should be acknowledged.

II. Health and Safety

Vendors must recognize that in addition to minimizing the incidence of work-related injury and illness, a safe and healthy work environment enhances the quality of products and services, consistency of production and worker retention and morale. Vendors must also recognize that ongoing worker input and education is essential to identifying and solving health and safety issues in the workplace.

The health and safety standards are:

. Occupational Injury and Illness - Procedures and systems are to be in place to prevent, manage, track and report occupational injury and illness, including provisions to: a) encourage worker reporting; b) classify and record injury and illness cases; c) provide necessary medical treatment; d) investigate cases and implement corrective actions to eliminate their causes; and e) facilitate return of workers to work.

. Emergency Preparedness - Emergency situations and events are to be identified and assessed, and their impact minimized by implementing emergency plans and response procedures, including: emergency reporting, employee notification and evacuation procedures, worker training and drills, appropriate fire detection and suppression equipment, adequate exit facilities and recovery plans.

. Occupational Safety - Worker exposure to potential safety hazards (e.g., electrical and other energy sources, fire, vehicles, and fall hazards) are to be controlled through proper design engineering and administrative controls, preventative maintenance and safe work procedures (including lockout/tagout), and ongoing safety training. Where hazards cannot be adequately controlled by these means, workers are to be provided with appropriate, well-maintained, personal protective equipment. Workers shall not be disciplined for raising safety concerns.

. Machine Safeguarding - Production and other machinery is to be evaluated for safety hazards. Physical guards, interlocks and barriers are to be provided and properly maintained where machinery presents an injury hazard to workers.

. Industrial Hygiene - Worker exposure to chemical, biological and physical agents is to be identified, evaluated, and controlled. Engineering or administrative controls must be used to control overexposures. When hazards cannot be adequately controlled by such means, worker health is to be protected by appropriate personal protective equipment programs.

. Sanitation, Food, and Housing - Workers are to be provided with ready access to clean toilet, facilities potable water and sanitary food preparation, storage, and eating facilities. Worker dormitories provided by the Participant or a labour agent are to be maintained clean and safe, and provided by the Participant or a labour agent, hot water for bathing and showering, and adequate heat and ventilation and reasonable personal space along with reasonable entry and exit privileges.

. Physically Demanding Work - Worker exposure to the hazards of physically demanding tasks, including manual material handling and heavy or repetitive lifting, prolonged standing and highly repetitive or forceful assembly tasks is to be identified, evaluated and controlled.

III. Environmental

Vendors should recognize that environmental responsibility is integral to producing world class products. In manufacturing operations, adverse effects on the environment and natural resources are to be minimized while safeguarding the health and safety of the public.

The environmental standards are:

- . Product Content Restrictions - Vendors are to adhere to applicable laws and regulations regarding prohibition or restriction of specific substances including labeling laws and regulations for recycling and disposal. In addition, Vendors are to adhere to all environmental requirements specified by Purchaser.
- . Chemical and Hazardous Materials -Chemical and other materials posing a hazard if released to the environment are to be identified and managed to ensure their safe handling, movement storage, recycling or reuse and disposal.
- . Air Emissions - Air emissions of volatile organic chemicals, aerosols, corrosives, particulates, ozone depleting chemicals and combustion by-products generated from operations are to be characterized, monitored, controlled and treated as required prior to discharge.
- . Pollution Prevention and Resource Reduction -Waste of all types, including water and energy, are to be reduced or eliminated at the source or by practices such as modifying production, maintenance and facility processes, materials substitution, conservation, recycling and re-using materials.
- . Wastewater and Solid Waste - Wastewater and solid waste generated from operations industrial processes and sanitation facilities are to be monitored, controlled and treated as required prior to discharge or disposal.
- . Environmental Permits and Reporting - All required environmental permits (e.g. discharge monitoring) and registrations are to be obtained, maintained and kept current and their operational and reporting requirements are to be followed.

IV. Ethics

Vendors must be committed to the highest standards of ethical conduct when dealing with workers, Vendors, and customers.

- . Corruption, Extortion, or Embezzlement - Corruption, extortion, and embezzlement, in any form, are strictly prohibited. Vendors shall not engage in corruption, extortion or embezzlement in any form and violations of this prohibition may result in immediate termination as an Vendor and in legal action.
- . Disclosure of Information - Vendors must disclose information regarding its business activities, structure financial situation, and performance in accordance with applicable laws and regulations and prevailing industry practices.
- . No Improper Advantage - Vendors shall not offer or accept bribes or other means of obtaining undue or improper advantage.
- . Fair Business, Advertising, and Competition - Vendors must uphold fair business standards in advertising, sales, and competition.
- . Business Integrity - The highest standards of integrity are to be expected in all business interactions. Participants shall prohibit any and all forms of corruption, extortion and embezzlement. Monitoring and enforcement procedures shall be implemented to ensure conformance.
- . Community Engagement - Vendors are encouraged to engage the community to help foster social and economic development and to contribute to the sustainability of the communities in which they operate.
- . Protection of Intellectual Property - Vendors must respect intellectual property rights; safeguard customer information; and transfer of technology and know-how must be done in a manner that protects intellectual property rights.

V. Management System

Vendors shall adopt or establish a management system whose scope is related to the content of this Code. The management system shall be designed to ensure (a) compliance with applicable laws, regulations and customer requirements related to the Vendors' operations and products; (b) conformance with this Code; and (c) identification and mitigation of operational risks related to this Code. It should also facilitate continual improvement.

The management system should contain the following elements:

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- . Company Commitment - Corporate social and environmental responsibility statements affirming Vendor's commitment to compliance and continual improvement.
- . Management Accountability and Responsibility - Clearly identified company representative[s] responsible for ensuring implementation and periodic review of the status of the management systems.
- . Legal and Customer Requirements - Identification, monitoring and understanding of applicable laws, regulations and customer requirements.
- . Risk Assessment and Risk Management - Process to identify the environmental, health and safety and labour practice risks associated with Vendor's operations. Determination of the relative significance for each risk and implementation of appropriate procedural and physical controls to ensure regulatory compliance to control the identified risks.
- . Performance Objectives with Implementation Plan and Measures - Areas to be included in a risk assessment for health and safety are warehouse and storage facilities, plant/facilities support equipment, laboratories and test areas, sanitation facilities (bathrooms), kitchen/cafeteria and worker housing /dormitories. Written standards, performance objectives, and targets an implementation plans including a periodic assessment of Vendor's performance against those objectives.
- . Training - Programs for training managers and workers to implement Vendor's policies, procedures and improvement objectives.
- . Communication - Process for communicating clear and accurate information about Vendor's performance, practices and expectations to workers, Vendors and customers.
- . Worker Feedback and Participation - Ongoing processes to assess employees' understanding of and obtain feedback on practices and conditions covered by this Code and to foster continuous improvement.
- . Audits and Assessments - Periodic self-evaluations to ensure conformity to legal and regulatory requirements, the content of the Code and customer contractual requirements related to social and environmental responsibility.
- . Corrective Action Process - Process for timely correction of deficiencies identified by internal or external assessments, inspections, investigations and reviews.
- . Documentation and Records - Creation of documents and records to ensure regulatory compliance and conformity to company requirements along with appropriate confidentiality to protect privacy.

The Code is modeled on and contains language from the Recognized standards such as International Labour Organization Standards (ILO), Universal Declaration of Human Rights (UDHR), United Nations Convention against Corruption, and the Ethical Trading Initiative (ETI) were used as references in preparing this Code and may be useful sources of additional information

**GENERAL CONDITIONS OF CONTRACT
(GCC-SUPPLY)**

GENERAL CONDITIONS OF CONTRACT (GCC)-SUPPLY

The General Condition of Contract shall form a part of specifications, contract document.

1.0 General Instructions

- 1.01** All the Bids shall be prepared and submitted in accordance with these instructions.
- 1.02** Bidder shall bear all costs associated with the preparation and delivery of its Bid, and the Purchaser will in no case shall be responsible or liable for these costs.
- 1.03** The Bid should be submitted by the Bidder in whose name the bid document has been issued and under no circumstances it shall be transferred/sold to the other party.
- 1.04** The Purchaser reserves the right to request for any additional information and also reserves the right to reject the proposal of any Bidder, if in the opinion of the Purchaser, the data in support of RFQ requirement is incomplete.
- 1.05** The Bidder is expected to examine all instructions, forms, terms & conditions and specifications in the Bid Documents. Failure to furnish all information required in the Bid Documents or submission of a Bid not substantially responsive to the Bid Documents in every respect may result in rejection of the Bid. However, the Purchaser's decision in regard to the responsiveness and rejection of bids shall be final and binding without any obligation, financial or otherwise, on the Purchaser.

2.0 Definition of Terms

- 2.01** "Purchaser" shall mean BSES Yamuna Power 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 BYPL in accordance with the specification.
- 2.09** "Contract" shall mean the "Letter of Acceptance/Purchase Order" issued by the Purchaser.
- 2.10** "Contract Price" shall mean the price referred to in the "Letter of Acceptance/Purchase Order".
- 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.

4.0 Scope of Supply -General

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

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

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

4.04 All relevant drawings, data and instruction manuals.

5.0 Quality Assurance and Inspection

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

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

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

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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 only be dispatched after receipt of dispatch Instructions issued by the Purchaser.

5.05 All in-house testing and inspection shall be done with out any extra cost. The in-house inspection shall be carried out in presence of BSES/BSES authorized third party inspection agency. Cost of Futile/abortive visit(s) shall be debited from the invoices.

5.06 Purchaser reserves the right to send any material being supplied to any recognized laboratory for testing, wherever necessary and the cost of testing shall be borne by the Bidder. 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 bidder's representative.

6.0 Inspection & Test Charges

6.01 GOODS shall be inspected by BUYER and/or third party inspection agency nominated by BUYER. Inspection shall carry out stage wise/final inspection as per agreed QA /QC procedure. In addition, inspection of GOODS shall be carried out at our Site/stores. SELLER shall, however, repair/replace the damaged/rejected GOODS to the satisfaction of BUYER at no extra cost.

6.02 Inspection charges are included in total order value, however BUYER will bear third party inspection charges. In case of futile/abortive visit of BUYER's inspector at SELLER'S works, the cost towards the same shall be debited from the SELLER's invoices.

6.03 GOODS covered by this PURCHASE ORDER shall not be dispatched in whole or in part until SELLER has received a written Release for Shipment Notice from BUYER or their designated representative.

6.04 Inspection call shall be raised minimum 15(fifteen) days in advance from delivery schedule mentioned in PO and duly filled Format issued by BYPL

7.0 Handling and Storage

7.01 Material Safety Data Sheet (MSDS), detail handling & storage instruction sheet/manual, wherever applicable, to be furnished before commencement of supply and one copy is to be submitted in store/site with First Lot.

8.0 Packing, Packing List & Marking

8.01 **Packing:** Supplier shall pack or shall cause to be packed all Commodities in crates/boxes/drums/containers/cartons and otherwise in such a manner as shall be reasonably suitable for shipment by road or rail to BYPL, Delhi/New Delhi stores/site without undue risk of damage in transit. All the packaging materials as prescribed shall be supplied preferably with bio-degradable packing- materials.

8.02 **Packing List:** The contents of each package shall be itemized on a detailed list showing the exact weight, extreme outside dimensions (length, width & weight) of each container/box/drum/carton, Item SAP Code, PO No & date. One copy of the packing list shall be enclosed in each package delivered.

9.0 Prices/Rates/Taxes

9.01 Price basis for supply of materials

- a) Bidder to quote their prices on Landed Cost Basis and separate price for each item for supply to BYPL Delhi/New Delhi stores inclusive of packing, forwarding, loading at manufacturer's premises, payment of GST, Freight, any other local charges. **Octroi is presently not applicable in Delhi and however if applicable shall be reimbursed at actuals.**
- b) The above supply prices shall also include unloading at BYPL Delhi/New Delhi stores/site.
- c) Transit insurance will be arranged by Bidder

10.0 Taxes & Duties

- 10.01 Prices for Goods are on Ex- Works basis. For the Goods covered under the GST laws, all taxes that are applicable under CGST, SGST, UGST, IGST and GST Compensation Cess shall be payable extra.
- 10.02 For the Goods not covered in the GST laws, the applicable ED, VAT / CST shall be payable extra at applicable rates.
- 10.03 GSTIN of BSES YAMUNA POWER LTD - 07AABCC8569N1Z0
CST No of BSES YAMUNA POWER LTD -07740254593
TIN NO of BSES YAMUNA POWER LTD - 07740254593
PAN NO of BSES YAMUNA POWER LTD - AABCC8569N
TAN NO of BSES YAMUNA POWER LTD - DELB05956G
- 10.04 At the end of each month, the SELLER must submit their detail of invoices and amount thereof to the concerned officer in charge, within 07 days after the close of the respective month of which supply relates. Non submission of the said request would be treated as good as that the SELLER has no requirement of reconciliation.

11.0 Invoicing Instructions

- 11.01 Invoices in triplicate [1) Original for recipient, 2) Duplicate for Transporter, 3) Triplicate for supplier] shall be made out and delivered to the following address: BSES YAMUNA POWER LIMITED, SHAKTI KIRAN BUILDING, KARKARDOOMA, DELHI-110032.
MDCC will be released separately for Capex & Opex. Invoice will be submitted by supplier as per the MDCC.
- 11.02 Vendor shall obtain GST registration in the State from where the supply will be carried out. Vendors supplying Goods to the Purchaser shall have a valid GST registration number and shall submit GST Tax Invoice and other documents as per SGST Act, CGST Act, IGST Act, UTGST Act, GST Compensation Cess Act and Rules made there under. Failure to submit GST Tax Invoice shall be liable for withholding SGST, CGST, IGST, UTGST, GST Compensation Cess amount charged by the vendor while releasing the payment.
- 11.03 Invoice will be in the name of BSES YAMUNA POWER LIMITED & address of the store/site mentioned in the MDCC. Invoice should contain all information as required under GST Invoice, Debit Note and Credit Rules. The government has notified rules of invoicing under GST along with a template of invoice(GST INV-01) covering the elements such as supplier's details, GSTIN No, HSN Codes, item details, GST tax rates, etc that need to be presented by the supplier.
- 11.04 Vendor to carefully examine and charge relevant CGST / SGST, UGST, IGST and GST compensation cess as applicable to the transactions.

11.05 Timely provision of invoices / Debit Notes / Credit Notes:

11.05.1 Vendor to timely provide invoice / Debit note / Credit note to enable Purchaser to claim tax benefit on or before stipulated time period. All necessary adjustment entries (Credit Note, Purchase Returns, Debit Notes) shall be made within the time lines prescribed under the GST Laws.

11.05.2 In case of receipt of advance, the Vendor undertakes to raise the tax invoice. Purchaser, upon payment of advance, shall issue payment voucher as per applicable GST laws and rules. Four copies of the invoices need to be provided by suppliers and wherever the law requires, an Electronic Reference Number for each invoice.

Documents and devices to be carried by a person-in-charge of a conveyance under.

11.06 E Way Bills / transit documents for movement of Goods:

Wherever applicable, the Vendor shall be responsible to issue required transit documents / E Way Bills for movement of Goods and the logistic partner / transporter shall not be liable for any loss arising due to confiscation of goods by government agencies on account of lack of proper documents or any mis-declaration. The Supplier is responsible to comply with rules applicable for E-way bill. Any violation in provision of E-way Bill will attract penalty and seizure of Transit Material. Any Penalty and Pre-Deposit due to violation of rules/provision shall be paid and borne by Supplier. Also, Supplier is responsible for releasing of goods from Authority whether CGST/SGST. Delay in supply from the contractual date due to seizure of goods shall also attract liquidated damages.

12.0 Terms of payment and billing

12.01 For Supply of Equipment's:

100% payment shall be made within 45 days from the date of receipt & acceptance of material at store/site on against submission of following documents against dispatch of each consignment at our Vendor Support Cell (VSC):

- a) Signed copy of accepted Rate Contract / Purchase Order (for first payment)
- b) LR / RR / BL as applicable
- c) Challan as applicable
- d) Two (02) copies of Supplier's detailed Recipient Invoice showing Commodity description, quantity, unit price, total price and basis of delivery, and being 100% of the value of the consignment claimed.
- e) Two (02) copies of Supplier's transporter invoice duly receipted by BYPL Stores & Original certificate issued by BYPL confirming receipt of the subject material at Stores/Site and acceptance of the same as per the provisions of the contract.
- f) Two (02) copies Packing List / Detailed Packing List
- g) Approved Test certificates / Quality certificates, if applicable
- h) Certificate of Origin, if applicable
- i) Material Dispatch Clearance Certificate (MDCC)
- j) Insurance Policy / Certificate, if applicable
- k) Warranty / Guarantee Certificate, if applicable
- l) Check list for bill submission.

12.02 Purchaser has the right to recover tax loss, interest and penalty suffered due to any non-compliance of tax laws by the Vendor. In the event, Purchaser is not able to avail any tax credit due to any short coming on the part of the Vendor (which otherwise should have been available to Purchaser in the normal course), then the Vendor at his own cost and effort will get the short coming rectified. If for any reason the same is not possible, then the Vendor will make 'good' the loss suffered by Purchaser due to the tax credit it lost . In such event, any amount paid to the Vendors shall be first attributable to the tax (GST) charged in the invoice and the balance shall be considered towards the 'value' of supply of goods/ services.

- 12.03 Purchaser shall deduct "Tax Deducted at Source" wherever applicable and at the rate prescribed under the GST Laws or any other Indian law and remit the same to the Government. Necessary TDS certificates as per law shall be issued by the purchase to the vendor.
- 12.04 Any liability arising out of dispute on the tax rate, classification under HSN, calculation and payment of tax to the Government will be to the Vendor's account.
- 12.05 Where the supply of Goods are liable to GST under reverse charge mechanism, then the supplier should clearly mention the category under which it has been registered and also that "the liability of payment of GST is on the Recipient of Supply".

13.0 Tax Indemnity Clause

- 13.01 Vendor (along with its affiliates in India or overseas including any agent/ third party contractor or any other person appointed by such affiliates for the purpose of this agreement) agrees that it will be solely responsible for performing all compliances and making payments of all taxes (direct tax or indirect tax including but not limited to income-tax, transfer pricing, value added tax, SGST, CGST, IGST, UTGST, GST Compensation Cess custom duty, excise duty, Research and Development Cess, etc.), cesses, interest, penalties or any other tax/ duty/ amount/ charge/ liability arising either out of laws/ regulations applicable in India and overseas or because of a demand/ recovery initiated by any revenue authority under laws/ regulations applicable in India or overseas.
- 13.02 In case any tax liability (including but not limited to income-tax, transfer pricing, value added tax, SGST, CGST, IGST, UTGST, GST Compensation Cess custom duty, excise duty, Research and Development Cess, etc.), cesses, interest, penalties or any other tax/ duty/ amount/ charge/ liability becomes payable by Purchaser due to failure of the Vendor, or any of its affiliates in India or overseas including any agent/ third party contractor or any other person appointed by such affiliates for the purpose of this agreement, to comply with the relevant laws/ regulations applicable in India or overseas, Vendor undertakes to indemnify Purchaser for an amount equal to amount payable by Purchaser.
- 13.03 Further, Vendor undertakes to keep Purchaser indemnified at all times against and from all other actions, proceedings, claims, loss, damage, costs and expenses which may be brought against Purchaser or suffered or incurred by Purchaser and which shall have arisen either directly or indirectly out of or in connection with failure of The Vendor, or any of its affiliates in India or overseas including any agent/ third party contractor or any other person appointed by such affiliates for the purpose of this agreement, to comply with relevant obligations/ compliance under any law/ regulations applicable in India and overseas.
- 13.04 The parties agree to follow the following process in case any communication of demand, arising out non-compliance by Vendor (along with its affiliates in India or overseas including any agent/ third party contractor or any other person appointed by such affiliates for the purpose of this agreement), is received by Purchaser:
- 13.04.1 On Purchaser receiving any communication from a competent authority demanding tax liability (including but not limited to income-tax, transfer pricing, value added tax, SGST, CGST, IGST, UTGST, GST Compensation Cess custom duty, excise duty, Research and Development Cess, etc.), cesses, interest, penalties or any other tax/ duty/ amount/ charge/ liability, Purchaser shall, within 5 common working days from the date of receipt of such communication (save where the period to respond to the relevant authority is less than five days, in which case, as soon as reasonably possible) inform Vendor in writing of such communication.

13.04.2 Pursuant to receiving communication from Purchaser, Vendor shall suggest to accept the communication and pay the demand amount to the competent authority. In such an event, Vendor shall reimburse such amount paid to Purchaser within 5 working days from the date of payment by Purchaser to the competent authority.

13.04.3 If Vendor advises in writing and Purchaser agrees to dispute the demand, then Purchaser shall dispute the matter with competent authority as per due process prescribed under the regulations and Purchaser shall not pay the Tax Demand. In such scenario, cost of litigation including but not limited to Counsel cost, filing fees, other related charges, should be reimbursed by Vendor to Purchaser. Additionally, If any coercive steps of recovery are initiated by the department, then Purchaser would pay such amount (including by way of adjustment of refunds due to it) and the same would be reimbursed by Vendor within 5 working days from date of such recovery from Purchaser. Purchaser will take all necessary steps to avoid such recovery measures.

13.04.4 On determination of the demand through an Order issued by a Tribunal or any other similar Authority, by whatever name called, under any law applicable in India or overseas, if the demand or any part thereof becomes payable and is paid by Purchaser, then Vendor undertakes to reimburse such amount to Purchaser within 10 days from the date of payment. Alternatively, if on determination of the demand through an Order, no amount is payable by Purchaser then any refund arising to Purchaser due to such an Order shall be passed on to Vendor within 10 days from the date of receipt of refund.

14.0 The Micro, Small and Medium Enterprises (MSME)

14.01 If the SELLERS establishment is covered under the purview of The Micro, Small and Medium Enterprises Development Act, 2006 and its amendments, he shall declare so within the bid of its status failing which it will be presumed that it is a non-MSME unit. Also submit a copy of Udyog Aadhaar (UA) & Udyam Registration Number.

15.0 Price Validity

15.01 All bids submitted shall remain valid, firm and subject to unconditional acceptance by BYPL Delhi for 120 days from the due date of submission. For awarded suppliers, the prices shall remain valid and firm till contract completion.

16.0 Performance Guarantee

16.01 To be submitted within fifteen (15) days from the date of issuance of the Letter of Award/PO, supplier shall establish a performance bond in favor of BYPL 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 30 months from the date of last receipt plus 3 months claim period.

16.02 Bank guarantee shall be drawn in favour of BSES Yamuna Power Ltd as applicable. The performance Bank guarantee shall be in the format as specified by BYPL.

17.0 Forfeiture

17.01 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 BYPL of this Performance Bond, to the relevant bank referred to above, together with a simple statement that supplier has failed to comply with any term or condition set forth in the Contract.

17.02 Each Performance BG established under will be automatically and unconditionally forfeited without recourse if BYPL in its sole discretion determines that supplier has failed to comply with any term or condition set forth in the contract.

18.0 Release

18.01 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 16.0) except for the case set forth in Clause 22.0.

19.0 Defects Liability Period/Guarantee/Warranty

19.01 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 66 months from the date of delivery.

19.02 If during the Defects Liability Period any GOODS are found to be defective, they shall be promptly replaced or rectified by BIDDER at its own cost (including the cost of dismantling and (reinstallation) on the instructions of BUYER and if removed from SITE for such purpose, shall be removed and re-delivered to SITE by BIDDER at its own cost.

20.0 Return, Replacement or Substitution

20.01 BYPL shall give Supplier notice of any defective Commodity promptly after becoming aware thereof. BYPL may in its discretion elect to return defective Commodities to Supplier for replacement, free of charge to BYPL, or may reject such Commodities and purchase the same or similar Commodities from any third party. In the latter case BYPL 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. BYPL may set off such costs against any amounts payable by BYPL to Supplier. Supplier shall reimburse BYPL for the amount, if any, by which the price of a substitute Commodity exceeds the price for such Commodity as quoted in the Bid. BUYER at its sole discretion shall have the opinion to dispose the material or GOODS so rejected and not taken back within forty-five days from the date of intimation of rejection.

21.0 Effective Date of Commencement of Contract

21.01 The date of the issuance of the Letter of Acceptance/Purchase Order shall be treated as the effective date of the commencement of Contract.

22.0 Time – The Essence Of Contract

22.01 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.

23.0 The Laws and Jurisdiction of Contract:

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

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23.02 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 Delhi in India

24.0 Events of Default

24.01 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 BYPL.

25.0 Consequences of Default.

- (a) If an Event of Default shall occur and be continuing, BYPL may forthwith terminate the Contract by written notice.
- (b) In the event of an Event of Default, BYPL 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 BYPL may incur as a result of Supplier's default.

26.0 Penalty for Delay

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

26.02 The total amount of penalty for delay under the contract will be subject to a maximum of ten percent (10%) of the basic (ex-works) price of total undelivered units.

26.03 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.

26.4 If Penalty is levied as per the Order terms & conditions; BYPL will raise Invoice of the penalty amount along with applicable GST rates. Accordingly, after set off of the penalty Invoice amount, net payment shall be made.

27.0 Variation in Taxes, Duties & Levies

27.1 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. In case of reduction in taxes, duties and levies, the benefits of the same shall be passed on to BUYER.

27.2 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.

27.3 Notwithstanding what is stated above, changes in Taxes, Duties & Levies shall applied 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.

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

28.0 Taxes & Duties on raw materials & bought out components

28.01 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.

28.02 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.

29.0 Force Majeure

29.01 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.

- 29.02 Specific Events of Force Majeure subject to the provisions of above clause, Events of Force Majeure shall include only the following to the extent that they or their consequences satisfy the above requirements :
- (i) The following events and circumstances :
 - a) Effect of any natural element or other acts of God, including but not limited to storm, flood, earthquake, lightning, cyclone, landslides or other natural disasters.
 - b) Explosions or fires
 - (ii) War declared by the Government of India.
 - (iii) Dangers of navigation, perils of the sea.
- 29.03 Notice of Events of Force Majeure If a force majeure event prevents a party from performing any obligations under the Contract in part or in full, that party shall:
- i) Immediately notify the other party in writing of the force majeure events within 7(seven) working days of the occurrence of the force majeure event
 - ii) Be entitled to suspend performance of the obligation under the Contract which is affected by force majeure event for the duration of the force majeure event.
 - iii) Use all reasonable efforts to resume full performance of the obligation as soon as practicable
 - iv) Keep the other party informed of all such efforts to resume full performance of the obligation on a regular basis.
 - v) Provide prompt notice of the resumption of full performance or obligation to the other party.
- 29.04 Mitigation of Events of Force Majeure Each Party shall:
- (i) Make all reasonable efforts to prevent and reduce to a minimum and mitigate the effect of any delay occasioned by an Event of Force Majeure including recourse to alternate methods of satisfying its obligations under the Contract;
 - (ii) Use its best efforts to ensure resumption of normal performance after the termination of any Event of Force Majeure and shall perform its obligations to the maximum extent practicable as agreed between the Parties; and
 - (iii) Keep the other Party informed at regular intervals of the circumstances concerning the event of Force Majeure, with best estimates as to its likely continuation and what measures or contingency planning it is taking to mitigate and or terminate the Event of Force Majeure.
- 29.05 Burden of Proof In the event that the Parties are unable in good faith to agree that a Force Majeure event has occurred to an affected party, the parties shall resolve their dispute in accordance with the provisions of this Agreement. The burden of proof as to whether or not a force majeure event has occurred shall be upon the party claiming that the force majeure event has occurred and that it is the affected party.
- 29.06 Termination for Certain Events of Force Majeure. If any obligation of any Party under the Contract is or is reasonably expected to be delayed or prevented by a Force Majeure event for a continuous period of more than 3 months, the Parties shall promptly discuss in good faith how to proceed with a view to reaching a solution on mutually agreed basis. If a solution on mutually agreed basis cannot be arrived at within a period of 30 days after the expiry of the period of three months, the Contract shall be terminated after the said period of 30 days and neither Party shall be liable to the other for any consequences arising on account of such termination.
- The Purchaser may terminate the contract after giving 7 (seven) days' notice if any of following occurs:
- i. Bidder fails to complete execution of works within the approved schedule of works, terms and conditions.
 - ii. In case the Bidder commits any Act of Insolvency, or adjudged insolvent
 - iii. Has abandoned the contract
 - iv. Has failed to commence work or has suspended the progress of works

v. Has failed to proceed the works with due diligence and failed to make such due progress

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

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

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

29.10 Severability

If any provision of this Agreement is or becomes invalid or unenforceable by the courts of any jurisdiction to which it is subject, such invalidity or unenforceability shall not prejudice the remaining provisions of this Agreement, which shall continue in full force and effect.

30.0 Transfer and Sub-Letting

30.01 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.

31.0 Recoveries

31.01 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.

32.0 Waiver

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

33.0 Indemnification

33.01 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.

34.00 Documentation

34.01 The Bidder shall procure all equipment from BYPL approved sources as per attached specifications. The Bidder's shall submit 5 copies of Material/Type Test Certificates, O&M Manuals, and Approved & As-built drawings, related to various equipment. The Bidder's shall ensure for the strict compliance to the specifications and Field Quality Procedures issued by BYPL Engineer in-charge.

35.0 Transit Insurance

35.01 Transit Insurance shall be arranged by the Bidder.

35.02 DAMAGE / LOSS OF CARGO IN TRANSIT: Vendor shall be solely responsible for coordinating with the concerned insurance company for procuring insurance for material and/or Goods, processing claim lodgment and settlement. Notwithstanding the insurance cover, in case of loss / damage to material and/or Goods, in any manner and for any cause whatsoever, Vendor shall cause the damaged cargo to be replaced and delivered to the Purchaser with new material and/or Goods within 30 days of such loss / damage. The Vendor shall be solely responsible for all expenses in relation to the replacement and delivery in such circumstances.

36.0 Limitation of Liability

36.01 Except as provided otherwise in the Contract and except for willful misconduct or gross negligence, neither Party shall be liable to the other Party for loss of use of any Works, loss of profit, loss of any contract or any other indirect or consequential loss or damage which may be suffered by the other Party in connection with the Contract. The total liability of the Supplier to the Purchaser under the Contract shall not exceed the Contract Value. Except that this Clause shall not limit the liability of the Supplier:

- (a) Under any other provisions of the Contract which expressly impose a greater liability,
- (b) In cases of fraud, willful misconduct or illegal or unlawful acts, or
- (c) In cases of acts or omissions of the Supplier which are contrary to the most elementary rules of diligence which a conscientious Supplier would have followed in similar circumstances.

37.0 Liability of Suppliers

37.1 Subject to the due discharge of its obligations under the Contract and except in case of gross negligence or willful misconduct on the part of the Supplier or on the part of any person acting on behalf of the Supplier, with respect to any loss or damage caused by the Supplier to the Purchaser's property or the Site, the Supplier shall not be liable to the Purchaser for the following:

- (a) For any indirect or consequential loss or damage; and
- (b) For any direct loss or damage that exceeds:
 - (i) The total payments made and expected to be made to the Supplier under the Contract including reimbursements, if any; or
 - (ii) The insurance claim proceeds which the Supplier may be entitled to receive from any insurance purchased by the Supplier to cover such a liability, whichever is higher.

37.2 This limitation of liability shall not affect the Supplier's liability, if any, for damage to any third party, caused by the Supplier or any Person or firm acting on behalf of the Supplier in executing the Works.

37.3 Notwithstanding anything contained in the Contract, the Supplier shall not be liable for any gross negligence or willful misconduct on the part of the Purchaser or any of its affiliates, any vendor, or any party, other than Supplier and/or, its directors, officers, agents or representatives or its affiliates, or SubSupplier, or the vendor or any third party engaged by it.

37.4 Notwithstanding anything contained in the Contract, including but not limited to approval by the Purchaser of any drawings, documents, vendor list, supply of information or data or the participation of the Purchaser in any meeting and/or discussion or otherwise, shall not absolve the Supplier from any of its liabilities or responsibilities arising in relation to or under the Contract.

38.0 Intellectual Property Rights and Royalties

38.1 The Supplier shall indemnify the Purchaser and the Purchaser's Representative from and against all claims and proceedings on account of infringement (or alleged infringement) of any patent rights, registered designs, copyright, design, trademark, trade name, know-how or other intellectual

property rights (hereinafter collectively referred to as "**Intellectual Property Rights**") in respect of the Works, Supplier's Equipment, machines, Works method, Plant, Materials, or anything whatsoever required for the execution of the Works and from and against all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto. In the event of infringement of any Intellectual Property Rights of any third party as a result of the execution of the Works (or any part thereof) by the Supplier, the Supplier shall rectify, modify or replace, at its own cost, the Works, Plant or Materials or anything whatsoever required for the Works so that infringement ceases to exist or, in the alternative, the Supplier shall procure necessary rights/ licenses from the affected third party so that there is no infringement of Intellectual Property Rights.

- 38.2 The Supplier shall be promptly notified of any claim made against the Purchaser. The Supplier shall, at its cost, conduct negotiations for the settlement of such claim, and any litigation or arbitration that may arise from it. The Purchaser or the Purchaser's Representative shall not make any admission which might be prejudicial to the Supplier, unless the Supplier has failed to take over the conduct of the negotiations, litigation or arbitration within a reasonable time after having been so requested. In the event of Supplier failing to act at the Purchaser's Representative's notice, the Purchaser shall be at full liberty to deduct any such amount of pending claim from any amount due to the Supplier under the Contract or any other contract and the balance portion of claim shall be treated as debt due from the Supplier.
- 38.3 All Intellectual Property Rights in respect of any Plant, Materials, Drawings and Designs, plans, documents, specifications, data, materials, know how, charts, information, etc., provided to the Supplier by the Purchaser pursuant to this Contract for the execution of the Works, belongs to and shall continue to belong to the Purchaser and the Supplier shall not have any rights in the same other than the limited right for its use for the purpose of execution of the Works.
- 38.4 Intellectual Property Rights in respect of any Plant, Materials, Drawings and Designs, plans, calculations, drawings, documents, know-how and information relating to the Works which are proprietary to the Supplier and/ or its third party licensors ("**Supplier's IPR**") shall continue to vest with the Supplier and/ or its third party licensors and the Supplier shall grant and/ or procure from its third party licensors, at its own cost, a worldwide, perpetual, royalty free, non-exclusive license (along with the right to sub-license) to use and reproduce such Supplier's IPR for the use, operation, maintenance and repair of the Works.
- 38.5 If any patent, trademark, trade name, registered design or software is developed by the Supplier or its SubSupplier specifically for the execution of the Works, then all Intellectual Property Rights in respect of such design, trademark, trade name or software shall be the absolute property of the Purchaser and shall not be utilized or retained by the Supplier (or its SubSuppliers) for any purpose other than with the prior written consent of the Purchaser.
- 38.6 If the Supplier uses proprietary software (whether customized or off the shelf) for the purpose of storing or utilizing records in relation to the Works, the Supplier shall obtain at its own expense, the grant of a worldwide, royalty-free, perpetual licence or sublicense (including the right to sublicense) to use such software, in favour of the Purchaser provided that the use of such software under the licence or the sublicense may be restricted to use any such software only for the design, construction, reconstruction, manufacture, installation, completion, reinstatement, extension, repair and operation of the Works or any part thereof.
- 38.7 If any software is used by the Supplier for the execution of the Works over which the Supplier or a third party holds pre-existing title or other rights, the Supplier shall obtain for the Purchaser, a worldwide, royalty free, perpetual license for the right to use and apply that software (together with any modifications, improvements and developments thereof).

<p>GENERAL CONDITIONS OF CONTRACT (GCC-SUPPLY) NIT NO: CMC/BY/22-23/RS/SV/51</p>	<p>Page 15 of 17</p>	<p>Bidders seal & Signature</p>
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39.0 Acceptance

- 39.01 Vendor confirms to have gone through the Policy of BYPL on legal and ethical code required to be followed by vendors encapsulated in the "Vendor Code of Conduct" displayed on the official website of BYPL (www.bsesdelhi.com) also, which shall be treated as a part of the contract/PO/WO. Vendor undertakes that he shall adhere to the Vendor code of Conduct and also agrees that any violation of the Vendor Code of Conduct shall be treated as breach of the contract/PO/WO. In event of any such breach, irrespective of whether it causes any loss/damage, Purchaser (BYPL) shall have the right to recover loss/damage from Vendor. The Contractor/Vendor hereby indemnifies and agrees to keep indemnified the Purchaser (BYPL) against any claim/litigation arising out of any violation of Vendor Code of Conduct by the Contractor/Vendor or its officers, agents & representatives etc.
- 39.02 Acceptance of the CONTRACT implies and includes acceptance of all terms and conditions enumerated in the CONTRACT in the technical specification and drawings made available to Contractor consisting of general conditions, detailed scope of work, detailed technical specification, detailed equipment drawing and complete scope of work.
- 39.03 Contractor and Company contractual obligation are strictly limited to the terms set out in the CONTRACT. No amendments to the concluded CONTRACT shall be binding unless agreed to in writing for such amendment by both the parties
- 39.04 We expect your services and supplies are aligned to our Vision, Mission and Values. Please refer to the following link to know about our Vision, Mission and Values; <https://www.bsesdelhi.com/web/bypl/about-bses>

QUANTITY AND DELIVERY REQUIREMENTS

SI. No.	BYPL SAP Code	Item Description	Specification	Total Qty. (Nos)	Tentative Delivery Schedule	Destination
3	2100268104	SUPPLY OF SINGLE PHASE NATURAL ORGANIC ESTER OIL FILLED COMPLETELY SELF PROTECTED (CSP) TRANSFORMER OF RATING 25KVA 6.35/0.240kV	SP-SPT-87-R1	375	Delivery shall be commencing within 01 Month from the PO and completion @100 Nos per month	BYPL Stores Delhi

The delivery schedule shown above is tentative. PO(s) will be released as per the actual requirement. However, supplier has to deliver the material within the delivery schedule provided.

Schemes may be executed in the phased manner.

APPENDIX II

FORMAT OF PERFORMANCE BANK GUARANTEE (To be executed on a Non-Judicial Stamp Paper of appropriate value)

This Guarantee made at _____ this [____] day of [____] 20XX

1. WHEREAS M/s BSES Yamuna Power Limited, a Company incorporated under the provisions of Companies Act, 1956 having its Registered Office at Shaktikiran Building, Karkardooma, Delhi 110032, India hereinafter referred to as the " Owner ", (which expression shall unless repugnant to the context or meaning thereof include its successors, administrators, executors and assigns).
2. AND WHEREAS the Owner has entered into a contract for _____ (Please specify the nature of contract here) vide Contract No. _____ dated _____ (hereinafter referred to as the "Contract") with M/s. _____, (hereinafter referred to as "the Supplier", which expression shall unless repugnant to the context or meaning thereof be deemed to mean and include each of their respective successors and assigns) for providing services on the terms and conditions as more particularly detailed therein.
3. AND WHEREAS as per clause _____ of conditions of Contract, the Suppliers are obliged to provide to the Owners an unconditional bank guarantee for an amount equivalent to ten percent (10%) of the total Contract Value for the timely completion and faithful and successful execution of the Contract from [_____] *pl. specify the name of Bank*) having its head/registered office at [_____] through its branch in _____ (*pl. specify the name of Branch through which B.G is issued*) hereinafter referred to as "the Bank", (which expression shall unless it be repugnant to the context or meaning thereof be deemed to include its successors and permitted assigns).
4. NOW THEREFORE, in consideration inter alia of the Owner granting the Suppliers the Contract, the Bank hereby unconditionally and irrevocably guarantees and undertakes, on a written demand, to immediately pay to the Owner any amount so demanded (by way of one or more claims) not exceeding in the aggregate [Rs.].....(*in words*) without any demur, reservation, contest or protest and/or without reference to the Supplier and without the Owner needing to provide or show to the Bank ,grounds or reasons or give any justification for such demand for the sum/s demanded.

5. The decision of the Owner to invoke this Guarantee and as to whether the Supplier has not performed its obligations under the Contract shall be binding on the Bank. The Bank acknowledges that any such demand by the Owner of the amounts payable by the Bank to the Owner shall be final, binding and conclusive evidence in respect of the amounts payable by the Supplier to the Owner. Any such demand made by the Owner on the Bank shall be conclusive and binding, notwithstanding any difference between the Owner and the Supplier or any dispute raised, invoked, threatened or pending before any court, tribunal, arbitrator or any other authority.
6. The Bank also agrees that the Owner at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor without proceeding against the Suppliers notwithstanding any other security or other guarantee that the Owner may have in relation to the Supplier's liabilities.
7. The Bank hereby waives the necessity for the Owner first demanding the aforesaid amounts or any part thereof from the Suppliers before making payment to the Owner and further also waives any right the Bank may have of first requiring the Owner to use its legal remedies against the Suppliers, before presenting any written demand to the Bank for payment under this Guarantee.
8. The Bank's obligations under this Guarantee shall not be reduced by reason of any partial performance of the Contract. The Bank's obligations shall not be reduced by any failure by the Owner to timely pay or perform any of its obligations under the Contract.
9. The Bank further unconditionally and unequivocally agrees with the Owner that the Owner shall be at liberty, without the Bank's consent and without affecting in any manner its rights and the Bank's obligation under this Guarantee, from time to time, to:
 - (i) vary and/or modify any of the terms and conditions of the Contract;
 - (ii) Forebear or enforce any of the rights exercisable by the Owner against the Suppliers under the terms and conditions of the Contract; or
 - (iii) Extend and/or postpone the time for performance of the obligations of the Suppliers under the Contract;

and the Bank shall not be relieved from its liability by reason of any such act or omission on the part of the Owner or any indulgence shown by the Owner to the Suppliers or any other reason whatsoever which under the law relating to sureties would, but for this provision, have the effect of relieving the Bank of its obligations under this Guarantee.

10. This Guarantee shall be a continuing bank guarantee and shall not be discharged by any change in the constitution or composition of the Suppliers, and this Guarantee shall not be affected or discharged by the liquidation, winding-up, bankruptcy, reorganisation, dissolution or insolvency of the Suppliers or any of them or any other circumstances whatsoever.
11. This Guarantee shall be in addition to and not in substitution or in derogation of any other security held by the Owner to secure the performance of the obligations of the Suppliers under the Contract.
12. NOTWITHSTANDING anything herein above contained, the liability of the BANK under this Guarantee shall be restricted to _____ *(insert an amount equal to ten percent (10%) of the Contract Value)* and this Guarantee shall be valid and enforceable and expire on _____ *(pl. specify date)* or unless a suit or action to enforce a claim under this Guarantee is filed against the Bank on or before the date of expiry.
13. On termination of this Guarantee, all rights under the said Guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities hereunder.
14. The Bank undertakes not to revoke this Guarantee during its validity except with the prior written consent of the Owner and agrees that any change in the constitution of the Bank or the Suppliers shall not discharge our liability hereunder.
15. Owner may assign this Guarantee to any Person or body whether natural, incorporated or otherwise under intimation to the Bank. The Bank shall be discharged of its obligations hereunder by performance in accordance with the terms hereof to such assignee without verifying the validity / legality / enforceability of the assignment.
16. This Guarantee shall be governed by the laws of India. Any suit, action, or other proceeding arising out of, connected with, or related to this Guarantee or the subject matter hereof shall be subject to the exclusive jurisdiction of the courts of **Delhi**, India.

Dated this day of 20XX at

(Signature)

.....

(Name)

.....

(Designation with Bank Stamp)

Attorney as per

Power of Attorney No.....

Date.....

APPENDIX II NIT NO: CMC/BY/22-23/RS/SV/51	Page 3 of 6	Bidders seal & Signature
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BYPL BANK DETAIL WITH IFSC & SWIFT CODE:

1. Name of the Bank: Axis Bank Limited
2. Branch Name & Full Address: C-58, Basement & Ground Floor, Preet Vihar, Main Vikas Marg,
New Delhi 110092
3. Branch Code: 055
4. Bank Account No: 911030003596085
5. IFSC Code: UTIB0000055
6. Swift Code: AXISINBB055

BSEES

FORMAT OF WARRANTY/GUARANTEE CERTIFICATE

BSES YAMUNA POWER LIMITED Shaktikiran Building, Karkardooma, Delhi -110032.

Ref. Purchase Order No. :

Dear Sir,

We hereby confirm that the.....dispatched to BSES YAMUNA POWER LTD vide invoice no.....
DT.....is exactly of the same nature and description as per above mentioned Purchase Order.

We further confirm that we will replace/repair our.....free of cost If found any manufacturing defect
during.....months from the date of dispatch of material or.....months from the data of commissioning
whichever is earlier.

Vendors Name & Signature

UNDERTAKING GST

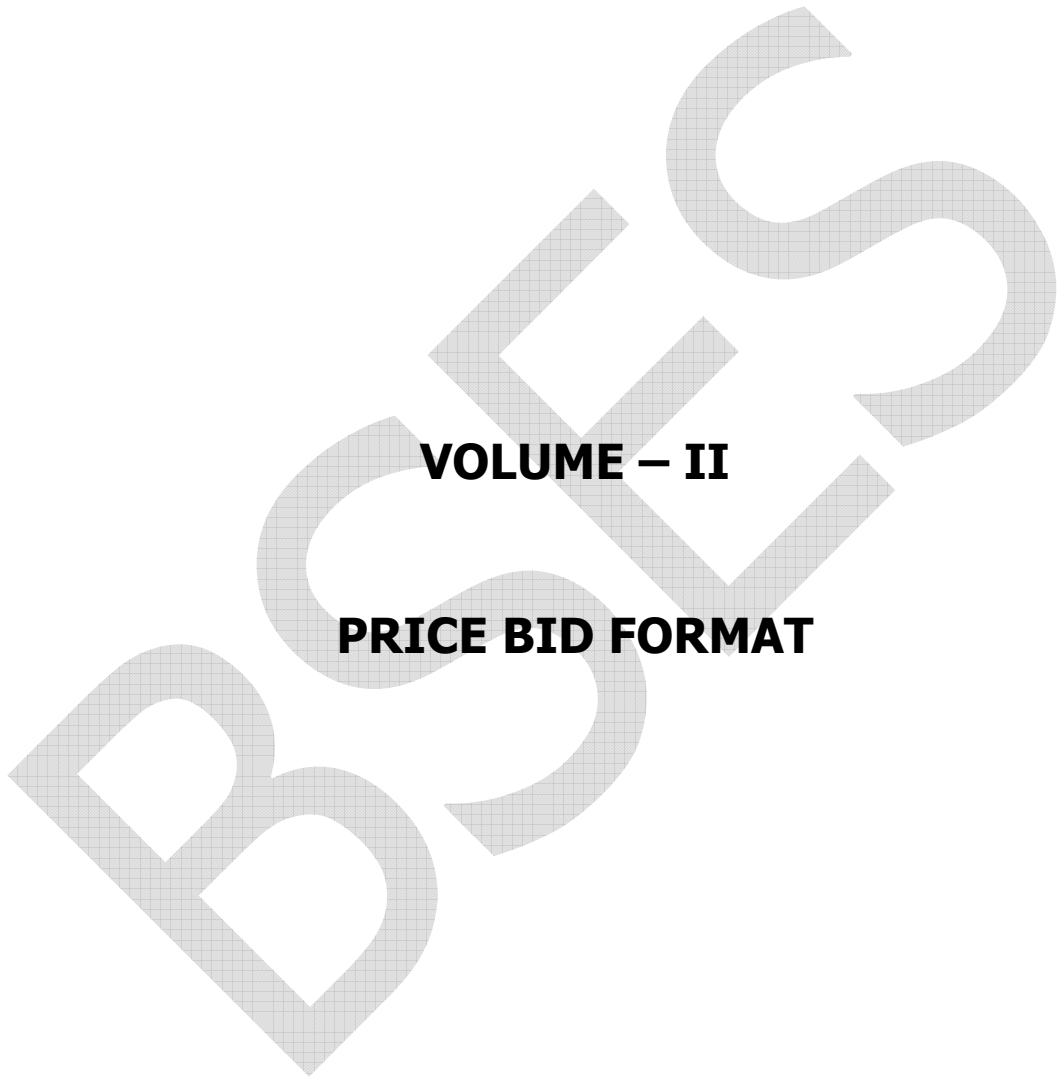
The Vendor shall give an undertaking in the following words on each invoice in the absence of which tax
payment as on the Vendor's invoice may be withheld.

"The tax component as mentioned in the invoice shall be deposited with GST Department as per law by
way of actual payment or by way of legal set off as per law. The turnover billed shall be duly declared in
my GST returns a copy of which shall be filed with the Purchaser. Should the input tax credit to the
Purchaser be denied by way of any lapse on the part of the Vendor, the same shall be paid on demand and
in any case the Purchaser is authorized to deduct the tax equivalent amount from the amount payable to
the Vendor"

APPENDIX II NIT NO: CMC/BY/22-23/RS/SV/51	Page 5 of 6	Bidders seal & Signature
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SUMMARY OF COMMERCIAL TERMS AND CONDITIONS

SI No	Item Description	AS PER BYPL	BIDDER'S CONFIRMATION
1	Validity	120 days from the date of submission of bid	
2	Price basis	a) "Firm" , FOR Delhi store basis. Prices shall be inclusive of all taxes & duties, freight upto Delhi stores. b) Unloading at stores shall be in vendor's scope c) Transit insurance in Bidders scope	
3	Payment terms	100% payment shall be made within 45 days from the date of receipt & acceptance of material at store/site against submission documents	
4	Delivery schedule	GTP/Drawings/QAP/etc to be submitted within 07 days to the concern official in BYPL for Transmittal approval. BYPL shall approve/ provide comments on the submitted drawings within 7 days of first submission. Delivery shall be commencing within 01 Month from the PO and completion @100 Nos per month.	
5	Defect Liability period	66 months from the date of delivery.	
6	Penalty for delay	1% (One) of the basic value (ex-works value) of undelivered units per week of delay or part thereof, subject to maximum of 10% (Ten) of the total basic value (ex-works value) of undelivered units.	
7	Performance Bank Guarantee	To be submitted within fifteen (15) days from the date of issuance of the Letter of Award/PO, supplier shall establish a performance bond in favor of BYPL in an amount not less than 10% of the PO value valid for a period of 30 months from the date of last receipt plus 3 months claim period.	



VOLUME – II

PRICE BID FORMAT

PRICE BID FORMAT NIT NO: CMC/BY/22-23/RS/SV/51	Page 1 of 2	Bidders seal & Signature
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ALL PRICES IN INR (₹)

S. No.	DESCRIPTION OF GOODS	HSN CODE (8 Digit Mandatory)	Uo M	QTY (A)	UNIT BASIC PRICE INCL FREIGHT (₹) (B)	UNIT GST & CESS AS APPLICABLE (CGST & SGST/UTGST or IGST) (₹) (C)		UNIT LANDED RATE (All Inclusive) (₹) (D = B+C)	TOTAL LANDED VALUE (₹) (E = DXA)
						%	AMT		
1	SUPPLY OF SINGLE PHASE NATURAL ORGANIC ESTER OIL FILLED COMPLETELY SELF PROTECTED (CSP) TRANSFORMER OF RATING 25KVA 6.35/0.240kV		Nos	375					
GRAND TOTAL LANDED VALUE (₹)									
In words									

NOTE: Cost of all tests as per technical specification is to be included. No separate charges will be paid.

The Un-priced bid should be marked as **"Quoted"** and to be submitted with Part – A

We declare that the following are our quoted prices in INR for the entire packages.

Date:

Bidders Name:

Place:

Bidders Address:

Signature:

Designation:

Printed Name:

Common Seal:



VOLUME – III

TECHNICAL SPECIFICATIONS



Specification of
Single Phase Oil Filled CSP Transformer

Specification no -- BSES-TS-30-SPT-R0

Revision	0	
Date	22/04/2022	
Pages	36	
Prepared by	Jeena Borana	<i>Jeena</i>
	Vani Sood	<i>Vani Sood</i> 22/04/22
Reviewed by	Srinivas Gopu	<i>Srinivas</i>
	Amit Tomar	<i>Amit Tomar</i> 22/04/22
Approved by	Gaurav Sharma	<i>Gaurav</i>
	Gopal Nariya	<i>Gopal Nariya</i>

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2.0 Codes & standards	4
3.0 Major Design Criteria & Parameters of the Transformer	5
4.0 Construction & Design	7
5.0 Fittings and Accessories on Transformer	14
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BSES-TS-30-SPT-R0

TECHNICAL SPECIFICATION OF SINGLE PHASE OIL FILLED CSP TRANSFORMER

Record of Revision

SI No.	Revision No	Item/Clause No.	Nature of change	Approved by

TECHNICAL SPECIFICATION OF SINGLE PHASE OIL FILLED CSP TRANSFORMER**1. Scope of work**

- 1.1 This specification covers design, engineering, manufacture, assembly, testing at manufacture's works, packing, transportation and delivery to site, supervision of erection, testing at site & commissioning and submission of complete documentation of CSP transformers to be used in HVDS system.
- 1.2 The transformer shall be complete with all components and accessories, which are necessary or usual for their efficient performance and trouble free operation under the various operating and atmospheric conditions specified in annexure A.
- 1.3 Such of the parts that may have not been specifically included, but otherwise form part of the transformer as per standard trade and/or professional practice and/or are necessary for proper operation of transformer, will be deemed to be also included in this specification.

2. Codes & standards

- 2.1 Materials, equipment and methods used in the manufacture of Transformer shall conform to the latest edition of below mentioned standards.
- 2.2 Vendor shall possess valid BIS Certification.

IS 1180 part 1	Outdoor type oil immersed distribution transformer upto and including 2.5MVA,33kV
IS 1180 part 3	Outdoor type oil immersed distribution transformer upto and including 2.5MVA, 33kV. Part 3 Natural/Synthetic Organic Ester oil Liquid Immersed.
IS 2026	Power Transformers
IS 2026-4	Terminal Marking, tappings and Connections for Power Transformers.
IS:3347	Dimensions for Porcelain Transformer bushing
IS 16659	Fluids for Electro technical Application- Unused Natural Esters for Transformers and Similar Electrical Equipment
IS-12444	Specification for Cu Wire rods
IS-5484	Specification for Al Wire rods
IS:10028	Code of practice for selection, installation & maintenance of transformers
IS 5561	Electrical Power Connectors
IS 5	Colors for ready mix paints
IS/IEC 60071	Co-ordination of Insulation.
IEC 62770	Unused natural esters for transformers and similar electrical

TECHNICAL SPECIFICATION OF SINGLE PHASE OIL FILLED CSP TRANSFORMER

	equipment
IS2026-7/IEC 60076-7	Loading Guide for Oil-Immersed Power Transformers.
IS 2026-8 /IEC 60076-8	Application Guide for Power Transformers.
IS 2026-10/IEC 60076-10	Determination of Transformer Sound Levels.
IS/IEC 60529	Degrees of Protection Provided by Enclosures (IP Code).
IS/IEC 60947	Low-Voltage Switchgear and Control gear.
IS/IEC 60137	Bushing for alternating voltage above 1000V
IS:1271/IEC 60085	Thermal evaluation and classification of electrical insulation
IEC 60076	Power transformers.
IEC 60156	Method for Determination of the Electric Strength for Insulating Oils.
IEC 60445	Basic& Safety principles for man-machine interface, marking and identification, Identification of Equipment Terminals and conductor terminals
IEEE C57.155	IEEE Guide for interpretation of Gases Generated in Natural Ester and Synthetic Ester-Immersed Transformer
DIN 42531 to 33	Specification for Outdoor Bushings
ASTM B-49	Specification for Cu Wire rods
ASTM B-233	Specification for Al Wire rods
	Indian Electricity Rules
	Indian Electricity Act
	CBIP manual

In the event of direct conflict between various order documents, the precedence of authority of documents shall be as follows –

- i. Guaranteed Technical Particulars (GTP)
- ii. This Specification
- iii. Indian Standards / IEC standards
- iv. Approved Vendor Drawings
- v. Other documents

3. Major Design Criteria & Parameters of the Transformer

Sr No	Description	Data by purchaser
3.1	Voltage variation on supply side	+ / - 10 %
3.2	Frequency variation on supply side	+/- 5 %

TECHNICAL SPECIFICATION OF SINGLE PHASE OIL FILLED CSP TRANSFORMER

3.3	Transient condition	- 20 % or + 10 % combined variation of voltage and frequency
3.4	Service Condition	Refer Annexure A
3.5	Location of equipment	Outdoor application
3.6	Reference design ambient temperature	50 deg C
3.7	Type of transformer	Sealed type, completely self protected (CSP)
3.8	Type of construction	Core type, oil immersed
3.9	Type of cooling	Oil natural air natural (KNAN)
3.10	No of phases	Single phase on primary & secondary side
3.11	No of windings	Two (one each for primary & secondary)
3.12	Rated frequency (Hz)	50 Hz
3.13	Highest system voltage HV side	12kV
3.14	Lightning Impulse withstand voltage, kV peak	
3.14.1	For nominal system voltage of 11 kV	75
3.15	Power Frequency Withstand Voltage kV rms	
3.15.1	For nominal system voltage of HV	28
3.15.2	For nominal system voltage of LV	3
3.16	Thermal and Dynamic short circuit withstand	For 3 secs.
3.17	Method of 11kv system earthing	Effectively earthed at 11kv source
3.18	Rated voltage HV Phase to Neutral	$11/\sqrt{3}$ KV
3.19	Rated voltage LV	240V
3.20	Rated HV current	
3.20.1	16kVA	2.52A
3.20.2	25kVA	3.96A
3.20.3	50kVA	7.87A
3.21	Rated LV current	
3.21.1	16kVA	66A
3.21.2	25kVA	104A
3.21.3	50kVA	208A
3.22	Percentage Impedance at 75 deg C	4% with IS tolerance
3.23	Max Total losses(No Load+ Load Losses at 75°C) at 50% of the rated load , Watts	

TECHNICAL SPECIFICATION OF SINGLE PHASE OIL FILLED CSP TRANSFORMER

3.23.1	16 kVA	82
3.23.2	25 kVA	110
3.23.3	50 kVA	210
3.24	Max Total losses (No Load+ Load Losses at 75 ⁰ C) at 100% of the rated load , Watts	
3.24.1	16 kVA	224
3.24.2	25 kVA	300
3.24.3	50 kVA	590
3.25	Temperature rise over reference ambient of 50 ⁰ C	
3.25.1	Top oil by thermometer 0 C	40 ⁰ C
3.25.2	Winding by resistance 0 C	45 ⁰ C
3.26	Reference standard	IS 1180 part 3/IS 1180 part 1
3.27	Overload Capability	As per IS 2026-part 7
3.28	Noise Level	As per IEC 60076-10
3.29	Minimum terminal clearance	
3.29.1	HV phase to earth	140 mm
3.29.2	LV phase to earth	40 mm

4. Construction & Design

4.1	Type	Double Copper wound, single phase, oil immersed with KNAN cooling with completely self protected (CSP)
4.2	Major Parts	
4.2.1	Tank	
4.2.1.1	Type	Sealed type with bolted cover which seals the interior of the tank from atmosphere.
4.2.1.2	Material of Construction	Tank should be round and made of good quality sheet steel
4.2.1.3	Tank Thickness	Adequate for meeting the requirements of pressure and vacuum type tests as per IS 1180 (Part – 3/Part-1) It shall be stiffed to provide sturdy and robust construction to withstand extreme pressure conditions.

TECHNICAL SPECIFICATION OF SINGLE PHASE OIL FILLED CSP TRANSFORMER

4.2.1.4	Tank features	<ul style="list-style-type: none">i) The circular base plate edges of the tank shall be folded upward for at least 25 mm, to have sufficient overlap with vertical sidewall of the transformer.ii) All seams and joints shall be double weldediii) The tank should be capable of withstanding pressure and vacuum as per values specified in IS: 1180 (Part – 3/Part-1)iv) The tank cover shall have plasticized surface at the top to guard against birdage faults. Alternatively, suitable insulating shrouds shall be provided on the bushing terminals.v) The transformer shall have a self pressure venting system.vi) Steel surface of the tank shall be prepared by sand blast or chemical cleaning including phosphating as per IS: 3618.vii) The space on the top of oil shall be filled with dry air or nitrogen. The nitrogen plus oil volume inside the tank shall be such that even under extreme operating conditions, the pressure generated inside the tank does not exceed 0.4 Kg/cm² positive or negative.viii) Heat resistance paint (Hot oil proof) shall be provided inside the tank. On external surface one coat of Thermo setting powder paint or two coats of zinc chromate followed by two coats of synthetic enamel paint of shade conforming to No.631 of IS:-5 shall be provided. The overall thickness of the paint shall be minimum 150 micron.
4.2.2	Core	

TECHNICAL SPECIFICATION OF SINGLE PHASE OIL FILLED CSP TRANSFORMER

4.2.2.1	Material	High grade , non ageing, low loss, high permeability, grain oriented, cold rolled silicon steel lamination
4.2.2.2	Grade	Premium Grade minimum M3 or better
4.2.2.3	Lamination thickness	0.23 mm Max.
4.2.2.5	Maximum Flux Density at 12.5 % over excitation / over fluxing	1.9 T
4.2.26	No load current	2% and 4% of RFLC at 100% and 112.5% Max
4.2.3	Winding	
4.2.3.1	Material	Electrolytic Copper
4.2.3.2	Winding connection	
4.2.3.2.1	HV Winding	Both ends of the primary winding shall be brought out through an appropriate HV bushings, one end of HV winding shall be externally earthed.
4.2.3.2.2	LV Winding	The secondary winding shall be connected to two LV bushing
4.2.3.3	Maximum Current Density allowed	3 Amp per sq mm
4.2.3.4	Winding Insulation	DPC insulation shall be used for HV and LV winding wires and electrical grade plain insulation Kraft paper for interleaving, no material, which can be affected by the action of oil under the operating conditions of the transformers, shall be used in the transformers or leads of the bushings.
4.2.3.5	Design features	<ul style="list-style-type: none">i) The core and coil assembly shall be securely held in position to avoid any movement under short-circuit conditions.ii) All turns of windings shall be adequately supported to prevent movement, in cases where turns are spaced out, a suitable inter-turn packing shall be provided.iii) The type of winding provided for HV side shall be preferably disc type or spiral winding.iv) The type of winding for LV side shall be preferably cylindrical, layer
4.2.4	Transformer Oil	
4.2.4.1	Type	i) Natural Organic Ester oil should be

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		<p>in accordance with specification as per Annex B of this document.</p> <p>ii) One sample of oil drawn from every lot of transformer offered for inspection should be tested at CPRI/ERDA for tests as listed in IS16659. The cost of this testing should be included within the cost of transformer.</p>
4.2.5	Bushings and Terminations	
4.2.5.1	Type of HV side bushing	Outdoor, Porcelain clad, creepage as per 31mm/kV(min)with voltage class of 12kV
4.2.5.1.1	Essential provision for HV side line bushing	HV bushings shall be fitted with molded heat shrinkage insulating covers / shrouds suitable for Aerial Bunched Conductor to provide protection of the bushing palm.
4.2.5.2	Type of LV side bushing	Outdoor, Porcelain clad, creepage as per 31mm/kV(min) with voltage class of 1.1kV.
4.2.5.3	Arcing Horns	Not required
4.2.5.4	Termination on HV side bushing	<p>i) The bushing palm is suitable for termination of 1CX 150 sqmm Aerial bunched cables, with bolted type clamping arrangement both in horizontal and vertical directions.</p> <p>ii) In case of copper/copper alloy stems, suitable bimetallic clamps with bolted type arrangement described above shall be used.</p>
4.2.5.5	Termination of LV side bushing	Suitable for termination of 2 runs of 1CX95 sq mm XLPE cable.
4.2.5.6	Continuous Current rating	Minimum 20 % higher than the rated current of the transformer
4.2.5.7	Rated thermal short time current	25 times the rated current for 2 sec

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4.2.6	LT cable box	<p>i) The LT cable box shall be provided as an integral part of the transformer designed for outdoor duty with minimum IP-55 protection.</p> <p>ii) MCCB is to be provided after LT bushing in the LT cable box</p> <p>iii) The cable box shall be equipped with LED to indicate ON/OFF & tripping of LT MCCB. On resetting of LTMCCB the tripping LED shall be automatically switched off.</p> <p>iv) LT bushing shall be inside the distribution box and a facility for sufficient outgoing feeders through cable glands shall be provided.</p>
4.2.7	Lightning Arrestor	
4.2.7.1	Type	Non linear resistance type
4.2.7.2	Rated Voltage of Arrestor, kV rms	9
4.2.7.3	Nominal Discharge Current, kA peak	5
4.2.7.4	Mounting arrangement	<p>i) Lightning arrestor shall be mounted external to the transformer and shall be suitable for outdoor type duty.</p> <p>ii) The line terminal of the surge arrestor shall be connected the HV bushing and the earth terminal of the surge arrestor shall be solidly connected to a separate earth externally.</p>
4.2.8	Transformer Mounting Arrangement	The transformers are to be mounted on single pole MS – I channel or tubular pole or PCC pole, the transformer therefore shall be provided with suitable and robust mounting arrangement. The mounting arrangement drawing shall be furnished for approval.
4.2.9	Hardware	
4.2.9.1	External	Stainless Steel
4.2.9.2	Internal	Cadmium plated except special hardware for frame parts and core assembly as per manufacturer's design
4.2.10	Gasket	<p>i) Gaskets shall be made of synthetic rubber or synthetic rubberized cork resistant to hot transformer ester</p>

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		liquid. ii) Gasket shall conform to Type III as per IS 11149/Type C as per IS 4253 (Part 2) and shall be compatible with high contact temperature i.e thermal class of 130°C.
4.2.11	Painting of transformer	
4.2.11.1	Surface preparation	By 7 tank pretreatment process or shot blasting method
4.2.11.2	Finish on internal surfaces of the transformer	Heat resistant and oil resistant paint two coats. Paint shall neither react nor dissolve in hot transformer insulating oil.
4.2.11.3	Finish on outer surface of the transformer	Battle ship grey shade 632 IS 5 Polyurethane paint two coats, overall paint thickness shall be 150 microns (min)
4.3	Transformer Protection	
4.3.1	HV Protection	i) HV protection shall be provided by an internally mounted HV fuse in series with the primary winding. ii) The option of using 11 KV fuse tube (preferably made of fiber glass), connected externally between the terminals of the lightning arrestor and the HV bushing can also be explored. The arrangement shall be such that the fuse tube remains in position when the fuse element inside the fuse tube blows off.
4.3.2	LT Protection	
4.3.2.1	MCCB Type	The MCCBs shall be trip free type with quick make and break design. The design of the operating mechanism of the circuit breaker shall be such that it shall have only two positions i.e. 'ON' and 'OFF', it shall not require resetting before being switched to 'ON' position.
4.3.2.2	Utilization Category	A
4.3.2.3	Interrupting medium	Air
4.3.2.4	Design	Molded case
4.3.2.5	Type of operation	Independent manual closing
4.3.2.6	Suitability for isolation	Not suitable for isolation
4.3.2.7	Provision for maintenance	Maintainable

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4.3.2.8	Method of installation – fixed	16 kVA	25 kVA	50 kVA
4.3.2.9	Number of poles	2		
4.3.2.10	Rated uninterrupted current (enclosed)	100 A	160 A	315 A
4.3.2.11	Voltage rating	250/415		
4.3.2.12	Rated insulation voltage	1kV		
4.3.2.13	Rated impulse withstand voltage	8kV		
4.3.2.14	Ultimate Breaking Capacity Icu	35 KA min.		
4.3.2.15	Service Breaking capacity Ics	35 KA min.		
4.3.2.16	Rated frequency	50Hz		
4.3.2.17	Rated duty	Uninterrupted duty		
4.3.2.18	Trip current characteristics:			
4.3.2.19	Type of release	Thermal-Magnetic		
4.3.2.20	Overload setting	Variable type 60% to 100% of In. Instep of 10%		
4.3.2.21	Short circuit settings	250% to 900% of In. Insteps of 50%		
4.3.2.22	Trip time at rated uninterrupted current	>2.5 hrs		
4.3.2.23	Trip time at 2.5 Setting times normal current	< 1 minute		
4.3.2.24	Trip time at 6 times normal current setting	< 5 secs.		
4.3.2.25	Trip time at 9 times normal current setting	40 millisec.		
4.3.3	Coordination of HT Fuse and LT MCCB	<p>i) The supplier shall furnish the time – current curves. The characteristics of LT MCCB and 11 KV fuse for various current multiples shall be drawn on the same sheet to indicate coordination between the LT MCCB and the HT fuse.</p> <p>ii) The LT MCCB shall operate with time delay for over load above rated capacity of transformer unit.</p> <p>iii) The HT fuse shall be selected such that it shall act as a back up protection for LT system faults and shall provide close co-ordination with LT MCCB</p> <p>iv) The HT fuse shall be selected such that it shall not operate for in rush current during transformer charging</p>		

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		<p>v) The HT fuse shall be selected such that it shall operate instantaneously for all internal faults in the transformer.</p> <p>vi) The supplier shall carry out coordination test, as indicated above, on minimum one transformer out of every 50 transformers and this shall form an Acceptance Test by the purchaser. Co-ordination of LT MCCB for external faults and HT fuse for internal faults complete with expected fault currents and I²t value of MCCB /HT fuse shall be assured/ proved.</p>
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5.**6. Fittings and Accessories on Transformer**

5.1	Rating and Diagram Plate	Required
5.1.1	Material	Anodized aluminum 16SWG
5.1.2	Background	SATIN SILVER
5.1.3	Letters, diagram & border	Black
5.1.4	Process	Etching
5.1.5	Rating and Diagram Plate details	<p>Following details shall be provided on rating and diagram plate as a minimum</p> <ul style="list-style-type: none"> i) Type/kind of transformer with winding material ii) standard to which it is manufactured iii) manufacturer's name; iv) transformer serial number; v) month and year of manufacture vi) rated frequency in Hz vii) rated voltages in kV viii) number of phases ix) rated power in kVA x) type of cooling (KNAN) xi) rated currents in A xii) 1.2/50μs wave impulse voltage withstand level in kV xiii) power frequency withstand voltage in kV xiv) impedance voltage at rated current

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		<p>and frequency in percentage</p> <p>xv) Max. Total losses at 50 % rated load</p> <p>xvi) Max. Total losses at 100 % rated load</p> <p>xvii) Load loss at 50% & 100% rated load</p> <p>xviii) Energy efficiency level.</p> <p>xix) continuous ambient temperature at which ratings apply in deg C</p> <p>xx) top oil and winding temperature rise at rated load in deg C;</p> <p>xxi) winding connection diagram with voltage, current and power</p> <p>xxii) transport weight of transformer</p> <p>xxiii) weight of core and windings</p> <p>xxiv) Weight of core</p> <p>xxv) Weight of winding</p> <p>xxvi) total weight</p> <p>xxvii) volume of oil</p> <p>xxviii) weight of oil</p> <p>xxix) name of the purchaser</p> <p>xxx) PO no and date</p> <p>xxxi) Guarantee period</p> <p>xxxii) Manufacturer call center number & email id</p>
5.2	Two earthing terminals with the earthing symbol	Required
5.3	Lifting lugs for complete transformers as well as for core & winding	Required
5.4	Bird guard.	Required
5.5	Pressure relief valve.	Required
5.6	Non return valve.	Required
5.7	Terminal connector	Required
5.8	HV side neutral earthing strip.	Required
5.9	Lightning arrestor	Required
5.10	Terminal marking plate	Required
5.11	Fittings as per IS 1180	Required
5.12	Additional fittings for CSP type of distribution transformers, if any. The fittings and accessories listed are	

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indicative only and any other fittings and accessories which are generally required for satisfactory operation of the transformer are to be provided without any extra cost

7. Approved make of components

6.1	Bushings	Baroda Bushing/CJI/Jaipur glass
6.2	CRGO	Nippon/JFE/Posco/Thyssen Krupp
6.3	Copper	Birla copper/Sterlite
6.4	Pre compressed Pressboard	Raman Board, Mysore/ Senapathy Whiteley, Dupont
6.5	Laminated Wood	Permalli Wallance / Rochling Engineers
6.6	Natural Ester Oil	Midel/Cargil
6.7	Mineral Oil	Apar/Savita/Raj Petro
6.8	Steel	TATA/Jindal/SAIL
6.9	Surge arrestor	Electrolite Power/Oblum/Tyco
6.10	MCCB	ABB/L&T/Schneider
6.11	Fuse	ERMCO,USA

Note – Any other make of component to be approved by purchaser

8. Quality assurance

7.1	Quality Assurance program	To be submitted before contract award. Program shall contain following i) The structure of the organization ii) The duties and responsibilities assigned to staff ensuring quality of work. iii) The bidder should have qualified technical & dedicated QA personnel at various stages of manufacture & testing. iv) Factory inspection of bidder may be carried out to ascertain the quality system and process in place at manufacturing facility. The same is applicable to bidders not approved with BSES. v) The system for purchasing, taking delivery and verification of materials
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		<ul style="list-style-type: none">vi) The system for ensuring quality of workmanshipvii) The system for control of documentationviii) The system for the retention of recordsix) The arrangements for the Supplier's internal auditingx) A list of the administration and work procedures required to achieve and verify Contract's quality requirements. These procedures shall be made readily available to the Purchaser for inspection on request
7.2	Quality Plan	<p>To be submitted by the successful bidder for approval. Plan shall contain following as a minimum</p> <ul style="list-style-type: none">i) An outline of the proposed work and programme sequenceii) The structure of the Supplier's organization for the contractiii) The duties and responsibilities assigned to staff ensuring quality of work for the contractiv) Inspection Hold and notification points mutually agreed.v) Submission of engineering documents required by the specificationvi) The inspection of materials and components on receiptvii) Reference to the Supplier's work procedures appropriate to each activityviii) Inspection during fabrication/constructionix) Final inspection and testx) Successful bidder shall include submittal of Mills invoice, Bill of lading, Mill's test certificate for grade, physical tests, dimension, specific watt loss per kG for the

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		core material to the purchaser for verification in the quality plan suitably
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9.**10. Progress Reporting**

8.1	Outline Document	To be submitted for purchaser approval for outline of production, inspection, testing, packing, dispatch, documentation programme
8.2	Detailed Progress report	To be submitted to Purchaser once a month containing i) Progress on material procurement ii) Progress on fabrication iii) Progress on assembly iv) Progress on internal stage inspection v) Reason for any delay in total programme vi) Details of test failures if any in manufacturing stages vii) Progress on final box up viii) Constraints ix) Forward path

11.**12. Inspection & testing**

9.1	Inspection and Testing during manufacture	Only type tested equipment shall be acceptable
9.1.1	Tank	i) Check for physical properties of materials for lifting lugs, jacking pads etc. All load bearing welds, including lifting lug welds shall be subjected to required load tests. ii) Certification of all test results. iii) Oil leakage test iv) Vacuum and Pressure test on tank as type test as per IS 1180
9.1.2	Core	i) Sample testing of core material for checking specific loss, bend properties, magnetization characteristics and thickness. ii) Check on the quality of varnish if used on the stampings.

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		<ul style="list-style-type: none">a) Measurement of thickness and hardness of varnish on stampings.b) Solvent resistance test to check that varnish does not react in hot oil.c) Check over all quality of varnish by sampling to ensure uniform hipping colour, no bare spots. No ever burnt varnish layer and no bubbles on varnished surface.iii) Check on the amount of burns.iv) Bow check on stampings.v) Check for the overlapping of stampings. Corners of the sheet are to be apart.vi) Visual and dimensional check during assembly stage.vii) Check on complete core for measurements of iron-loss and check for any hot spot by exciting the core so as to induce the designed value of flux density in the core.viii) Check for inter laminar insulation between core sectors before and after pressing.ix) Visual and dimensional checks for straightness and roundness of core, thickness of limbs and suitability of clamps.x) High voltage test (2 KV for one minute) between core and clamps.xi) Certification of all test results.
9.1.3	Insulating Materials	<ul style="list-style-type: none">i) Sample check for physical properties of materials.ii) Check for dielectric strength.iii) Visual and dimensional checks.iv) Check for the reaction of hot oil on insulating materials.v) Certification of all test results.
9.1.4	Windings	<ul style="list-style-type: none">i) Sample check on winding

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		<p>conductor for mechanical properties and electrical conductivity.</p> <p>ii) Visual and dimensional check on conductor for scratches, dept. mark etc.</p> <p>iii) Sample check on insulating paper for PE value, Bursting strength, Electric strength.</p> <p>iv) Check for the reaction of hot oil on insulating paper.</p> <p>v) Check for the bending of the insulating paper on conductor.</p> <p>vi) Check and ensure that physical condition of all materials taken for winding is satisfactory and free of dust.</p> <p>vii) Check for absence of short circuit between parallel strands.</p> <p>viii) Check for Brazed joints wherever applicable.</p> <p>ix) Measurement of voltage ratio to be carried out when core/ yoke is completely restocked and all connections are ready.</p> <p>x) Certification of all test results.</p>
9.1.4.1	Checks before drying process	<p>i) Check conditions of insulation on the conductor and between the windings.</p> <p>ii) Check insulation distance between high voltage connection distance between high voltage connection cables and earthed and other live parts.</p> <p>iii) Check insulation distance between low voltage connection and earthed and other parts.</p> <p>iv) Insulation test of core earthing.</p> <p>v) Check for proper cleanliness</p> <p>vi) Check tightness of coils i.e. no free movement.</p> <p>vii) Certification of all test results.</p>
9.1.4.2	Checks during drying process	<p>i) Measurement and recording of</p>

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		<p>temperature and drying time during vacuum treatment.</p> <p>ii) Check for completeness of drying.</p> <p>iii) Certification of all test results.</p>
9.1.5	Oil	As per IS 16659/ IEC 62770
9.1.6	Test on fittings and accessories	As per manufacturer's standard
9.2	Routine tests	<p>The sequence of routine testing shall be as follows</p> <p>i) Visual and dimension check</p> <p>ii) Measurements of voltage ratio</p> <p>iii) Measurements of winding resistance</p> <p>iv) Measurements of insulation resistance and polarization index</p> <p>v) Separate sources voltage withstand test.</p> <p>vi) Measurement of iron losses and exciting current at rated frequency and 90%, 100% and 112.5% rated voltage.</p> <p>vii) Induced voltage withstand test.</p> <p>viii) Load losses measurement at 50 % & 100 % of load.</p> <p>ix) Impedance measurement</p> <p>x) Routine test of tanks</p> <p>xi) HT fuse and LT MCCB coordination test</p> <p>xii) Oil leakage test on transformer</p> <p>xiii) Certification of all test results.</p> <p>xiv) Temperature Rise Test #</p> <p>#Temperature rise test may be necessary to be carried one unit/lot. Purchaser's engineer, will at its discretion, select transformer for temp. rise test from any lot offered for inspection at manufacturer's works and witness the same for comparison with ERDA/CPRI type test results</p>
9.3	Type Tests	<p>On one transformer of each rating and type at CPRI/ERDA.</p> <p>i) Impulse withstand test</p>

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		<ul style="list-style-type: none"> ii) Temperature rise test as per IS iii) Dynamic & Thermal (3 sec) Short circuit test iv) Air pressure test v) Pressure and Vacuum test on tank vi) Dissolved gas analysis before and after Temperature Rise Test vii) Oil testing to be tested at CPRI/ERDA labs, whose samples shall be selected & sealed by customer. <p>Note – Purchaser may choose to carry out short circuit, impulse & temperature rise test on one unit from a lot offered from inspection at CPRI/ERDA</p>
9.3.2	Notification to bidders	<p>In case bidder had conducted type & special tests from CPRI/ERDA on BSES design and there is no design change in the transformer less than 10 years from the date of the bid opening, then bidder need not to conduct the type test from CPRI/ERDA.</p> <p>The bidder shall submit the undertaking that there is no change in design with respect to type tested design.</p>
		<p>The product offered must be of type tested quality.</p> <p>In case the product offered is never type tested the same as per above list to be conducted by bidder at his own cost at CPRI/ERDA. The test report shall not be more 5 years old</p>
9.4	Customer Hold Point	<ul style="list-style-type: none"> i) GTP & Drawings approval ii) Tank Pressure & vacuum Test iii) Core & Coil Stage inspection of each lot to be offered

13. Packing , Shipping, Handling and Storage

10.1	Packing	
10.1.1	Packing protection	Against corrosion, dampness, heavy rains, breakage and vibration
10.1.2	Packing for accessories and spares	Robust wooden non returnable packing

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		case with all the above protection
10.1.3	Packing details	<p>On each packing case details required as follows</p> <ul style="list-style-type: none"> i) Individual serial number; ii) Purchaser's name; iii) PO number; iv) Destination; v) Supplier's name; vi) Name and address of supplier's agent vii) Description and quantity viii) Manufacturer's name ix) Country of origin x) Case measurements xi) Gross and net weights in kilograms xii) All necessary slinging and stacking instructions.
10.2	Shipping	<p>The bidder shall ascertain at an early date and definitely before the commencement of manufacture, any transport limitations such as weights, dimensions, road culverts, overhead lines, free access etc. from the manufacturing plant to the project site; and furnish to the Purchaser confirmation that the proposed packages can be safely transported, as normal or oversize packages, upto the plant site. Any modifications required in the infrastructure and cost thereof in this connection shall be brought to the notice of the Purchaser</p>
10.3	Handling and Storage	As per manufacturer's instruction

14.**15. Deviations**

11.1	Deviation	<p>Deviations from this Specification shall be provided in excel sheet with tender by reference to the Specification clause/GTP/Drawing and a description of the alternative offer. In absence of such a statement, it will be assumed that the bidder complies fully with this specification.</p>
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TECHNICAL SPECIFICATION OF SINGLE PHASE OIL FILLED CSP TRANSFORMER**16. Drawing & Data Submission matrix**

Document submission shall be as per the matrix given below. All documents/drawing shall be provided in soft copy (in pen drive) for each section. Language of the documents shall be English only. Deficient/improper drawing submission may liable for rejection.

S No.	Documents to be submitted	Bid	Approval	Pre Dispatch
12.1	Copy of specification along with company seal & signature on each page.	Required	Required	
12.2	Guaranteed technical particulars	Required	Required	
12.3	Outline dimension drawing for each major component, general arrangement drawing showing component layout an general schematic diagrams.	Required	Required	
12.4	Type test certificates, where available, and sample routine test reports	Required	Required	
12.5	Detailed reference list of customers already using equipment offered during the last 5 years with particular emphasis on units of similar design and rating	Required		
12.6	Performance certificates executed in last 5 years	Required		
12.7	Details of manufacturers quality assurance standard and programme and ISO 9000 series or equivalent national certification.	Required		
12.8	Deviations from this specification. Only deviations approved in writing before award of contract shall be accepted.	Required		
12.9	Recommended spare parts and consumable items for the five years of operation with prices and spare parts catalogue with price list for future requirements.	Required		
12.10	Transport / shipping dimension and weights, space required for handling parts for maintenance	Required		
12.11	Write up on oil preservation system.	Required	Required	
12.12	Quality assurance program.	Required	Required	
12.13	Programme for production and testing		Required	

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12.14	General description of the equipment and all components, including brochures		Required	
12.15	Detailed dimension drawing for all components ,general arrangement drawing showing detailed component layout and detailed schematic and wiring drawings for all components like Lightning arrestor, birdguard, bushings		Required	
12.16	Calculations to substantiate choice of electrical, structural, mechanical component size, ratings		Required	
12.17	Termination arrangement		Required	
12.18	Flow diagram of cooling system showing no. of cooling banks		Required	
12.19	Drawings of major components like bushing,LA, MCB etc		Required	
12.20	Lists of makes of all fittings and accessories		Required	
12.21	Statement drawing attention to all exposed points in the equipment at which contact with or in close proximity to other metals and stating clearly what protection is employed to prevent corrosion at each point		Required	
12.22	Detailed installation and commissioning instructions		Required	
12.23	Inspection and test reports carried out in manufacturers works			Required
12.24	Test certificates of all bought out items.			Required
12.25	Operation and maintenance instructions as well as trouble shooting charts.			Required

TECHNICAL SPECIFICATION OF SINGLE PHASE OIL FILLED CSP TRANSFORMER**17. Annexure – A Service Conditions**

1.0	Delhi Atmospheric conditions	
1.1	Average grade atmosphere :	Heavily polluted, dry
1.2	Maximum altitude above sea level	1000 M
1.3	Ambient Air temperature	Highest 50 deg C, Average 40 deg C
	Design ambient temperature	50 deg C
1.4	Relative Humidity	90 % Max
1.5	Seismic Zone	4
1.6	Rainfall	750 mm concentrated in four months

TECHNICAL SPECIFICATION OF SINGLE PHASE OIL FILLED CSP TRANSFORMER**18. Annexure – B Technical Particulars of Natural Ester Oil**

The Natural Ester Oil shall be certified as K Class as per IS 16659/IEC 62770.

Sr. No	Item description	Specification requirement
4.1.0	Physical property	
4.1.1	Appearance	Clear, free from sediments and suspended matter.
4.1.2	Viscosity	
4.1.2.1	At 100° C, Max	15 mm ² /sec
4.1.2.2	At 40° , Max	50 mm ² /sec
4.1.3	Pour point , Max	-10° C
4.1.4	Water content, Max	200 mg/kg (ppm)
4.1.5	Density at 200C, Max	1.0 g/ cm ³
4.2.0	Electrical property	
4.2.1	Dielectric breakdown voltage (2.5 mm gap), Min	65kV
4.2.2	Dielectric Dissipation factor (Tanδ) at 900 C, Max	0.05
4.3.0	Chemical property	
4.3.1	Soluble acidity, Max	0.06 mg KOH/gm
4.3.2	Corrosive sulfur	Non corrosive
4.3.3	Total additives, Max	weight fraction 5%
4.4.0	Performance-After oxidation stability test	
4.4.1	Total acidity, Max	0.6 mg KOH/g
4.4.2	Viscosity at 40° C, Max	30% increase over the initial value
4.4.3	Dielectric Dissipation factor (Tanδ) at 90° C, Max	0.5
4.5.0	Health, safety and environment (HSE)	
4.5.1	Fire point, Min	300° C
4.5.2	Flash point, Min	250°C
4.5.3	Biodegradation	Readily biodegradable

TECHNICAL SPECIFICATION OF SINGLE PHASE OIL FILLED CSP TRANSFORMER**19. Annexure – C Guaranteed Technical Particulars (Data by Seller)**

S. No.	Description	Specified/Required	Offered
1.0	Name of manufacturer		
2.0	Type		
3.0	Ratings		
3.1	Nominal Continuous Rating, KVA	16/25/50kVA	
3.2	Rated voltage-HV, Volts	11/ $\sqrt{3}$ kV	
3.3	Rated voltage-LV, Volts	240V	
3.4	Rated current-HV, Amps		
3.5	Rated current-LV, Amps		
3.6	No load voltage ratio		
3.7	Number of phases		
3.8	Frequency, Hz	50 Hz	
4.0	Connections		
4.1	High voltage		
4.2	Low voltage		
5.0	Method of cooling	KNAN	
6.0	Impedance voltage at rated voltage and frequency at 75 ⁰ C	4% with IS tolerance	
6.1	Impedance		
6.2	Reactance		
6.3	Resistance		
7.0	Resistance of the winding at 75 ⁰ C in ohm		
7.1	HV		
7.2	LV		
8.0	Guaranteed maximum Total Losses (no load losses+load losses at 75 deg.C), Watt		
8.1	50% of load		
8.2	100% of load	as per Spec Cl 3.24	
8.3	No Load Loss (Max)	as per Spec Cl 3.25	
8.4	Total I ² R losses of windings @ 75 deg C, Watt		
8.5	Total stray losses @ 75 deg C, Watt		
8.6	Total Load losses (Max.), Watt		
8.7	No load loss at maximum permissible voltage and frequency (approx.), Watt		
9.0	Temperature rise over reference ambient of 50 ⁰ C		
9.1	Top oil by thermometer	35 ⁰ C	
9.2	Winding by resistance	40 ⁰ C	

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9.3	Temperature of hottest spot in the winding at full load , ° C		
10.0	Efficiency		
10.1	Efficiency at 75°C and unity power factor, %		
10.1.1	at 110% load		
10.1.2	at 100% load		
10.1.3	at 80% load		
10.1.4	at 60% load		
10.1.5	at 40% load		
10.1.6	at 20% load		
10.2	Efficiency at 75°C and 0.8 power factor lag, %		
10.2.1	at 110% load		
10.2.2	at 100% load		
10.2.3	at 80% load		
10.2.4	at 60% load		
10.2.5	at 40% load		
10.2.6	at 20% load		
10.3	Maximum efficiency at 75°C, %		
10.4	Load and power factor at which it Occurs		
11.0	Regulation, (%)		
11.1	Regulation at full load at 75°C		
11.1.1	at unity power factor		
11.1.2	at 0.8 power factor lagging		
11.2	Regulation at 112.5% load at 75° C		
11.2.1	at unity power factor		
11.2.2	at 0.8 power factor lagging		
12.0	Details of tank		
12.1	Type	Sealed type with bolted cover which seals the interior of the tank from atmosphere.	
12.2	Material	Tank should be round and made of good quality sheet steel	
12.3	Thickness of tank sheet		
12.3.1	Sides, mm		
12.3.2	Top, mm		
12.3.3	Bottom, mm		
12.4	Confirmation of Tank designed and tested for Vacuum, Pressure As per IS 1180(Yes/ No)		

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12.4.1	Vacuum mm of Hg. / (kN/m ²)	As per IS 1180	
12.4.2	Pressure mm of Hg.		
12.5	Is the tank lid sloped?	Yes	
13.0	Core		
13.1	Type	Core	
13.2	Core material grade	Premium grade minimum M3 or better	
13.3	Core lamination thickness in mm		
13.4	Insulation of lamination	With insulation coating on both sides	
13.5	Details of core		
13.5.1	Core material grade	Premium grade minimum M3 or better	
13.5.2	Diameter, mm		
13.5.3	Cross sectional area, mm ²		
13.5.3.1	Gross, mm ²		
13.5.3.2	Net, mm ²		
13.5.4	Window height, mm		
13.5.5	Limb center, mm		
13.5.5	Weight of stamping in core and yoke separately		
13.5.6.1	Core, kgs		
13.5.6.2	Yoke, kgs		
13.5.6.3	Total, kgs		
13.6	Design flux density at rated voltage , Tesla		
13.7	Maximum flux density at 12.5 % over excitation /over fluxing, Tesla	1.9 Tesla Max allowed	
13.8	Guaranteed No Load current at 100% rated voltage , Amps		
13.8.1	HV		
13.8.2	LV		
13.9	Guaranteed No Load current At 110% rated voltage, Amps		
13.9.1	HV		
13.9.2	LV		
14.0	HV coil construction details		
14.1	Type of winding		
14.2	Size of conductor (Bare), mm		
14.3	Cross sectional area of conductor, mm ²		
14.4	Number of coils per limb		
14.5	Outer diameter of coil, mm		
14.6	Inner diameter of coil, mm		

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14.7	Insulation of conductor		
14.8	Interlayer reinforcement detail		
14.9	Current at full load, Amp		
14.10	Normal working current density, Amp/mm ²		
14.11	End turn insulation		
14.12	Weight of bare conductor used in one leg of HV, kg		
14.13	Weight of insulated conductor used in one leg of HV, kg		
14.14	Number of turns per leg		
14.15	Length of mean turns, mm		
14.16	Axial length, mm		
15.0	LV coil constructional details		
15.1	Type of winding		
15.2	Size of conductor (Bare), mm		
15.3	Cross sectional area of conductor, mm ²		
15.4	Number of coils per limb		
15.5	Outer diameter of coil, mm		
15.6	Inner diameter of coil, mm		
15.7	Insulation of conductor		
15.8	Interlayer reinforcement detail		
15.9	Current at full load, Amp		
15.10	Normal working current density, Amp/mm ²		
15.11	End turn insulation		
15.12	Weight of bare conductor used in one leg of LV, kg		
15.13	Weight of insulated conductor used in one leg of LV, kg		
15.14	Number of turns per leg		
15.15	Length of mean turns, mm		
15.16	Axial length, mm		
16.0	Insulation details material and size		
16.1	HV coil end packing	TUP paper	
16.2	LV coil end packing		
16.3	Inter coil spacer of HT sections		
16.4	Bottom core strip insulation		
16.5	Yoke insulation		
16.6	Clamp insulation		
16.7	Inter phase barrier		
16.8	Core wrap		
16.9	Cylindrical insulation between HT & LT		
16.10	Type of blocks used between coils		
17.0	Details of clearances		

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17.1	Internal clearance between inner walls of tank and core coil assembly unit, mm		
17.2	Radial clearance between LV and HV winding, mm		
17.3	Phase to phase clearance between HV limb, mm		
17.4	Clearance from top of the yoke to the inside of the top cover of tank, mm		
17.5	Radial clearance of LV coil from core, mm		
17.6	Horizontal duct between HT sectional coil		
17.7	End clearance of HT coil from yoke, mm		
17.8	Minimum clearance between core and tank bottom, mm		
18.0	Impulse test voltage of winding for 1.2/50 micro seconds wave according to relevant IS		
18.1	HV		
18.2	LV		
19.0	Volts per coil of HV winding, Volts		
20.0	Approximate volts per layer of HV winding, Volts		
21.0	Induced over voltage test at double frequency		
22.0	Permissible duration of overload following continuous running at normal rated load in ambient temperature of 50°C		
22.1	10%overload		
22.2	20%overload		
22.3	30%overload		
23.0	RMS value of symmetrical short circuit current which the transformer can withstand and its duration		
24.0	Terminal arrangement of HV side		
25.0	Terminal arrangement of LV side		
26.0	Particulars of HV bushing		
27.1	Make		
27.2	Type		
27.3	Dry withstand voltage for one minute		
27.4	Wet withstand voltage for thirty minutes		
27.5	Voltage rating		
27.6	Impulse withstand voltage 1.2/50		

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	micro second wave		
27.7	Total creepage distance in air	mm	
27.8	Height of bushing above transformer tank		
28.0	Particulars of LV neutral bushing		
28.1	Make		
28.2	Type		
28.3	Voltage rating		
28.4	Dry withstand voltage for one minute		
28.5	Wet withstand voltage for thirty minutes		
28.6	Total creepage distance in air, mm		
28.7	Height of bushing above transformer Tank, mm		
29.0	Time constant of transformer		
30.0	MCCB rating		
30.1	Make and model no.		
30.2	Utilization Category	A	
30.3	Interrupting medium	Air	
30.4	Design	Molded case	
30.5	Type of operation	Independent manual closing	
30.6	Voltage rating	240/415	
30.7	Number of poles	2	
30.8	Rated insulation voltage	1kV	
30.9	Rated impulse withstand voltage	8kV	
30.10	Rated frequency	50Hz	
30.11	Rated duty	Uninterrupted duty	
30.12	Ultimate Breaking Capacity Icu	35 KA min.	
30.13	Service Breaking capacity Ics	35 KA min.	
30.14	Trip current characteristics		
30.14.1	Rated current		
30.14.2	Overload setting	60% to 100% of In. In steps of 10%	
30.14.3	Short circuit settings		
30.14.4	Trip time at rated uninterrupted current	>2.5 hrs	
30.14.5	Trip time at 2.5 Setting times normal current	< 1 minute	
30.14.6	Trip time at 6 times normal current setting	< 5 secs.	
30.14.7	Trip time at 9 times normal current setting	40 millisec.	
31.0	HV fuse rating		

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31.1	Make		
31.2	Tripping curves provided	Yes/No	
31.3	Fuse catalogue is provided	Yes/No	
31.4	Tripping coordination graph of HV fuse and MCCB is provided	Yes/No	
32.0	Transformer oil		
32.1	Dielectric strength		
32.2	Resistivity		
32.3	Acidity		
32.4	Tan delta		
32.5	Name of supplier		
32.6	Quantity of transformer oil, Liters		
33.0	Weight of the following		
33.1	Tank and fittings, Kgs		
33.2	Core, Kgs		
33.3	Winding weight, Kgs		
33.4	Core and windings, Kgs		
33.5	Transformer oil, Kgs		
33.6	Total weight of transformer including oil, Kgs		
34.0	Overall dimensions of transformer		
34.1	Length	mm	
34.2	Breadth	mm	
34.3	Height	mm	
35.0	Name of material and size used for clamping of core winding		
35.1	Core clamp		
35.2	Tie rod		
35.3	Core bolt		
35.4	Bottom plate		
36.0	Tests		
36.1	Is the offered 16/25/50 kVA distribution transformer type tested? (Yes, No)		
36.2	All in process tests confirmed as per Cl. 9.1 (Yes/ No)		
36.3	All Routine Tests confirmed as per Cl.9.2 (Yes / No)		
36.4	All Type Tests confirmed as per Cl.9.3 (Yes/ No)		

TECHNICAL SPECIFICATION OF SINGLE PHASE OIL FILLED CSP TRANSFORMER**20. Annexure – D Guaranteed Technical Particulars of Natural Ester oil**

Bidder to submit duly filled & signed along with techno commercial offer.

Sr. No	Item description	Specification requirement	Data by Vendor
1.0	Manufacturer Name		
1.1	Address		
1.2	Contact person		
1.3	Contact telephone no		
2.0	Physical property		
2.1	Appearance	Clear, free from sediments and suspended matter.	
2.2	Viscosity		
2.2.1	At 100° C, Max	15 mm ² /sec	
2.2.2	At 40° , , Max	50 mm ² /sec	
2.3	Pour point , Max	-10° C	
2.4	Water content, Max	200 mg/kg (ppm)	
2.5	Density at 20° C, Max	1.0 g/ cm ³	
3.0	Electrical property		
3.1	Dielectric breakdown voltage(2.5 mm gap), Min	65kV	
3.2	Dielectric Dissipation factor (Tanδ) at 90 C, Max	0.05	
4.0	Chemical property		
4.1	Soluble acidity, Max	0.06 mg KOH/gm	
4.2	Corrosive sulfur	Non corrosive	
4.3	Total additives, Max	weight fraction 5%	
5.0	Performance-After oxidation stability test		
5.1	Total acidity, Max	0.6 mg KOH/g	
5.2	Viscosity at 400 C, Max	30% increase over the initial value	
5.3	Dielectric Dissipation factor (Tanδ) at 90° C, Max	0.5	
6.0	Health, safety and environment (HSE)		
6.1	Fire point, Min	300° C	
6.2	Flash point, Min	250° C	
6.3	Biodegradation	Readily biodegradable	
7.0	Packing & delivery as per specification		YES / NO
7.1	Size of oil drum	210 liter minimum	
7.2	Quantity of oil to be supplied in DRUM		
8.0	Copy of Type test report	Submitted along with GTP?	YES / NO
9.0	Deviation sheet	Submitted along with GTP?	YES / NO

TECHNICAL SPECIFICATION OF SINGLE PHASE OIL FILLED CSP TRANSFORMER**21. Annexure – E Recommended Spares (Data by Supplier)**

List of recommended spares as following –

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