

The Tata Power Company Ltd		OPEN TENDER NOTIFICATION
Tender Reference: 4100035742/CC25ADO014		Document Date: 12 th August 2024

The Tata Power Company Limited Invites Tender through E-Tender Two-Part Bidding Process from interested bidders for the following package: -

A. Summary of the tendered package:

Sr. No.	Description	Tender Reference no.	Bid Guarantee Fee / EMD (Rs.)	Tender Fee (Rs.)	Last Date and Time for Bid Submission
For the following package please send mail to Mr. Amey Oak (amey.oak@tatapower.com) with copy to Mr. Selva Ganesh (selva.ganesh@tatapower.com).					
1.	Outline Agreement (OLA) for 1 year for Supply and supervision services of Oil Filled Transformer PAN India	4100035742/CC25ADO014	Rs. 2,70,000/-	2,000 /-	9 th September 2024 1500 Hrs.

B. Tender Fee Payment Details

- Non-Refundable Tender Fee, as indicated in table above, to be submitted in the form of Direct deposit in the following bank account and submit the receipt along with a covering letter clearly indicating the Tender Reference number –

Beneficiary Name – The Tata Power Co. Ltd.

Bank Name – HDFC Bank Ltd.

Branch Name – Fort Branch, Mumbai

Address – Maneckji Wadia Building, Nanik Motwani Marg, Fort, Mumbai 400023.

Branch Code – 60

Bank & Branch Code – 400240015

Account No – 00600110000763

Account type – CC

IFSC Code – HDFC0000060

- Eligible and Interested Bidders to submit duly signed and stamped letter on Bidder's letterhead indicating

Tender Enquiry number

Name of authorized person

Contact number

e-mail id

Details of submission of Tender Participation Fee

E-mail with necessary attachment of 1 and 2 above to be send to amey.oak@tatapower.com with a copy to selva.ganesh@tatapower.com before Last date and time mentioned above

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Interested bidders to submit Tender Participation Fee and Authorization Letter before Last date and time as indicated above. Bids of only those bidders will be accepted who have paid the tender fee and EMD. Link from Tata Power E-Tender system (Ariba) will be shared for further communication and bid submission.

Please note all future correspondence regarding the tender, bid submission, bid submission date extension, Pre-bid query etc. will happen only through Tata Power E-Tender system (Ariba).

No e-mail or verbal correspondence will be responded. All communication will be done strictly with the bidder who have done the above step to participate in the Tender.

Also it may be strictly noted that once date of “Last date and time for Payment of Tender Participation Fee” is lapsed no Bidder will be sent link from Tata Power E-Tender System (Ariba). Without this link vendor will not be able to participate in the tender. Any last moment request to participate in tender will not be entertained.

Any payment of Tender Participation Fee / EMD by Bidder who have not done the pre-requisite will not be refunded.

Also all future corrigendum’s to the said tender will be informed on Tender section on website <https://www.tatapower.com> only.

CONFIDENTIAL

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OPEN TENDER NOTIFICATION

FOR

Outline Agreement (OLA) for 1 year for Supply and supervision services of Oil Filled Transformer PAN India

**The Tata Power Company Limited (Tata Power)
Smart Center of Procurement Excellence, 2nd Floor,
Sahar Receiving Station, Near Hotel Leela,
Sahar Airport Road, Andheri East, Mumbai-400059**

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1. Event Information

1.1 Scope of work

Open Tenders are invited in e-tender bidding process from interested Bidders for entering into an Outline Agreement of 1 Year as defined below:

Reference Number	4100035742/CC25ADO014
Description	Outline Agreement (OLA) for 1 year for Supply and supervision services of Oil Filled Transformer PAN India
Type of Tender	Out Line Agreement (Rate Contract)
Estimated Period	One Year
Tender Fee	Rs. Two Thousand Only (Rs. 2000/-)
Earnest Money Deposit (EMD)	Rs. Two Lakh Seventy Thousand Only (Rs. 2,70,000/-)
Price Basis	IEEMA Price Variation Basis
Executive Handling this Tender*	Name: Mr. Amey Oak E-Mail ID: amey.oak@tatapower.com
Reporting Manager*	Name: Mr. Selva Ganesh E-Mail ID: selva.ganesh@tatapower.com
Technical Query *	Name: Mr. Nilesh Shivankar E-Mail ID: nileshshivankar@tatapower.com

*You may contact the above personnel from Monday to Friday during office hours only.

1.2 Availability of Tender Documents

Tender documents may be downloaded by interested eligible bidders from The Tata Power Company website www.tatapower.com with effect from 17.08.2024. In the event detailed tender documents are downloaded from The Tata Power Company website or are received through online tendering system ARIBA from The Tata Power Company, the Tender Fee shall be compulsorily submitted online through NEFT/ RTGS. Any such bid submitted without this Fee shall be rejected.

Bidders are requested to visit TPC website www.tatapower.com regularly for any modification/ clarification to the bid documents.

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1.3 Calendar of Events

(a)	Date of availability of tender documents on TPC Website	From 17.08.2024 to 09.09.2024, 15:00 Hrs.
(b)	Date & Time of Pre-Bid Meeting (If any)	Shall be intimated in advance.
(c)	Last Date of receipt of pre-bid queries, if any	23.08.2024 up to 15:00 Hours
(d)	Last Date of Posting Consolidated replies to all the pre-bid queries as received	29.08.2024 up to 17:00 Hours
(e)	Last date and time of receipt of Bids	09.09.2024 up to 15:00 Hrs
(f)	Date & Time of opening of Price of qualified bids	Will be notified to the successful bidders through our website / e-mail.

Note:- * These date and time are as planned and tentative. In case of change the same shall be intimated to Authorized Person of Interested Bidder through E-Tender System.

Please note post submission of Bids relevant communication will be done with Authorized Person of Interested Bidder through E-Tender System

1.4 Mandatory documents required along with the Bid.

- 1.4.1 Bid Guarantee Fee (EMD) of requisite value and validity. PLEASE NOTE THAT BID GUARANTEE ONLY IN FORM OF BANK GUARANTEE WILL BE ACCEPTED.
- 1.4.2 Requisite Documents to ascertain fulfilling of Technical and Commercial Pre-Qualification Requirement as detailed in Tender Enquiry.
- 1.4.3 Technical Submission including Drawings, Type Test details, data sheets etc. as detailed in Technical Specification.
- 1.4.4 Required Commercial Submission as detailed in Tender Document
- 1.4.5 Technical and Commercial Clarification and Deviations as per the format attached in the Tender Enquiry
- 1.4.6 Proper authorization letter to sign the tender and participate in Tata Power E-Tender system on the behalf of bidder.
- 1.4.7 **For vendor not registered with Tata Power, duly filled Vendor Registration form with all supporting documents is mandatory to participate in the Tender.**

Please note that in absence of any of the above documents, the bid submitted by a bidder shall be liable for rejection.

Also please note that whenever editable format are shared it is requested that data be filled in relevant cells. No formatting or addition / deletion of rows / columns to be done. Wherever editable Excel submission are requested the file should be free from references, macros etc.

1.5 Deviation from Tender

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 Query / Clarification / Deviation (QCD) Format. Deviations must be mandatorily submitted in editable Excel sheet.

Technical or Commercial Deviation should be mentioned in Deviation Format only. Deviation in any other document or Format will not be considered.

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1.6 Right of Acceptance/Rejection

1.5.1 Bids are liable for rejection in absence of following: -

1.5.2 Mandatory Documents as listed in 1.3 above.

1.5.3 Price Bid as per the Price Schedule mentioned in Tender Document

1.5.4 Receipt of Bid and Response to queries within the due date and time

Tata Power reserves the right to accept/reject any or all the bids without assigning any reason thereof.

1.7 Qualification Criteria

Parameter	Tata Power Requirement	Documents To be submitted by Bidder
Infrastructure	Bidder must be an OEM of Equipment with manufacturing facility / assembly in India. The bidder must have in-house routine and acceptance testing facilities for acceptance as per relevant IS/IEC	Self-undertaking to be submitted in this regard. TATA Power reserves the right to inspect the said manufacturing facility as a proof of compliance to this parameter.
Supply and Experience	The bidder must have supplied at least 20 nos. of transformer of similar type and similar or higher size and voltage in last 3 years. Bids will be accepted only up to that rating which are equal to the maximum rating of transformer submitted as supply experience in this criterion. For Eg. If bidder submits supply experience of transformer of maximum rating 1600 KVA, then his bids will be accepted for all ratings up to 1600 KVA in the BoQ and not above the same. Indian Subsidiaries of global companies having plant in India are also eligible to bid if the qualification requirements stated above are met independently or in combination with the parent company. Declaration from parent company needs to be submitted.	Purchase Order Copies and Completion Certificates. Self-undertaking to be submitted in this regard. TATA Power reserves the right to inspect the said manufacturing facility as a proof of compliance to this parameter.
Performance	The bidder should have performance certificates for 2 years satisfactory performance for equipment of similar or higher rating for at least 10 nos. The work against these issued certificates should be completed in last seven years from the date	Supply List & Performance Certificates from the utilities/Clients

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	<p>of bid submission. In case the bidder has a previous association with any of Tata Power Groups for similar products and services, the performance feedback for that bidder by Tata Power User Group shall only be considered irrespective of performance certificates issued by any third organization.</p>	
<p>Type Tests</p>	<p>The bidder shall submit Type test reports obtained from NABL/ International Accredited Lab for the equipment / material offered. The type tests should have been conducted on the equipment / material of the same design.</p> <p>The type tests should have been conducted within 10 years prior to the date of bid opening. Time period for type test can be extended by another 5 years as a special case, if there is no change in design / material of construction (MOC).</p> <p>In case the type test reports furnished are not for the quoted equipment / material but for the equipment / material with higher voltage class and/or different capacity, then type test shall be carried out for the offered equipment / material from NABL / International Accredited Lab without any cost implication to the owner and the Type Test reports shall be submitted before dispatch of the equipment / material.</p>	<p>Type Test Report.</p> <p>Undertaking that there is no change in design / material of construction (MOC) if Type Test Report older than 10 years.</p> <p>Undertaking that type test shall be carried out for the offered equipment / material from NABL / International Accredited Lab without any cost implication to the owner and the Type Test reports shall be submitted before dispatch of the equipment / material.</p>
<p>Commercial Capability</p>	<p>Average Annual turnover of the bidder for last three years shall not be less than Rs 4.5 Crs.</p>	<p>Copy of audited balance Sheet and Profit & Loss account to be submitted in this regard. UDIN No. shall be mandatorily mentioned on the audited documents.</p>

1.7 Pre-Bid Queries

Pre-Bid Queries if any, must be sent through message in E-Tender System. Pre-Bid Query must be sent only in the Query / Clarification / Deviation (QCD) Format. Technical Pre-Bid Query and Commercial Pre-Bid Queries have to be submitted in Separate Editable Excel File in Prescribed Format. Pre-Bid Queries sent in any other format or send through any other communication channel will not be accepted and answered. Pre-Bid Queries have to be sent in the stipulated timeline as defined in the

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Tender Document. No Pre-Bid Query will be accepted after the due time and date as specified as "Last Date of receipt of pre-bid queries, if any."

1.8 Marketing Integrity

We have a fair and competitive marketplace. The rules for bidders are outlined in the General Condition of Contracts and other parts of Tender Documents. Bidders must agree to these rules prior to participating. In addition to other remedies available, Tata Power reserves the right to exclude a bidder from participating in future markets due to the bidder's violation of any of the rules or obligations contained in the General Condition of Contracts or other part of the Tender Documents. A bidder who violates the marketplace rules or engages in behavior that disrupts the fair execution of the marketplace, may result in restriction of a bidder from further participation in the marketplace for a 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 terms as published in TENDER.
- Submit irrelevant documents or frequently cases of missing documents as part of compliance to Qualifying, Technical or Commercial Requirements causing unnecessary delay in Tender Evaluation.

1.9 Supplier Confidentiality

All information contained in this tender is confidential and shall not be disclosed, published, or advertised in any manner without written authorization from Tata Power. This includes all bidding information submitted to Tata Power. All tender documents remain the property of Tata Power and all suppliers are required to return these documents to Tata Power upon request. Suppliers who do not honor these confidentiality provisions will be excluded from participating in future bidding events.

2. Evaluation Criteria

- The bids will be evaluated technically on the compliance to tender terms and conditions.
- The bids will be evaluated commercially on overall all-inclusive lowest cost for the individual rating of Transformer as calculated in Price Bid Format. Tata Power, however, reserves right to split the order line item wise and/or quantity wise among more than one Bidder. Hence all bidders are advised to quote their most competitive rates against each line item.
- Bidder must mandatorily quote against each item of Schedule of Items. Failing to do so, Tata Power may reject the bids.
- Bidder to mention the location from where the supplies will be made under this contract in the price bid format.
- This tender has been issued for the requirement of cables at various upcoming EV bus depots/EV hubs across India.
- The requirement is scattered across various cities in India. Order against the OLA will be placed as per the requirement at site finalized.
- To facilitate this arrangement, transport rates per KM are being sought. Hence bidders are requested to submit prices for the material ex works and submit prices for transport and related costs separately as per the line item given in the Price Bid Format.
- Location from where supply is to be done is also sought in the price bid format. Bidders are requested to mandatorily submit this information. Bidders may give different supply location

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for different line items if the case is so. Payment for transportation will be done on actual basis for KM of transport from this defined supply location till the site.

NOTE: In case of a new bidder not registered with Tata Power, factory inspection and evaluation shall be carried out to ascertain bidder’s manufacturing capability and quality procedures. However, Tata Power reserves the right to carry out factory inspection and evaluation for any bidder prior to technical qualification. In case a bidder is found as Disqualified in the factory evaluation, their bid shall not be evaluated any further and shall be summarily rejected. The decision of Tata Power shall be final and binding on the bidder in this regard.

2.1 Price Variation Clause and Cap: Price Variation shall be applicable as follows.

2.1 The prices shall be subject to IEEMA Price Variation Clause with following conditions:

IEEMA formulae and factors governing the price variation shall be as follows:

$$P = \frac{P_0}{100} (7 + 41 \frac{C}{C_0} + 23 \frac{ES}{ES_0} + 10 \frac{IS}{IS_0} + 5 \frac{IM}{IM_0} + 8 \frac{TO}{TO} + 6 \frac{W}{W_0})$$

P-Price payable as adjusted in accordance with the formula
P₀-Price quoted / confirmed (Each)

C- Price of Copper - Applicable in the Month of ordering.
C₀- Price of Copper - as per base month of tender.

ES- Price of CRGO - Applicable in the Month of ordering.
ES₀- Price of CRGO - as per base month of tender.

IS- Price of HR Coil of 3.15mm - Applicable in the Month of ordering.
IS₀- Price of HR Coil of 3.15mm - as per base month of tender.

IM- Price of Insulating Materials - Applicable in the Month of ordering.
IM₀- Price of Insulating Materials - as per base month of tender.

2.2 Base circular shall be July 2024 circular issued in August 2024. Base month for Bid Price shall remain same throughout the negotiation process till Outline Agreement / Rate Contract is finalized. Base month circular has to be attached in the price bid.

2.3 Whenever Firm Order has to be placed against Outline Agreement / Rate Contract Tata Power shall seek PVC corrected price based on index published and available during the said month from the bidder. Purchase Order against Outline Agreement / Rate Contract will be placed at PVC corrected price. The said price shall then remain firm till completion of delivery and bill payment.

2.4 There will be no cap on positive & negative side.

3. Submission of Bid Documents

3.1 Bid Submission

Bidders are requested to submit their offer in line with this Tender document. Bids shall be submitted in 3 (three) parts:

FIRST PART: “EMD – BANK GUARANTEE” of Value detailed in 1.1 valid for 180 days from the due date of bid submission in the form of Bank Guarantee favoring ‘The Tata Power Company Limited’. The

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EMD has to be strictly in the format as mentioned in Tender Document, failing which it shall not be accepted by Tata Power and the bid as submitted shall be liable for rejection.

Note: BG of 180 days and further claim period of 180 days is needed. In case the same cannot be issued by your bank then BG valid for 365 days can be provided.

Note: At times bidders have sought Tata Power bank details which is needed by them to make BG. Hence the same is reproduced below. These details are only provided to facilitate making of BG if needed

Tata Power's Bank Details for submitting EMD BG:
 Bank Name & Address – ICICI Bank, 163 HT Marg,
 Backbay Reclamation, Churchgate, Mumbai 400 020.
 A/c no. - 000451000293
 IFSC Code – ICIC0000393

The hard copy of EMD in a sealed envelope should be sent on address mentioned in Tender document.

First Part must be submitted in hard copy in Sealed Envelope.

SECOND PART: "TECHNICAL / UN-PRICED COMMERCIAL BID" shall contain the following documents:

- a) Documentary evidence in support of Technical, Commercial qualifying criteria
- b) Technical literature/GTP/Type test report/Details of Qualified Manpower Available/ Testing Facility available etc. *(complete in all respect as desired and detailed in Technical Specification and Technical Requirement Section)*
- c) Duly filled Technical and Commercial Deviation Sheets, if applicable
- d) Duly filled formats like Authorization affidavit form
- e) *Unpriced Commercial Bid*

The technical / un-priced commercial bid shall be properly indexed and is to be submitted in Soft Copy though E-Tender system of Tata Power. Hard Copy of Technical Bids need not be submitted.

Second Part has to be submitted through E-Tender System Only

THIRD PART: "PRICE BID" shall contain only the price details and strictly in Price Bid format along with explicit break up of basic prices and applicable GST. Basic price should include packaging forwarding, freight, transit insurance and any other cost envisaged by the bidder.

Third part must be submitted through E-Tender System. Hard Copy of Third Part, "Price Bid" need not be submitted.

FOR BIDS INVITED THROUGH E-TENDER SYSTEM (TECHNICAL, UN-PRICED COMMERCIAL BID and PRICE BID):

In response to advertisement Bidder must provide details of person authorized to Bid on behalf of the Bidder. An e-mail will be generated by E-Tender System and the authorized person can download the Tender Documents from the system.

SECOND and THIRD PART of the Bid must be submitted in E-Tender System.

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Bidders must mandatorily submit SECOND PART and THIRD PART (Technical, Un-priced commercial Bid, and Price Bid) only through E-Tender system of Tata Power. Bids submitted through any other form/ route shall not be admissible.

FOR BIDS INVITED IN SEALED ENVELOPE PROCESS (FIRST PART):

First part of the bid shall be sealed in an envelope which shall be clearly marked as below:

EMD

“Please mention Tender Reference No”

Please mention our Tender Reference No on the Tender and drop the same in our Tender Box located at The Tata Power Company Limited (Tata Power), Corporate Contracts, Tata Power Sahar Receiving Station, T2 Airport Road, Sahar, Andheri-E, Mumbai 400 059.

The bids and the outer envelope shall be addressed to:

Head - Procurement
Corporate Contracts, Tata Power Sahar Receiving Station, T2 Airport Road, Sahar, Andheri-E,
Mumbai 400 059

The envelope shall also bear the Name and Address of the Bidder along with our Tender No. and subject.

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

Bids submitted by Email/Telex/Telegram /Fax will be rejected. No request from any Bidder to Tata Power to collect the proposals from Courier/Airlines/Cargo Agents etc. shall be entertained.

SIGNING OF BID DOCUMENTS:

The bid must contain the name, residence, and place of business of the person or persons making the bid and must be signed and sealed by the Bidder with his usual signature. The names of all persons signing should also be typed or printed below the signature.

The Bid being submitted must be signed by a person holding a Power of Attorney authorizing him to do so, certified copies of which shall be enclosed.

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.

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3.2 Contact Information: Detailed in 1.1

3.3 Bid Prices

Bidders shall quote for the entire Scope of Supply/ work with a break-up of prices for individual items and Taxes & duties. The bidder shall complete the appropriate Price Schedules included herein, stating the Unit Price for each item & total price with taxes, duties & freight up to destination at various sites of Tata Power. The all-inclusive prices offered shall be inclusive of all costs as well as Duties, Taxes and Levies paid or payable during the execution of the supply work, breakup of price constituents.

The quantity break-up shown else-where other than Price Schedule is tentative. The bidder shall ascertain himself regarding material required for completeness of the entire work. Any items not indicated in the price schedule, but which are required to complete the job as per the Technical Specifications/ Scope of Work/ SLA mentioned in the tender, shall be deemed to be included in prices quoted.

3.4 Bid Currencies

Prices shall be quoted in Indian Rupees Only. It also may be noted that the denomination of Purchase Order / Outline Agreement / Rate Contract and associated Payment to Successful Bidder shall also be in Indian Rupees Only. In case Bidder intends to import any equipment, part etc. and supply to Tata Power then all liability and costs related to import will rest with the Bidder. All statutory compliances, payments, expenditure etc. related to importing of equipment will be responsibility of the bidder.

3.5 Period of Validity of Bids

Bids shall remain valid for 180 days from the due date of submission of the bid.

Notwithstanding clause above, Tata Power may solicit the Bidder's consent to an extension of the Period of Bid Validity. The request and responses thereto shall be made in writing.

3.6 Alternative Bids

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

3.7 Modifications and Withdrawal of Bids

The bidder is not allowed to modify or withdraw its bid after the Bid's submission. The EMD if submitted along with the bid shall be liable for forfeiture in such event.

3.8 Earnest Money Deposit (EMD):

The bidder shall furnish, as part of its bid, an EMD amounting as specified in the tender. The EMD is required to protect the Tata Power against the risk of bidder's conduct which would warrant forfeiture.

The EMD shall be in following form:

- Bank Guarantee valid for 180 days after due date of submission.

The EMD shall be forfeited in case of:

- The bidder withdraws its bid during the period of specified bid validity.

Or

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- In case of a successful bidder, if the Bidder, within 15 days, does not.
- accept the purchase order, or.
- furnish the required Contract Performance Bank Guarantee (CPBG).

Original Bank Guarantee submitted as EMD shall be returned only after completion of award process for unsuccessful bidders and issue of Contract Performance Bank Guarantee (CPBG) for successful bidder.

4. Bid Opening & Evaluation process

4.1 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 Tata Powers processing of Bids or award decisions may result in the rejection of the Bidder's Bid.

4.2 Technical Bid Opening

Bids will be opened at Corporate Office of Tata Power as per our standard Process. The bids shall be opened internally by Tata Power. Technical bid must not contain any cost information whatsoever.

First the envelope marked "EMD" will be opened. Bids without EMD of required amount/ validity in prescribed format, shall be rejected.

Next, the technical bid of the bidders who have furnished the requisite EMD will be opened in E-Tender system.

4.3 Preliminary Examination of Bids/Responsiveness

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

Prior to the detailed evaluation, Tata Power 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.

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

4.4 Techno Commercial Clarifications

Bidders need to ensure that the bids submitted by them are complete in all respects. To assist in the examination, evaluation and comparison of Bids, Tata Power may, at its discretion, ask the Bidder for a clarification on its Bid for any deviations with respect to the Tata Power specifications and attempt will be made to bring all bids on a common footing. 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 owing to any clarifications sought by Tata Power.

<p>The Tata Power Company Ltd</p>	 TATA TATA POWER	<p><i>OPEN TENDER NOTIFICATION</i></p>
<p><i>Tender Reference:</i> 4100035742/CC25ADO014</p>		<p><i>Document Date: 12th August 2024</i></p>

4.5 Price Bid Opening

The EMD of the bidder withdrawing or substantially altering his offer at any stage after the technical bid opening will be forfeited at the sole discretion of Tata Power without any further correspondence in this regard.

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.

4.6 Reverse Auction and Price Matching Option

Tata Power reserves the right to go for Reverse Auction (RA) for price negotiation and discover the most competitive price on ARIBA portal, Tata Power’s official e-tendering platform. This will be decided after techno-commercial evaluation of the bids. Bidders need to give their acceptance with the offer for participation in RA. Non-acceptance to participate in RA may result in non-consideration of their bids, in case Tata Power decides to go for RA.

Only those bidders who are techno-commercially qualified shall be eligible to participate further in RA process. However, the original H1 bidder (whose price bid is the highest post techno-commercial evaluation) shall not be allowed to participate in further RA process provided minimum three techno-commercially qualified bids are available.

For case where more than one bidder have to be awarded (including Rate Contract / Outline Agreement) Price Matching Option will be exercised. Volume of job allocated to original competitive bidder will be more than bidder who is chosen through Price Matching Option. Tata Power decision regarding work sharing shall be final and no explanation OR clarification shall be given regarding the same.

5.0 Award Decision

Tata Power will award the contract to the successful bidder whose bid has been determined to be the lowest-evaluated responsive bid as per the Evaluation Criterion mentioned at Clause 2.0. The Cost for the said calculation shall be taken as the all-inclusive cost quoted by bidder in Priced Bid Format subject to any corrections required in line with Clause 4.3 above. The decision to place purchase order/Outline Agreement/ Rate Contact solely depends on Tata Power on the cost competitiveness across multiple lots, quality, delivery and bidder’s capacity, in addition to other factors that Tata Power may deem relevant.

Tata Power reserves all the rights to award the contract to one or more bidders so as to meet the delivery requirement or nullify the award decision without assigning any reason thereof.

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

In case of award, the Purchase Order shall be issued digitally through Ariba Commerce Automation portal. In all such cases, further transaction such as Order Acceptance, SES / GRN preparation, Invoicing etc. shall be conducted in the Ariba Commerce Automation system.

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5.1 Rate Contract / Outline Agreement

Rate Contract / Outline Agreement does not guarantee any assureded business volume in Rupees or Quantity. Quantities are only indicative and specified for the purpose of readiness as per the request from Purchaser. Supplies shall be only against Firm Purchase Orders placed as per the agreed terms and conditions of Rate Contract / Outline Agreement. Purchaser shall be entitled at its discretion to place firm order for such supplies on "As and When Required Basis" without minimum take-off guarantee.

Rate Contract / Outline Agreement will have list of Items with Unit Rate and applicable Taxes and Duties. There will be a cap on value for which order which can be placed against the Rate Contract / Outline Agreement. Actual quantity ordered for each line item may differ significantly from the tentative quantity indicated in the Tender Document. One / few / all items of Rate Contract / Outline Agreement can be ordered till the Cap Value is reached.

6.0 Order of Preference/Contradiction:

In case of contradiction in any part of various documents in tender, following shall prevail in order of preference:

1. Outline Agreement/Purchase Order (with Commercial conditions)
2. Special Terms and conditions (if applicable)
3. General Terms and conditions
4. Technical Specifications

In case there is a discrepancy in the BOQ mentioned in tender (to the extent modified through subsequent Corrigendum, if any) and the bid submitted by any bidder, the description as mentioned in the tender (to the extent modified through subsequent Corrigendum, if any) shall prevail.

7.0 Ethics

Tata Power is an ethical organization and as a policy Tata Power lays emphasis on ethical practices across its entire domain. Bidder should ensure that they should abide by all the ethical norms and in no form either directly or indirectly be involved in unethical practice.

Tata Power work practices are governed by the Tata Code of Conduct. Bidder is request to refer Tata Code of Conduct Clause in General Terms and Conditions.

8.0 General Condition of Contract and Special Condition of Contracts

Any condition not mentioned above shall be applicable as per General Terms and Conditions and Special Condition of Contracts attached along with this tender.

The Tata Power Company Ltd		OPEN TENDER NOTIFICATION
Tender Reference: 4100035742/CC25ADO014		Document Date: 12 th August 2024

Annexure – 1 Schedule of Items

OLA for 1 year for Supply of Oil Filled Trasnformers PAN India.					
Sr. No.	Item Description	UoM	Quantity	Unit Rates	Total
1	Supply of 3 Phase ,50Hz 630 KVA , 11 /0.433KV ,Dyn11 , OCTC Mineral oil Conventional Transformer (ONAN) & Distribution Transformer Comply to IS 1180 , Energy Level-1.	Each	5		
	Transportation 630 KVA	KM	2500		
	Supervision during installation 630 KVA	Day	5		
	Total (Basic)				
	Total with GST (GST @ 18%)				
2	Supply of 3 Phase ,50Hz 800 KVA , 11 /0.433KV ,Dyn11 , OCTC Mineral oil Conventional Transformer (ONAN) & Distribution Transformer Comply to IS 1180 , Energy Level-1.	Each	2		
	Transportation 800 KVA	KM	1000		
	Supervision during installation 800 KVA	Day	2		
	Total (Basic)				
	Total with GST (GST @ 18%)				
3	Supply of 3 Phase ,50Hz 1000KVA , 11 /0.433KV ,Dyn11 , OCTC Mineral oil Conventional Transformer (ONAN) & Distribution Transformer Comply to IS 1180 , Energy Level-1.	Each	3		
	Transportation 1000 KVA	KM	1500		
	Supervision during installation 1000 KVA	Day	3		
	Total (Basic)				
	Total with GST (GST @ 18%)				
4	Supply of 3 Phase ,50Hz 1250KVA , 11 /0.433KV ,Dyn11 , OCTC Mineral oil Conventional Transformer (ONAN) & Distribution Transformer Comply to IS 1180 , Energy Level-1.	Each	3		
	Transportation 1250 KVA	KM	1500		
	Supervision during installation 1250 KVA	Day	3		
	Total (Basic)				
	Total with GST (GST @ 18%)				

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5	Supply of 3 Phase ,50Hz 1600 KVA , 11 /0.433KV ,Dyn11 , OCTC Mineral oil Conventional Transformer (ONAN) & Distribution Transformer Comply to IS 1180 , Energy Level-1.	Each	5		
	Transportation 1600 KVA	KM	2500		
	Supervision during installation 1600 KVA	Day	5		
	Total (Basic)				
	Total with GST (GST @ 18%)				
6	Supply of 3 Phase ,50Hz 2000 KVA , 11 /0.433KV ,Dyn11 , OCTC Mineral oil Conventional Transformer (ONAN) & Distribution Transformer Comply to IS 1180 , Energy Level-1.	Each	2		
	Transportation 2000 KVA	KM	1000		
	Supervision during installation 2000 KVA	Day	2		
	Total (Basic)				
	Total with GST (GST @ 18%)				
	Location from Where supply will be done				
1	Request to please enter a value in the cells highlighted yellow only. Please donot edit any other cell				
2	The bidders are advised to quote prices strictly in the above format and for all the line items as mentioned above. Failing to do so, bids are liable for rejection.				
3	Mentioning “extra/inclusive” in any of the column may lead for rejection of the price bid. Please do not edit any other cell in the sheet				
4	This tender has been issued for the requirement of cables at various upcoming EV bus depots/EV hubs across India.				
5	The requirement is scattered across various cities in India. Order against the OLA will be placed as per the requirement at site finalized.				
6	To facilitate this arrangement, transport rates per KM are being sought. Hence bidders are requested to submit prices for the material ex works and submit prices for transport and related costs separately as per the line item given in the Price Bid Format.				
7	Location from where supply is to be done is also sought in the price bid format. Bidders are requested to mandatorily submit this information. Bidders may give different supply location for different line items if the case is so. Payment for transportation will be done on actual basis for KM of transport from this defined supply location till the site.				

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ANNEXURE II
TECHNICAL SPECIFICATION

CONFIDENTIAL

The Tata Power Company Ltd		TECHNICAL SPECIFICATION FOR 11kV/433V & 33kV/433 OIL FILLED DISTRIBUTION TRANSFORMER
ENSE-EV-200X-R0		Date of Issue: xx/05/2024

TECHNICAL SPECIFICATION

11KV/433V & 33kV/433V Oil filled Distribution Transformer

The Tata Power Company Ltd.
Engineering Services (ENSE),
Distribution Division, Senapati Bapat Marg,
Lower Parel, Mumbai – 400013 Maharashtra

The Tata Power Company Ltd		TECHNICAL SPECIFICATION FOR 11kV/433V & 33kV/433V OIL FILLED DISTRIBUTION TRANSFORMER
ENSE-EV-200X-R0		Date of Issue: xx/05/2024

Document No: ENSE-EV-200X-R00

Document Title: Technical specifications for 11KV/433V & 33KV/433V Oil Filled Transformer

00	<i>For tender purpose (ENSE-EV- 200X-R00)</i>	Xx/05/24	KSJ		AVP		RMB	
Rev			Prepared By		Checked By		Approved and Issued By	

*The Tata Power Company Ltd.
Engineering Services (ENSE),
Distribution Division, Senapati Bapat Marg,
Lower Parel, Mumbai – 400013 Maharashtra*

Rev No.	Prepared By & Date	Checked By & Date	Approved for Issue By & Date
R00	Ketan S. Jadhav Xx/xx/24	Ajay V. Potdar Xx/xx24	Ravindra M. Bhanage Xx/xx/24

The Tata Power Company Ltd		TECHNICAL SPECIFICATION FOR 11kV/433V & 33kV/433V OIL FILLED DISTRIBUTION TRANSFORMER
ENSE-EV-200X-R0		Date of Issue: xx/05/2024

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- 2.0 APPLICABLE STANDARDS
- 3.0 CLIMATIC CONDITIONS OF THE INSTALLATION
- 4.0 GENERAL TECHNICAL REQUIREMENTS
- 5.0 GENERAL CONSTRUCTIONS
- 6.0 NAME PLATE AND MARKING
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- 8.0 TYPE TEST CERTIFICATES
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- 10.0 INSPECTION AFTER RECEIPT AT STORE
- 11.0 GUARANTEE
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- 14.0 QUALITY CONTROL
- 15.0 MINIMUM TESTING FACILITIES
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- 23.0 ANNEXURE III : SOURCE OF MATERIAL/PLACES OF MANUFACTURE, TESTING AND INSPECTION
- 24.0 ANNEXURE IV : STAR RATING LABLE GUIDLINES

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ENSE-EV-200X-R0		Date of Issue: xx/05/2024

1	SCOPE	<ol style="list-style-type: none"> 1. This Specification covers the technical requirements of design, manufacture, testing at manufacturer's works, packing forwarding, supply and unloading at site/store and performance of Oil immersed, non-sealed, naturally cooled, three Phase 11/0.433 kV & 33/0.433kV, 50Hz, outdoor type Distribution Transformer. 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 clause no. 3 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. The successful bidder shall not be eligible for any extra charges for such accessories etc. notwithstanding the fact that at the time of an initial offer bidder had segregated such items and quoted for them separately.
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2	APPLICABLE STANDARDS	<p>The equipment (and the materials used) covered by this specification shall unless otherwise stated, be designed, manufactured and tested in accordance with the latest editions of the following Indian, IEC / International standards , with latest amendment from time to time, thereof, some of which are listed below:</p> <table border="1" data-bbox="451 905 1544 1812"> <thead> <tr> <th data-bbox="451 905 708 968">Indian Standards (IS)</th> <th data-bbox="708 905 1544 968">Title</th> </tr> </thead> <tbody> <tr> <td data-bbox="451 968 708 999">IS 5 : 2007</td> <td data-bbox="708 968 1544 999">Specification for Colors for ready mixed paints and enamels.</td> </tr> <tr> <td data-bbox="451 999 708 1031">IS 104 : 1979</td> <td data-bbox="708 999 1544 1031">Specification for ready mixed paint, brushing, zinc chrome, priming.</td> </tr> <tr> <td data-bbox="451 1031 708 1062">IS 191 : 2007</td> <td data-bbox="708 1031 1544 1062">Copper</td> </tr> <tr> <td data-bbox="451 1062 708 1094">IS 335 : 1993</td> <td data-bbox="708 1062 1544 1094">Specification for New insulating oils</td> </tr> <tr> <td data-bbox="451 1094 708 1125">IS 649: 1997</td> <td data-bbox="708 1094 1544 1125">Testing for steel sheets and strips and magnetic circuits.</td> </tr> <tr> <td data-bbox="451 1125 708 1157">IS 1180 : 2014</td> <td data-bbox="708 1125 1544 1157">Outdoor Type Oil Immersed Distribution Transformers Up to and Including 2500 KVA, 33 kV-Specification.</td> </tr> <tr> <td data-bbox="451 1157 708 1188">IS 1576: 1992</td> <td data-bbox="708 1157 1544 1188">Solid Pressboard for Electrical Purposes -Specification</td> </tr> <tr> <td data-bbox="451 1188 708 1220">IS 1897: 2008</td> <td data-bbox="708 1188 1544 1220">Copper strip for electrical purposes</td> </tr> <tr> <td data-bbox="451 1220 708 1251">IS 2099:1986</td> <td data-bbox="708 1220 1544 1251">Specification for bushings for alternating voltages above 1000 volts</td> </tr> <tr> <td data-bbox="451 1251 708 1283">IS 2362:1993</td> <td data-bbox="708 1251 1544 1283">Determination of water content in oil by Karl in oil Fischer Method – Test Method.</td> </tr> <tr> <td data-bbox="451 1283 708 1314">IS 3024 : 2006</td> <td data-bbox="708 1283 1544 1314">Grain oriented electrical steel sheets and strips.</td> </tr> <tr> <td data-bbox="451 1314 708 1346">IS3347 (Part I): 1979</td> <td data-bbox="708 1314 1544 1346">Dimensions for Porcelain Transformer Bushings for Use in Normal and Lightly Polluted Atmospheres - Part 1 : Up to and including 1 kV</td> </tr> <tr> <td data-bbox="451 1346 708 1377">IS 3401 : 1992</td> <td data-bbox="708 1346 1544 1377">Specification of silica Gel</td> </tr> <tr> <td data-bbox="451 1377 708 1409">IS 4253: Part II: 1980</td> <td data-bbox="708 1377 1544 1409">Specification for cork composition sheets- Part II: Cork and Rubber.</td> </tr> <tr> <td data-bbox="451 1409 708 1440">IS 4257(Part I): 1981</td> <td data-bbox="708 1409 1544 1440">Dimensions for Clamping Arrangements for Porcelain transformer Bushings - Part I: For 12 kV to 36 kV Bushings.</td> </tr> <tr> <td data-bbox="451 1440 708 1472">IS 5082:1998</td> <td data-bbox="708 1440 1544 1472">Wrought Aluminum and Aluminum Alloy bars, Rods, Tubes, Sections, Plates and Sheets for Electrical Applications.</td> </tr> <tr> <td data-bbox="451 1472 708 1503">IS 5561 : 1970</td> <td data-bbox="708 1472 1544 1503">Specification for Electric Power Connectors.</td> </tr> <tr> <td data-bbox="451 1503 708 1535">IS 6103 : 1971</td> <td data-bbox="708 1503 1544 1535">Specification for Testing of specific resistance of electrical insulating liquids.</td> </tr> </tbody> </table>	Indian Standards (IS)	Title	IS 5 : 2007	Specification for Colors for ready mixed paints and enamels.	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IS 6262 : 1971	Method of test for power factor and dielectric constant of electrical insulating liquids.
IS 6600:1972	Guide for loading of Oil-immersed transformer.
IS 6792:1992	Method for Determination of Electric Strength of Insulating Oil.
IS 7404 (Part-1): 1991	Paper Covered conductors: Round Conductors.
IS 7421:1988	Specification for porcelain bushings for alternating voltages up to and including 1000kv.
BIS IS 8603 (Part-1): 2008	Dimensions for Porcelain Transformer Bushings for Use in Heavily Polluted Atmospheres - Part I: 12 /17.5 kV, 24kV and 36 kV Bushings.
IS 9335:1979	Specification for Cellulosic Papers for Electrical Purposes
IS 10028: 1981	Code of Practice for Selection, Installation and Maintenance of Transformers.
IS 11149:1984	Specification for rubber gaskets
IS 12444: 1988	Specification for continuously cast and rolled electrolytic copper wire rods for electrical conductors.
IS 13964: 1994	Methods of measurement of transformer and reactor sound levels.

IEC Standard	Title
IEC 60156: 1995	Method of determination of electric strength of insulating oils.
IEC 60296: 2003	Specification for unused mineral insulating oils for transformers and switchgear.
IEC 60529: 2001	Degrees of protection provided by enclosures (IP Code)
IEC 60076	Specification for power transformer.

Material conforming to other internationally accepted standards, which ensures equal or better quality than the standards mentioned above would be acceptable, subject to prior approval from Tata Power. In case the Bidders who wish to offer material conforming to the other standards, salient points of difference between the Standards adopted and the specific standards shall be clearly brought out in relevant schedule copy of such standards with authentic English Translation shall be furnished along with the offer. In the case of conflict the order of precedence shall be

- 1) Indian Standards,
- 2) IEC Standards
- 3) Other alternative standards.

3 CLIMATIC CONDITIONS OF THE INSTALLATION

1	Maximum ambient temperature	43 deg.C
2	Max. Daily average ambient temp	35 deg.C
3	Min Ambient Temperature	07 deg.C
4	Maximum Relative Humidity	100%
5	Minimum Relative Humidity	40%
6	Average No. of thunderstorm per annum	50
7	Average Annual Rainfall	2380mm
8	Average No. of rainy days per annum	115
9	Rainy months	June to Oct.
10	Altitude above MSL not exceeding	300 meters
11	Average Air Pressure	29.6-inch Hg

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		The atmosphere is generally laden with mild acid and dust in suspension during the dry months and is subjected to fog in cold months. The design of equipment and accessories shall be suitable to withstand seismic forces corresponding to an acceleration of 0.3 g. For Mumbai the atmosphere is mainly humid across year.
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4 GENERAL TECHNICAL REQUIREMENTS										
SR. No.	Description									
1	Continuous Rated Capacity (kVA)	315 kVA	400 kVA	500 kVA	630 kVA	800 kVA	1 MVA	1.25 MVA	1.6 MVA	2 MVA
2	Application	Outdoor								
3.A	System voltage (max.) (11kV)	12 kV								
3.B	System voltage (max.) (33kV)	36 kV								
4.A	Rated voltage HV (11kV)	11 kV								
4.B	Rated voltage HV (33kV)	33 kV								
5	Rated voltage LV (V)	433 V								
6.A	Line current HV(11kV) (A)	16.53	21.00	26.24	33.07	33.07	52.49	65.61	83.98	104.98
6.B	Line current HV(33kV) (A)	5.51	7.00	8.75	11.02	11.02	17.50	21.87	27.99	34.99
7.2	Line current LV (A)	420	533	667	840	1067	1333	1667	2133	2667
8	Frequency (Hz)	50 Hz								
9	No. of Phases	Three								
10	Connection HV	Delta								
11	Connection LV	Star (Neutral Brought out)								
12	Vector group	Dyn-11								
13	Type of cooling	ONAN								
14	Tap changing arrangement (off load)	+10.0% to -10% in steps of 2.5%								
15	No. of tap positions	9								
	Noise level at rated voltage and frequency (as per NEMA Tr-1)	56 dB	56 dB	56 dB	57 dB	57 dB	58 dB	60 dB	60 dB	61 dB
17	Permissible temperature rise over ambient:									
17.1	Of top oil measured by thermometer	40 °C								

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17.2	Of winding measured by resistance	45 °C								
18	Max. Total Losses at 100% loading at 75°C (watts) (11kV)	3100	3450	4300	5300	6403	7700	9200	11800	15000
19	Max. Total Losses at 50% loading) at 75°C (Watts) (11kV)	1025	1225	1510	1860	2287	2790	3300	4200	5050

Note:
For transformers having voltage class 33 kV the permissible total loss values shall not exceed by 7½ percent of the maximum total loss values mentioned in above table.(Cl. 18 & 19)

20	Short circuit impedance voltage at 75°C (±10% tolerance)	4.50%	4.50%	4.50%	4.50%	5%	5%	5%	6.25%	6.50%
21	Insulation Class	A								
22	Normal Flux Density(at rated voltage and frequency)	1.69 T (Max)								
23	Maximum flux density (Increase of +12.5% combined voltage and frequency variation from rated voltage and frequency)	1.9 T (Max.)								
24	Maximum current density (A/mm ²)	2.5 A/mm ²								
25.A	Impulse withstand voltage (11kV)	75 kVp								
25.B	Impulse withstand voltage (33kV)	170 kVp								
26.A	Power frequency withstand voltage(11kV)	28 kV								
26.B	Power frequency withstand voltage(33kV)	70 kV								
26.C	Power frequency withstand voltage (LV)	3 kV								
27	Voltage fluctuations permissible	+12.5% to -12.5%								
28	Neutral terminal	Two separate brought out neutral from main neutral bus bar, One for taking out the neutral for 4 wire system and other additional neutral for solid earthing.								
29	Minimum clearances in Cable Box (mm):									
29.A	HV phase to phase/ phase to earth (11kV)	130 / 80								

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29.B	HV phase to phase/ phase to earth (33kV)	350 / 220	
29.C	LV phase to phase/ phase to earth	25 / 20	
30	Wheels	The transformer shall be provided with four bi-directional rollers with locking arrangement suitable for rail gauges in both the axis for movement of transformer in either direction. Distance between wheels shall be center to center 820mm.	

5	GENERAL CONSTRUCTION	<ol style="list-style-type: none"> The transformer shall be double wound, copper coil, oil immersed, naturally cooled (ONAN) and non sealed type with plain rectangular tank. The transformer shall be suitable for service with fluctuations in supply voltage up to plus 12.5% to minus 12.5%. The transformer and accessories shall be designed to facilitate operation, inspection, maintenance and repairs. The design shall incorporate every precaution and provision for the safety of equipment as well as staff engaged in operation and maintenance of equipment. All outdoor apparatus, including bushing insulators with their mountings, shall be designed so as to avoid any accumulation of water. The transformer shall be designed suitable for service life of 25years.
5.1	CORE	<ol style="list-style-type: none"> Transformer core shall be stack type , constructed from high grade cold rolled, non-ageing, grain oriented, silicon steel lamination which shall be properly annealed (under inert atmosphere, if required) to relieve stresses. The core shall have low loss and good grain properties. It should be coated with hot oil proof insulation, bolted together with frames to prevent vibration and noise. Core laminations should be coated with hot oil proof, with insulation coating, an inorganic coating equivalent to C-5 type as ASTM A976 or IS 3024, like Carlite -3. All core should be clamped together with frames to prevent vibration and noise. The core clamping shall be preferably without through bolts and if any bolt used same shall be effectively insulated. The core thickness should be 0.23mm or less and grade should be M3 or better. All core clamping bolts (if any) shall be effectively insulated. Only one grade and one thickness of core shall be accepted and mixing of different grades shall not be allowed. The complete design of the core must ensure maximum permanency of the core losses without continuous working of the transformers. The value of the maximum flux density allowed in the design and grade of lamination used shall be clearly stated. The vendor shall submit the calculations in support of the same. The transformer shall be suitable for continuous service without damage under 'over fluxing' where the ratio of voltage over frequency exceeds the corresponding ratio at rated voltage and rated frequency up to 12.5% and the core shall not get saturated. The No Load current shall not exceed 2% of the Full Load current and will be measured by energizing the transformer at rated voltage and frequency. Increase of 12.5% of rated voltage shall not increase the no-load current by 5% maximum of full load current. The bidder shall be required to submit the following documents in regard to procurement of core material: <ol style="list-style-type: none"> Invoice of supplier Mill's test certificate Packing list Bill of landing

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		<p>5. Bill of entry certificate by custom</p> <p>6. Description of material, electrical analysis, physical inspection certificate for surface defects, thickness and width of material.</p> <p>13. The bidder shall offer the core for inspection and approval of Tata power during the manufacturing stage. Heavy penalty or black listing shall be imposed on the bidders using defective CRGO sheets.</p>																														
5.2	WINDING CONNECTIONS	<p>1. Primary and secondary windings shall be constructed from high- conductivity (copper conductors), Double Paper Covered (DPC) copper conductor with min.25% overlap per layer. Super enamel conductors are not accepted.</p> <p>2. The bidder shall submit characteristics of insulation paper with the offer.</p> <p>3. The current density for HV and LV winding should not be more than 2.5 Ampere per sq.mm.</p> <p>4. The insulation between core and bolts and core and clamps shall withstand 2.5 kV for one minute.</p> <p>5. Inter layer insulation both for HV and LV windings shall be Epoxy dotted Kraft paper and pressboard of standard make or any other superior material subject to approval of Tata Power.</p> <p>6. All spacers, axial wedges / runners used in windings shall be made of pre-compressed solid pressboard. In case of cross-over coil winding of HV all spacers shall be properly sheared, and dovetail punched to ensure proper locking. All axial wedges/runners shall be properly milled to dovetail shape so that they pass through the designed spacers freely. Insulation shearing, milling and punching operations shall be carried out in such a way, that there should not be any burr and dimensional variations. Proper bonding of inter layer insulation with the conductor shall be ensured. Test for bonding strength shall be conducted as per standards.</p> <p>7. LV winding shall be such that neutral formation is at the top.</p> <p>8. All turns of windings shall be adequately supported to prevent movement. The core/coil assembly shall be securely held in position to avoid any movement under short circuit conditions.</p> <p>9. The joints in the winding shall be avoided but if it is necessary then, these shall be properly brazed, and the resistance of the joints shall be less than that of parent conductor.</p>																														
5.3	LOSSES	<p>1. The bidder shall guarantee the total loss at 50% and 100% load condition (at rated voltage and frequency and at 75°C) and these should be within the limits of maximum total losses declared by Tata Power for both 50% and 100% loading values (as per table below).</p> <table border="1"> <thead> <tr> <th>Description</th> <th>315 kVA</th> <th>400 kVA</th> <th>500 kVA</th> <th>630 kVA</th> <th>800 KVA</th> <th>1 MVA</th> <th>1.25 MVA</th> <th>1.6 MVA</th> <th>2 MVA</th> </tr> </thead> <tbody> <tr> <td>Max. Total Losses at 100% loading at 75°C (watts) (11kV)</td> <td>3100</td> <td>3450</td> <td>4300</td> <td>5300</td> <td>6403</td> <td>7700</td> <td>9200</td> <td>11800</td> <td>15000</td> </tr> <tr> <td>Max. Total Losses at 50% loading) at 75°C (Watts) (11kV)</td> <td>1025</td> <td>1225</td> <td>1510</td> <td>1860</td> <td>2287</td> <td>2790</td> <td>3300</td> <td>4200</td> <td>5050</td> </tr> </tbody> </table> <p>Note:</p>	Description	315 kVA	400 kVA	500 kVA	630 kVA	800 KVA	1 MVA	1.25 MVA	1.6 MVA	2 MVA	Max. Total Losses at 100% loading at 75°C (watts) (11kV)	3100	3450	4300	5300	6403	7700	9200	11800	15000	Max. Total Losses at 50% loading) at 75°C (Watts) (11kV)	1025	1225	1510	1860	2287	2790	3300	4200	5050
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For transformers having voltage class 33 kV the permissible total loss values shall not exceed by 7½ percent of the maximum total loss values mentioned in above table.

No positive tolerance shall be allowed on the losses as mentioned above. However, bidder can offer losses less than specified but no consideration in cost will be given for the same.

2. The successful bidder shall guarantee the quoted losses for at least five years. If at any point of time during operation if it is found that the total losses at 50% and 100% load are more than the values given in specifications, then bidder shall be liable to pay a fine of Rs 250 per watt to the amount by which losses at 50% loading and 100% loading increase the values given in specifications.
3. During testing at Bidder's works if it is found that the actual measured losses are more than the values quoted by the Bidder, TATA POWER shall reject the transformer and shall have the right to reject the complete lot.
4. During testing at Bidder's works, if the temperature rise exceeds the specified values, the entire lot shall be rejected by TATA POWER.
5. During testing at Bidder's works, if the impedance values differ from the guaranteed values including tolerance, the transformer shall be rejected by TATA POWER.

5.4

TRANSFORMER TANK AND TANK CONSTRUCTION

1. The transformer tank shall be of robust construction, **rectangular in shape** and shall be built up of electrically tested welded mild steel plates.
2. The tank shall be fabricated by welding at corners. No horizontal or vertical joints in tank side walls and its bottom or top cover shall be allowed.
3. All welding operations should be carried by **qualified welders** (performance qualification certificates to the customer) as per the relevant ASME standards and a copy of the **welding procedure** has to be submitted to TATA POWER.
4. The **thickness of tank** should be as below:

Top and Bottom	6 mm (minimum)
For Sides	5 mm (minimum)

5. **The tolerances as per IS 1852 shall be applicable.**
6. In addition, the cover of the main tank shall be provided with an **air release plug**.
7. The tank plates shall be of such strength that the complete transformer when filled with oil may be lifted bodily by means of the lifting lugs provided. The top cover shall have no cut at point of lifting lug.
8. The transformer tank cover shall be bolted/clamped alternatively welded with tank rim to make a leak proof joint. The curb design shall be such that it is possible to remove the weld and re weld the tank at least two times.
9. The tank plate and lifting lugs shall be of such strength that the complete transformer filled with oil may be lifted by means of lifting shackle.
10. The tank cover shall have slight slope (10 mm ± 2mm) towards HV side to drain rainwater.
11. There must be sufficient space from the core to the top cover to take care of oil expansion. The oil volume inside the tank shall be such that even under the extreme operating conditions, the **pressure generated inside the tank does not exceed 0.4 kg/sq. cm positive or negative** and the tank shall be of adequate mechanical strength to withstand it.
12. The transformer should be capable of **withstanding 0.8kg/sq.cm and a vacuum of 0.7kg/sq.cm**. The permanent deflection of the flat plate, when the tank without oil is subjected to a vacuum of 525 mm of mercury shall not be more than the values specified:

Length of Plate	Deflection
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Up to 750 mm	5.0 mm
751 mm to 1250 mm	6.5 mm
1251 mm to 1750 mm	8.0 mm
Above 1750 mm	9.0 mm

13. The tank design shall be such that the core and the windings can be lifted freely without dismantling the bushings.
14. The tightening torque chart to be provided for all bolts used. Bolt grade 5.6 or higher TS. This shall be submitted along with each rating drawings.
15. An enclosure of MS with terminal block should be provided on tank body so as to facilitate the connection of energy meter to DT .Also, suitable holes with glands to be provided on bottom side of this box as incoming and outgoing for 10 core 2.5 sq.mm cable.
16. **Lifting Lugs:**
The transformer shall be provided with a minimum of four welded heavy duty enclosed lifting lugs of Structural steel E250 or better grade quality A (Minimum quality A) as per IS 2062 plate of minimum 16mm thickness and 165mm welding length on tank for lower rating 315 kVA. Minimum 20mm thickness and 165mm welding length on tank for 400kVA, 500kVA, Minimum 20mm thickness and 180mm welding length on tank 630kVA, Minimum 22mm thickness and 200mm welding length on tank for 1000kVA. This shall gradually increase for higher rating as per weight. These shall be reinforced with vertical supporting flat stiffener below lug up to stiffener angle. This shall have smooth min. 7mm welding on all sides. This is to be checked during routine testing of tank & stage inspections.
17. **All transformer lifting lug shall be painted with yellow colour.**
18. The location of lifting lugs shall be such that the clearance between lifting chain and nearest part of bushing or PRV or other part shall be at least 100 mm.
19. There shall be facilities for lifting the core coil assembly separately.
20. The lifting lugs shall be designed in such a way that any two diagonal lugs are capable of lifting two times of the total weight of the transformer. The design of should be such that it should be suitable for 120degree lifting rope angle as per ASME B30.9 and at any point of time the maximum stress allowed on the Lug martial shall be lesser than 82MPa as per ANSI C.57.12.10
21. Calculation sheet for Lifting lug design to be submitted by Bidder. The calculation shall include the Stress on lifting lug material and stress on welding both. The Stress on the welding should be less than 840kg/cm2 as per ANSI C.57.12.10. All calculation to be done for considering lifting on any diagonal opposite two lugs conditions.
22. The lifting lugs shall be located on the side walls only and conservator on LT box side. Separate drawing to be submitted stating welding thickness, welding length (min. 120mm for 160KVA and higher as per rating and load) and location on tank along with stiffener support for all rating and all lugs.
23. All joints of tank and fittings shall be oil tight and no bulging shall occur during service.
24. Inside of tank shall be painted with hot oil restraint paint and minimum oil level mark shall be embossed inside the tank (at 25° C).
25. Anti –theft stainless steel fasteners with breakaway nut shall be provided at top cover (minimum 4 no's at corners).
26. The maximum overall size of DTs(including tolerance) shall be as mentioned below:

Rating	Size (LXB) in mm
Up to 500KVA	1800 X 1800
630KVA, 800KVA, 1MVA	2200 X 2000
1.25MVA	2200 X 2000
1.6MVA	2400 X 2200
2 MVA	2500 X 2300

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5.5	RADIATORS	<ol style="list-style-type: none"> 1. Radiators of pressed steel type conforming to the design requirement shall be provided. 2. The Pressed Steel type should be used in vertical formation without any bending and should be individually tested for leakage and pressure test etc. before welding with the main tank. 3. Thickness of sheet for radiators shall be 1.20 mm (min). 4. The mounting of the radiators shall be non- detachable type (i.e., they should be welded permanently with the tank). 5. The number / cross section / length / fixing arrangement of radiators shall be indicated in the general assembly drawing. 6. Radiator thickness must be uniform without any dent or damage and also no bulging or concave should occur even after performing pressure/ vacuum test and temperature rise test. 7. Corrugated designs are not accepted. 						
5.6	GASKET	Nitrile / Neoprene / cork rubber gaskets conforming to Type III as per IS 11149/Type C as per IS 4253 (Part-2) shall be provided.						
5.7	TAPS	<ol style="list-style-type: none"> 1. Tap changing shall be carried out by means of an externally operated self-position switch and when the transformer is in de-energised condition. 2. The taps shall be provided in HV winding and each tap change shall result in voltage variation of 2.5%. 3. Switch position no.1 shall correspond to the maximum plus tapping (i.e., +10%) and position no.9 shall correspond to minimum tapping (i.e,-10%). 4. Provision shall be made for locking the tapping switch handle in position. Suitable plate shall be fixed for tap changing switch to know the position number of tap. 						
5.8	BUSHINGS	<p>HT Bushings:</p> <table border="1" data-bbox="451 1138 998 1207"> <tr> <td>11kV</td> <td>12kV</td> <td>250A</td> </tr> <tr> <td>33kV</td> <td>36kV</td> <td>250A</td> </tr> </table> <ol style="list-style-type: none"> 1. For Plinth mounted transformers: Transformer shall be with HT cable box on Sideways having porcelain rod bushing. Rods and nuts shall be made of tinned brass material. Bushing shall have creepage distance of 25mm/KV. 2. Tinned Copper busbar of 100mm long with 50mmx6mmSize: The tinned copper busbar to be provided on HV cable box one size shall fixed in bushing stud with tinned brass bolts and washers. Other side should have hole with M16 bolts for fixing of Lug. 3. All transformers shall be plinth mounted with HT side cable box, with bushing having creepage distance of 25mm/kV. <p>LT Bushings (1.1kV/suitable current rating):</p> <ol style="list-style-type: none"> 4. The bushings shall be of outdoor type made of porcelain/Epoxy material and rods and nuts shall be made of tinned copper material. 5. The metal portion of the internal HV & LV bushing inside the tank shall remain dipped in oil in all operating condition. 6. IS to be followed: IS 3347(Part-I) and IS 7421(latest amendment of IS). 7. The LV bushings shall be provided on the sideways along with cable box. 8. LT bushing to be rated for 1.1K V. 	11kV	12kV	250A	33kV	36kV	250A
11kV	12kV	250A						
33kV	36kV	250A						

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5.9

CABLE BOXES

1. All transformer ratings shall have HT & LT side cable box without any glands.
2. Cable boxes made up of Mild Steel with suitable handle and front cover shall be provided for both HV and LV side.
3. Water should not accumulate on cable boxes and proper slope shall be provided to ensure drainage of water.
4. Cable box protection should be IP 55.
5. HV and LV cable boxes shall be fixed on opposite sides on the tank with nuts and bolts (gasket placed in between them) in such a way that they can be completely removed whenever required.
6. Canopy shall be provided on all gasket joints covering each cable box. Canopy with extended top covers or bend in edges of covers overlapping gasket to protect gasket from rain and sunlight are accepted. On top cover edges with metallic lining also accepted.
7. Suitable cable clamping/cleating arrangements shall be provided to keep Cable straight and to support cables to avoid tension on bushings due to cable weight.
8. Non-magnetic Gland plates shall be provided for both HV and LV cable box drilled with suitable no. of holes required for installation (as mentioned below).
9. Gland plates shall be mounted separately with nut & bolt arrangement and gasket in between them.
10. Support for GI earth strip (65x10mm) shall be provided to avoid tension on secondary neutral bushing.
11. The size of the cable box cover should be moderate so that only 2 people is enough to lift it.

HV CABLE BOX

12. One part of the HV box shall be fixed on transformer and other parts/ cover shall be removable for cable termination.
13. Mild Steel earthing clamps shall be provided in the HV box to earth the armour of HV cable.
14. For 11kV, 3 C X 300 sq.mm and for 33kV, 3C, 400sq.mm XLPE Cable shall be used at HV side. HV box should be suitable for heat shrink of this cable. The distance between HV gland plate and HV bushings should be minimum 850 mm.
15. Standard Danger marking plate as per IS to be fixed on front of cover.
16. Earthing provision (Body earth) shall be provided in the HV box to earth the armour of HV cable.

LV CABLE BOX:

17. Neutral terminal of LV winding shall be brought out on LV phase terminals to form four wire system.
18. Epoxy Insulators shall be provided from top side in LV box to support LV busbar.
19. LV busbar shall be of AL material & shall have sufficient clearances between nut bolts with Lugs between each phases & phase and neutral.
20. The no. and size of cables for installation on LV side shall be as follows:

Transformer Rating	Size of cable for Phase & Neutral	No. of runs
315 kVA	4C x 300 sq. mm (1.1 kV Class)	2
400 kVA		3
500 KVA		3

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I		630 kVA		4									
		800 kVA		5									
		1 MVA		5									
		1.25MVA		7									
		1.6 MVA		8									
		2 MVA		10									
5.10	TERMINAL CONNECTORS	<p><u>HT TERMINAL CONNECTOR:</u></p> <p>1. All ratings shall be suitable for 3CX300 sq.mm XLPE for 11kV & 3CX400 sq.mm for 33kV shall be provided at HT side for cable connection.</p> <p><u>LT TERMINAL CONNECTOR:</u></p> <p>2. Tinned Brass palm connector (with suitable current rating), suitable bimetallic washer (between palm connector and Aluminum Busbar) and Aluminum busbar (current density: not more than 1 A/mm²) shall be provided.</p>											
5.11	EARTHING CONNECTIONS	<p><u>NEUTRAL EARTHING:</u></p> <p>1. Separate LV neutral bushing to be provided on top of LV box for neutral earthing.</p> <p>2. The for connecting LV neutral bushing shall be provided with 2 No's of 65x10 mm GI strip (The thickness of GI coating of neutral earthing strip shall be 60 microns (minimum)).</p> <p>3. At the bottom of the GI strips two concentric holes of 12 mm diameter shall be made and suitable nuts & bolts shall be provided for them.</p> <p>4. For neutral earthing & CT refer clause 5.31</p> <p><u>BODY EARTHING:</u></p> <p>5. Two body earthing terminals, located on the lower side of the transformer, diagonally opposite to each other of M12 size (taken 50mm out of tank) shall be provided on Transformer tank with Bolt.</p>											
5.12	EQUILISING/ EQUIPOTENTIAL STRIP	<p>1. The Transformer top cover shall be connected at two places (diagonally opposite with each other) with the tank by tinned copper strip (30mm wide, 0.7mm thick).</p> <p>2. The strip should touch bare surface of tank to ensure proper electrical connection of tank body with top cover with the strip.</p>											
5.13	OIL	<p>1. All transformers shall be filled with new, unused, clean, standard mineral oil in compliance with IS 335/ IEC 296 and shall be free from all traces of polychlorinated biphenyl (PCB) compounds. The use of recycled oil is not acceptable.</p> <p>2. Oil shall be filled under vacuum before filling it shall be filtered and tested (as per IS 6103). The test parameters should be as per the table below:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Test parameters</th> <th>Values</th> </tr> </thead> <tbody> <tr> <td>Break Down Voltage (min)</td> <td>60 kV</td> </tr> <tr> <td>Water content ppm, (max.)</td> <td>20 ppm</td> </tr> <tr> <td>Specific resistance (min.) (at 27°C)</td> <td>2.5 × 10¹² ohm-cm</td> </tr> </tbody> </table>				Test parameters	Values	Break Down Voltage (min)	60 kV	Water content ppm, (max.)	20 ppm	Specific resistance (min.) (at 27°C)	2.5 × 10 ¹² ohm-cm
Test parameters	Values												
Break Down Voltage (min)	60 kV												
Water content ppm, (max.)	20 ppm												
Specific resistance (min.) (at 27°C)	2.5 × 10 ¹² ohm-cm												
5.14	CONSERVATOR	<p>1. The conservator shall be supported / fixed on the main body of the transformer tank.</p>											

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		<ol style="list-style-type: none"> 2. The capacity of the conservator tank shall be designed keeping in view the total quantity of oil and its contraction and expansion due to temperature variations. The total volume of conservator shall be such as to contain 10% quantity of the oil used in transformer. Normally, at least 30% volume of conservator shall be filled with Oil. 3. The connecting pipe of the conservator shall be so fitted to transformer tank that the pipe can be detached from the tank. 4. Joint less pipe shall be used which shall be connected with round flanges. 5. The inside diameter of the pipe connecting the conservator to the main tank shall be within 25 to 50 mm and it should be projected into the conservator so that its end is approximately 20mm above the bottom of the conservator so as to create a sump for collection of impurities. The minimum oil level corresponding to -5°C should be above the sump level. 6. The conservator oil filling cap/hole shall be of 32mm diameter & female type cap to be provided. 7. 1MVA & above rating to be fixed with Buchholz relay between main tank and conservator. There shall be isolation valves on either side of Buchholz relay to replace the same in case of any abnormality after site installation. 8. Buchholz relay the pipe should not contain any right-angle elbows. Its diameter should correspond to the diameter of the hole for the passage of oil of the relay. The pipe must be arranged to slope upwards towards the conservator at an angle of about 2 to 4 degrees to the horizontal (max 5 degrees). The part of the pipe preceding the relay should be straight for a length equal to at least five pipe diameters; the part of the pipe leading to the conservator immediately adjacent to the relay should be straight for a length equal to at least three pipe diameters. <ol style="list-style-type: none"> 1. The Oil conservator shall be provided with: <ul style="list-style-type: none"> • Oil level indicator (as per clause no. 5.17). • Dehydrating breather (as per clause no. 5.21). • Drain plug and Oil filling hole (1.25 inch/32mm with thread size of BSP 1.25inch, 11TPI) with cover. • Detachable end plate on one side (the side on which the gauge glass is fitted), to enable the maintenance staff to periodically clean the inside of the conservator tank. <p>A rain shed should be provided on top portion of gasket joint.</p>	
5.15	OIL LEVEL INDICATOR	<ol style="list-style-type: none"> 1. Oil level indicator with prismatic glass shall be provided. The oil gauge glass shall be removable and so embodied in the end plate to prevent oil leakage. 2. The Oil level indicator should indicate oil level at minimum, normal and maximum as -5°C, 30°C and 90°C respectively. 	
5.16	Center of Gravity	The transformer should be designed in such a way that the centre of gravity of complete transformer with oil and with all accessories shall fall at the vertical centre at lower height such that the transformer should be stable on flat surface ground and while lifting at lifting hooks.	
5.17	EXPLOSION VENT / PRESSURE RELEASE DEVICE	<ol style="list-style-type: none"> 1. Explosion vent shall be provided on the top cover. 2. Double diaphragm with oil observation gauge (prismatic Type) shall be provided on explosion vent pipe. 3. All rating shall have PRV/PRD only. 4. PRV shall be provided to operate before reaching the test pressure as specified in the above class. 5. PRV shall not have air release arrangement. 6. The PRV shall seal-off after the excess pressure has been released and it shall have mechanical flag arrangement. 7. The PRV shall have NO, NC contacts. 	

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5.18	AIR RELEASE PLUG	The cover of the main tank shall be provided with an air release plug on all ratings.				
5.19	DRAIN VALVE AND FILTER VALVE	<ol style="list-style-type: none"> The drain valve and filter valve shall be of Brass with gate valve. The drain valve and filter valve shall have double round flanges. One side shall be fixed with tank and other side should be left open for oil filling/filtration purpose. The drain valve and filter valve shall be provided with embossed name plate stating drain valve and filter valve. The drain valve shall be located on the bottom and filter valve shall be provided at side top of tank. Locking arrangement shall be provided to stop movement of hand wheel. The valves shall be covered with a MS box by welding on tank. 				
5.20	DEHYDRATING BREATHER	<ol style="list-style-type: none"> The breather pipe shall enter the conservator from the upper side of the conservator. The breather shall contain 1 kg of silica gel upto 630 kVA, 2 kg of Silica gel from 700 to 1000 KVA & 3 KG from 1240 to 2000 KVA rating. The silica gel shall be eco-friendly orange colored as per IS: 3401 – 1992. It should be 3-4 Mesh size. The body of the breather shall be transparent UV protected seamless acrylic tube. The top cover shall be of die cast aluminum and powder coated or polyurethane painted. The oil cup shall be of UV protected acrylic or polycarbonate. Oil cup shall have marking of oil filling. Oil cup shall be removable from bottom only without opening breather top cover assembly. Lock shall be provided to achieve the same. Oil cup shall have metallic nut casted in body for fixing in central bolt. 				
5.21	OIL TEMPERATURE INDICATOR	<ol style="list-style-type: none"> Dial Type Oil temperature indicator shall be provided on the top cover of the transformer. It should be suitable for outdoor mounting with maximum indicator pointer. Fixing union shall be of female thread. Dial size : 100 mm (dial should be made up of stainless steel) Range: 0- 120 °C, Accuracy: ± 2 °C. For 1 MVA & above rating, The OTI to be placed in marshalling box & It should have alarm and trip contacts at predetermined temperatures. For Tata Power Mumbai all rating shall have OTI with alarm & trip contacts and to be placed in marshalling box. 				
5.22	FASTENERS	<ol style="list-style-type: none"> All the bolts or studs shall be at least 6 mm in diameter except when used for small wiring terminals. All nuts/bolts/washers exposed to atmosphere shall be as follows: <table border="1" style="margin-left: 40px;"> <tr> <td>Size 12mm (or below)</td> <td>Stainless Steel</td> </tr> <tr> <td>Above 12mm</td> <td>Steel with antirust coating ,Hot dip galvanized</td> </tr> </table> All ferrous bolts, nuts and washers placed in outdoor positions shall be hot dip galvanized to prevent corrosion (except high tensile steel bolts and spring washers which shall have electrolytic action between dissimilar metals). In case the galvanization is removed due to welding or manufacturing, the parts should be properly cleaned and painted to avoid exposure to atmosphere. Each bolt shall project at least one thread but more than three threads through the nut. If bolts and nuts are placed so that they are inaccessible by means of ordinary spanners, special spanners shall be provided. The length of the screwed portion of the bolts shall be such that no screw thread may form part of a shear plane between members. Taper washers shall be provided where necessary. Protective washers of suitable material shall be provided on front and back of the securing screws. 	Size 12mm (or below)	Stainless Steel	Above 12mm	Steel with antirust coating ,Hot dip galvanized
Size 12mm (or below)	Stainless Steel					
Above 12mm	Steel with antirust coating ,Hot dip galvanized					

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5.23	SURFACE PREPARATION AND PAINTING	<ol style="list-style-type: none"> The paint shall be applied by airless spray. Steel surfaces shall be prepared by shot blast cleaning (IS-9954) to grade Sq.2.5 of ISO 8501-1 or chemical cleaning including phosphating of the appropriate quality (IS 3618). Heat resistant (Hot oil proof) paint shall be used for the inside surface and whereas for external surface one coat of thermosetting powder paint or one coat of epoxy primer (zinc chromate) followed by two coats of polyurethane (P.U.) base paint. as per table given below: <table border="1" data-bbox="483 451 1458 741"> <thead> <tr> <th>Sr. No.</th> <th>Paint type (should be UV restraint, non-fading)</th> <th>Area to be painted</th> <th>No of coats</th> <th>Total dry film thickness (min); micron</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Thermosetting powder paint</td> <td>Inside Outside</td> <td>01 01</td> <td>30 60</td> </tr> <tr> <td>2.</td> <td>Liquid Paint</td> <td></td> <td></td> <td></td> </tr> <tr> <td>a.</td> <td>Epoxy (primer)</td> <td>Outside</td> <td>01</td> <td>30</td> </tr> <tr> <td>b.</td> <td>P.U. Paint (finish paint)</td> <td>Outside</td> <td>02</td> <td>25 (each)</td> </tr> <tr> <td>c.</td> <td>Hot oil resistant paint</td> <td>Inside</td> <td>01</td> <td>35</td> </tr> </tbody> </table> <p>The two coats shall be of oil and weather-resistant nature with final coat as glossy and non-fading paint of shade 631 as per IS 5 or RAL 7032.</p> The dry film thickness shall not exceed the specified minimum dry film thickness by more than 25%. Any damaged part shall be cleaned to bare metal with an area extending 25 mm around its boundary. A priming coat shall be immediately applied followed by full paint finish equal to that originally applied and extending 50 mm around the perimeter of the original damage. The repainted surface shall present a smooth surface which shall be obtained by carefully chamfering the paint edges before and after priming. Painting shall not affect by weather changes & performance against pilling out or fading etc. to be guaranteed for 5 Years. 	Sr. No.	Paint type (should be UV restraint, non-fading)	Area to be painted	No of coats	Total dry film thickness (min); micron	1.	Thermosetting powder paint	Inside Outside	01 01	30 60	2.	Liquid Paint				a.	Epoxy (primer)	Outside	01	30	b.	P.U. Paint (finish paint)	Outside	02	25 (each)	c.	Hot oil resistant paint	Inside	01	35
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5.24	RADIO INTERFERENCE	When operated at voltages up to 12.5% in excess of the normal system rating, transformers shall be substantially free from partial discharges (i.e. corona discharges in either internal or external insulation) which are likely to cause interference with radio or telephone communication.																														
5.25	OVERLOAD CAPACITY	The transformer shall be suitable for loading as per IS 6600.																														
5.26	PACKING	<ol style="list-style-type: none"> Transformers shall be delivered filled with oil and supplied with all accessories mounted. Screws and bolts shall be thoroughly tightened to ensure no leakage of oil. Bidder shall ensure that all the equipment covered under this specification shall be prepared for rail/road transport in a manner to protect the equipment from damage in transit. No single use plastic to be used in packing material. Packing should be done with environment friendly recyclable materials. 																														
5.27	FITTINGS	<p>The following standard fittings shall be provided:</p> <ol style="list-style-type: none"> Two earthing terminals with earthing symbol \perp for body earthing. Air Release Device. Thermometer Pocket with cap. Inspection Cover. Drain cum Sampling Valve (Double Flanged) and (0.75 inch nominal size thread, IS 554) with locking arrangement and a valve cover made of M.S.steel. Non Return Valve. Pressure relief device or explosion vent. Radiators. HV and LV cable Boxes. 																														

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		<ol style="list-style-type: none"> 10. HV and LV Bushings. 11. Terminal Connectors for HV/LV side (palm connector, suitable bimetallic washer, Al busbar and Al lugs). 12. HV and LV Gland plates (Non-Magnetic) (with Brass glands for TPDDL, Delhi). 13. Conservator with Dehydrating Breather. 14. Prismatic Oil level Gauge. 15. Lifting lugs for the top cover, complete transformer as well as for core and winding assembly. 16. Pulling Lugs. 17. Jacking Pads. 18. Stiffener Angle. 19. 2 Base channels. 20. 4 No. Bidirectional rollers with locking arrangement. 21. Marking Plates as asked in clause 6.1 22. Magnetic Oil level Gauge, Oil Temperature indicator with alarm & trip, Magnetic Reed type Buchholz relay and Winding Temperature Indicator. 23. Marshalling Box with stud type terminals. 24. Two GI strip for neutral earthing with minimum GI coating thickness of 86 microns. Size of GI strip shall be, 65x10mm 																								
<p>5.28</p>	<p>WINDING TEMPERATURE INDICATOR (WTI)</p>	<ol style="list-style-type: none"> 1. WTI shall be provided in one winding of LV phase. 2. WTI shall be indicating type, responsive to the combination of top oil temperature and winding current, calibrated to follow the hottest spot temperature of the transformer winding. 3. WTI shall operate a remote alarm and trip in the event of attaining the predefined temperature. 4. In addition, pocket with heater coil along with Resistance Temperature Indicator (RTD) shall be provided for WTI and OTI. CT for RTD for winding hot spots shall be provided. 																								
<p>5.29</p>	<p>BUCHHOLZ RELAY</p>	<ol style="list-style-type: none"> 1. Magnetic Reed type Buchholz relay shall be provided with alarm and tripping contacts to detect accumulation of gas. 2. The installation shall be fixed and weather proof to avoid any water seepage inside the relay. 3. Round flange of nominal pipe bore of 50mm diameter shall be used. 																								
<p>5.30</p>	<p>MARSHALLING BOX AND PROTECTION</p>	<ol style="list-style-type: none"> 1. Marshalling Box of suitable size, made up of Mild Steel and with theft proof locking arrangement shall be provided. 2. Marshalling box shall have IP 55 protection. 3. Marshalling Box shall have provision for wiring the WTI, OTI, MOG, PRV, Buchholz relays. The terminals shall be provided as per table below. Standard TB links along with terminal markings will be provided separately at the time of drawing approval stage. <table border="1" data-bbox="493 1430 1435 1791"> <thead> <tr> <th>Element</th> <th>Alarm</th> <th>Trip</th> </tr> </thead> <tbody> <tr> <td>Oil Temperature Indicator</td> <td>NO,NC,COM</td> <td>NO,NC,COM</td> </tr> <tr> <td>Winding Temperature Indicator HT Side</td> <td>NO,NC,COM</td> <td>NO,NC,COM</td> </tr> <tr> <td>Winding Temperature Indicator LT Side</td> <td>NO,NC,COM</td> <td>NO,NC,COM</td> </tr> <tr> <td>Buchholz</td> <td>NO,NC,COM</td> <td>NO,NC,COM</td> </tr> <tr> <td>Magnetic Oil Level Gauge</td> <td>NO,NC,COM</td> <td></td> </tr> <tr> <td>PRV</td> <td>NO,NC,COM</td> <td></td> </tr> <tr> <td>Spare TB</td> <td>4 No.</td> <td></td> </tr> </tbody> </table> <ol style="list-style-type: none"> 4. WTI/OTI meter shall be wired/ installed in the marshalling box. 	Element	Alarm	Trip	Oil Temperature Indicator	NO,NC,COM	NO,NC,COM	Winding Temperature Indicator HT Side	NO,NC,COM	NO,NC,COM	Winding Temperature Indicator LT Side	NO,NC,COM	NO,NC,COM	Buchholz	NO,NC,COM	NO,NC,COM	Magnetic Oil Level Gauge	NO,NC,COM		PRV	NO,NC,COM		Spare TB	4 No.	
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		<ol style="list-style-type: none"> 5. 10 core PVC wire (4 sq.mm Cu FRLS PVC stranded panel wires) shall be used to terminate connections from CTs at LV side to the Marshalling box. 6. Plastic ferrules engraved with black letters shall be used to mark the wires in the marshalling box. 7. Wiring in Marshalling box shall be done by 2.5 sq.mm Cu FRLS PVC stranded panel wires. 8. All the cables and conduits between the transformer and control cabinet shall be included in the scope of supply by the bidder.
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5.31	MAKE OF MAJOR COMPONENTS & RAW MATERIALS	<p>The BA shall procure the following constituent items from the designated vendors as follows:</p> <table border="1" data-bbox="451 552 1520 1121"> <thead> <tr> <th data-bbox="451 552 570 615">Sr.no</th> <th data-bbox="570 552 948 615">RAW MATERIAL/EQUIPMENT</th> <th data-bbox="948 552 1520 615">MAKE</th> </tr> </thead> <tbody> <tr> <td data-bbox="451 615 570 653">1</td> <td data-bbox="570 615 948 653">Transformer Raw Materials</td> <td data-bbox="948 615 1520 653"></td> </tr> <tr> <td data-bbox="451 653 570 716">a)</td> <td data-bbox="570 653 948 716">Copper</td> <td data-bbox="948 653 1520 716">M/S Sterlite, M/S Hindustan Copper, M/S Hindalco or equivalent on approval of bidder.</td> </tr> <tr> <td data-bbox="451 716 570 810">b)</td> <td data-bbox="570 716 948 810">Core</td> <td data-bbox="948 716 1520 810">M/S AK Steels, POSCO, Kawasaki/ JFE, Nippon Steel or equivalent on approval of bidder.</td> </tr> <tr> <td data-bbox="451 810 570 905">c)</td> <td data-bbox="570 810 948 905">Insulation paper</td> <td data-bbox="948 810 1520 905">Raman Boards- Mysore, Senapathy Whiteley – Bangalore or equivalent on approval of bidder.</td> </tr> <tr> <td data-bbox="451 905 570 968">d)</td> <td data-bbox="570 905 948 968">Transformer Oil</td> <td data-bbox="948 905 1520 968">Savita, Apar, Gandhar or equivalent on approval of bidder.</td> </tr> <tr> <td data-bbox="451 968 570 1031">e)</td> <td data-bbox="570 968 948 1031">Gaskets & Corks</td> <td data-bbox="948 968 1520 1031">Nu Cork, Anchor Corks or equivalent on approval of bidder.</td> </tr> <tr> <td data-bbox="451 1031 570 1121">f)</td> <td data-bbox="570 1031 948 1121">Steel For Tank</td> <td data-bbox="948 1031 1520 1121">M/S TISCO, M/S SAIL, M/S Bhushan Steel, M/S ISSCO, M/S RINL, M/S Jindal Steel or equivalent on approval of bidder.</td> </tr> </tbody> </table> <p>Bidder has to provide all test certificates from original manufacturers & relevant sourcing documents. BA shall also have shot blasting facility.</p>	Sr.no	RAW MATERIAL/EQUIPMENT	MAKE	1	Transformer Raw Materials		a)	Copper	M/S Sterlite, M/S Hindustan Copper, M/S Hindalco or equivalent on approval of bidder.	b)	Core	M/S AK Steels, POSCO, Kawasaki/ JFE, Nippon Steel or equivalent on approval of bidder.	c)	Insulation paper	Raman Boards- Mysore, Senapathy Whiteley – Bangalore or equivalent on approval of bidder.	d)	Transformer Oil	Savita, Apar, Gandhar or equivalent on approval of bidder.	e)	Gaskets & Corks	Nu Cork, Anchor Corks or equivalent on approval of bidder.	f)	Steel For Tank	M/S TISCO, M/S SAIL, M/S Bhushan Steel, M/S ISSCO, M/S RINL, M/S Jindal Steel or equivalent on approval of bidder.
Sr.no	RAW MATERIAL/EQUIPMENT	MAKE																								
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a)	Copper	M/S Sterlite, M/S Hindustan Copper, M/S Hindalco or equivalent on approval of bidder.																								
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5.32	INSULATING PAPER AND INSULATING PRESSBOARD	<ol style="list-style-type: none"> 1. Inter layer insulation both for HV and LV windings shall be Epoxy diamond dotted Kraft paper and compressed pressboard of make (refer Clause no.5.32) subject to approval of TPC. Primary and secondary windings shall be constructed from high-conductivity (copper conductors), Double Paper Covered (DPC) copper conductor with min. 30% overlap per layer of paper & TPC with 25% overlap per layer. 2. Kraft paper and Pressboard should be made of pure Cellulose from soft wood pulp manufactured from sulphate process. No additive, adhesive or coloring matter shall be present. 3. Kraft paper and Pressboard should be of class A (105°C) insulation material. 4. All spacers, axial wedges / runners used in windings shall be made of pre-compressed solid pressboard. 5. All axial wedges/runners shall be properly milled to dovetail shape so that they pass through the designed spacers freely. 6. Insulation shearing, milling and punching operations shall be carried out in such a way, that there should not be any burr, sharp edges and dimensional variations. 7. Kraft paper self-adhesive tape to be used for bonding of insulating paper layer, spanner and paperboards that are immersed in the oil filled transformer. 8. Below required values could be verified if required at any stage of the inspection and
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it should fulfill the requirement as per below table:

Characteristics	Kraft Paper	Pressboard (all Sizes)
1. Dimension	As specified by bidder with $\pm 5\%$ tolerance.	As specified by bidder with tolerance as per IS1576.
2. Apparent Density	>0.80 g/cm ³	as per IS 1576 w.r.t Thickness
3. pH of Aqueous extract	6-8%	6-8%
4. Electrical strength i) in air ii) In Oil	7KV/mm -----	12KV/mm 35KV/mm
5. Ash content	Maximum 1%	Maximum 0.7
6. Moisture content	Maximum 8%	Maximum 8%
7. Oil absorption	-----	Minimum 9%
8. Heat stability	As per IS 9335-part 3	As per IS 1576
9. Tear index	As per IS 9335-part 3	As per IS 1576

Bidder has to submit the test certificates as per IS-9335, IS-1576 for all type of insulating materials covering above stated parameters along with below parameters during stage inspection :

1. Substance (Grammage) (g/m³)
2. Compressibility
3. Tensile strength
4. Conductivity of water extract
5. Shrinkage in air
6. Flexibility
7. Cohesion between plies1.
8. Elongation
9. Air permeability

Bidder shall provide the below details in below table

Sr. No.	Description	Unit	As furnished by bidder
1	DPC Paper for HV and LV conductor.		
	Type of DPC Paper		
	Make of DPC Paper		
	Thickness DPC Paper	mm	
	Percentage Overlapping (not less than 60%)	%	
2	Type of paper for interlayer insulation		
	Make of paper for interlayer insulation		
	Thickness of Paper for Interlayer Insulation	mm	
3	Type of Paper for Insulation Between HV and LV winding		
	Make of Paper for Insulation Between HV and LV winding		

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			Thickness of Paper for Insulation Between HV and LV winding (for all sizes)	mm	
		4	Type of Pressboards used for Insulation Between HV and LV winding		
			Make of Pressboards used for Insulation Between HV and LV winding		
			Thickness of Pressboards for Insulation Between HV and LV (all size)	mm	
		5	Type of Paper used for insulation between core and LV		
			Make of Paper used for insulation between core and LV		
			Thickness of Paper used for insulation between core and LV (All sizes)	mm	
		6	Type of Pressboard used for insulation between core and LV		
			Make of Pressboard used for insulation between core and LV		
			Thickness of Pressboard used for insulation between core and LV (All sizes)	mm	
		7	Material used for top and bottom yoke insulation		
			Make of material used for top and bottom yoke insulation		
			Thickness of material used for top and bottom yoke insulation	mm	
		8	Type of material used for spanner, wedge, and Axial for insulation.		
			Thickness of material used for spanner, wedge, and Axial for insulation.	mm	
6.0	NAME PLATE AND MARKING				

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6.1

**MARKING
PLATES**

1. **Name Plate (Rating) Plate :**
A rating plate shall be fitted to each transformer in a visible position and shall carry all the information as **specified in clause no. 6.2**
2. **Terminal Marking Plate :**
 - The terminal marking plate shall be provided which shall be strictly in accordance with **figure 4 of IS 1180-Part 1: 2014**. This plate may be combined with the rating plate or can be provided separately.
 - Value of short circuit impedance on extreme tapping and on principal tapping and indication of winding to which impedance is related has to be displayed additionally.
3. **Details Plate:**
A separate plate of **size 125 mm x 125 mm** shall be provided having following details:
 - Name of the firm.
 - Serial No.
 - Rating of transformer.
 - Order no. and date.
 - Date of dispatch.
4. **Guarantee Plate:**
A separate warranty plate made of **Stainless Steel** with following clause written on it.

“THE EQUIPMENT GUARANTEED UPTO A PERIOD OF 48 MONTHS FROM THE DATE OF COMMISSIONING OR 60 MONTHS FROM THE DATE OF LAST SUPPLY”

All the plates described above (clause 1 to 4) should be as followings:

Material	Stainless Steel
Thickness	1 mm
Engraving	The letters on the rating plate shall be engraved black on the white/silver back ground.
Fixing	Fixing screws shall be of stainless steel.
5. **Danger Plate:**
Danger notice shall have red lettering on a white background on a plate as specified in **IS: 2551 – 1982**.
6. **BIS Certification Mark:**
The Bidder is required to get approval from BIS and display BIS mark on the name plate.
7. **BEE LABEL:**
A label shall be affixed on the front of the distribution transformer near the name plate, so as to be prominently visible. The label shall be non-detachable weather proof type with the following particulars shall be displayed on its label, namely:
 1. the logo of the Bureau of Energy Efficiency
 2. that the equipment is a distribution transformer
 3. that it is an oil filled, naturally cooled type
 4. name of the manufacturer and brand
 5. Capacity in KVA as tested
 6. Voltage is up to 11 KV
 7. Total losses at 50% loading in watts
 8. Total losses at 100% loading in watts
 9. Star level

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		<p>10. Model and year of manufacturing. 11. Bureau's authorisation number</p> <p>8. <u>Control Circuit drawing Plates:</u></p> <ul style="list-style-type: none"> Engraved drawing for control circuit unit shall be available on Marshalling box. <p>The design, colour, size and content of label shall be as specified in the schedule annexure IV.</p> <p>Logo Size – 300mm X 300mm.</p> <div data-bbox="451 596 1533 1520" style="border: 1px solid black; padding: 10px;"> <p>Relationship between the two marks- size</p> <p>The Tata and Tata Power Marks are always used in conjunction with each other, never appearing in isolation on Tata Power communication.</p> <p>The height of the letter T of Tata (T-height) is the basic measure for all sizes and proportions.</p> <p>The rounded measure 2T in height, is separated from the Tata lettering by a distance of 1/2T.</p> <p>The T height of both, the Tata and the Tata Power Marks is to be the same, except in exceptional cases on approval from the Corporate Communications team.</p> <div style="text-align: right;">  </div> <p style="text-align: right;">Centre aligned - Stacked (Preferred)</p> <p>Relationship between the two marks- positioning</p> <p>The two marks can appear stacked, which is the preferred placement, or linear, by the side of one another.</p> <div style="text-align: right;">  </div> </div>
6.2	NAME PLATE DETAILS	<p>The name plate shall be strictly as per IS 1180: 2014 (figure 1). Additionally, following points shall be displayed :</p> <ol style="list-style-type: none"> Actual no load losses of transformer. Actual total losses of transformer at 50% load and 100% load. Standard mark (BIS certification). For Tata Power, Mumbai - "PROPERTY OF Tata Power Company" shall be written in bold letters. PO number with date has to be mentioned. Overall dimensions of the transformer.

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6.3	MARKING	<ol style="list-style-type: none"> 1. All transformers shall have HV phase windings marked in both, the terminal boards inside the tank and outside with capital letter 1U, 1V, 1W. The LV winding for the same phase shall be marked by corresponding small letter 2u, 2v, 2w. The neutral point terminal shall be indicated by the letter 2n. 2. The markings shall be done by steel strips in which marks had been engraved in black colour. 3. Colour marking of the bushings shall be done. 4. On the top cover of tank and the core channel, Manufacturer's name and Manufacturer's serial no. shall be engraved. 		
7.0	TESTS	All routine, acceptance & type tests shall be carried out in accordance with the IS 2026 and IS 1180: Part-1 (2014). All routine & type tests shall be witnessed by the TATA POWER/his authorized representative. All the components shall also be type tested as per the relevant standards. Following tests shall be necessarily conducted on the Distribution Transformers in addition to others specified in IS/IEC standards.		
7.1	TYPE TEST	<ol style="list-style-type: none"> 1. Lightning Impulse Test [As per IS 2026 (Part 3)]. 2. Temperature Rise Test [As per IS 2026 (Part 2)]. NOTE: Maximum measured total loss (No load at Rated excitation load loss at maximum current tap converted to 75°C reference temperature) at 100 percent loading shall be supplied during temperature rise test. 3. Short Circuit Withstand test [As per IS 2026 (Part 5)]. NOTE: Routine tests before and after short circuit test shall be conducted as per IS 2026(Part 1). 4. Pressure Test [As per IS 1180: Part 1 (2014)]. <p>Note: - Out of the above mention type test, the tests under sr. no. 1, 2, and 3 shall be conducted at CPRI/ERDA labs and the balance test shall be acceptable as in- house tests.</p>		
7.2	ROUTINE TEST	<ol style="list-style-type: none"> 1. Measurement of Winding Resistance at each tap [As per IS 2026 (Part 1)]. 2. Measurement of voltage ratio, check of voltage displacement, polarity, phase sequence and vector group [As per IS 2026 (Part 1)]. 3. Measurement of short circuit impedance (principal tapping, when applicable) and load loss at 50% and 100% load [As per IS 2026 (Part 1)]. 4. Measurement of insulation resistance [As per IS 2026 (Part 1)]. 5. Induced over voltage withstand test [As per IS 2026 (Part 3)]. 6. Separate Source voltage withstand test [As per IS 2026 (Part 3)]. 7. Pressure test [As per IS 1180: Part 1] 8. Oil leakage test [As per IS 1180: Part 1] 9. Measurement of no load losses and magnetizing current at rated frequency and 90%, 100% and 112.5% of rated voltage. [As per IS 2026 (Part 1)]. 10. Vacuum withstand test on tanks and radiators. 11. All CT's and resistance of image coil for WTI shall be checked for ratio test, polarity and knee point voltage. 12. Oil sample Test (as per IS 335). 		
7.3	ACCEPTANCE TEST	<ol style="list-style-type: none"> a. Temperature Rise Test (on one unit of every lot offered for inspection for each rating). b. Oil leakage test [As per IS 1180: Part 1] c. The painted surface shall pass the Cross Adhesion Test, Impact Test and Hardness Test. d. Checking of weight, dimensions, fitting and accessories, tank sheet thickness, oil quantity, material finish and workmanship, physical verification of core coil assembly and measurement of flux density on one unit of each rating of the offered lot with reference to the GTP and contract drawings. e. Vector group test f. Calibration of WTI and OTI. 		

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		<p>g. At least 10% transformer of the offered lot (minimum of one) shall be subjected to all the tests mentioned under the section 'ROUTINE' in presence of TATA POWER's representative at the place of manufacture before dispatch without any extra charges. The testing shall be carried out in accordance with IS: 1180 and IS: 2026.</p> <p>h. Device Trails & tests for 1MVA & above (Buchholz trip, Buchholz alarm, PRV trip, WTI Alarm, WTI trip, OTI trip and OTI Alarm).</p> <p>i. Magnetic Balance Test on HV & LV side, with magnetizing current HV and LV side.</p>	
8.0	TYPE TEST CERTIFICATES	<p>The Bidder shall furnish the type test certificates of the Transformer for the tests as mentioned above as per the corresponding standards. All the tests shall be conducted at CPRI / ERDA as per the relevant standards. Type tests should have been conducted in certified Test laboratories during the period not exceeding 5 years from the date of opening the bid. In the event of any discrepancy in the test reports, i.e. any test report not acceptable or any/all type tests (including additional type tests, if any) not carried out, same shall be carried out without any cost implication to TATA POWER.</p>	
9.0	PRE-DESPATCH INSPECTION	<ol style="list-style-type: none"> Equipment shall be subject to inspection by a duly authorized representative of the TATA POWER. Inspection may be made at any stage of manufacture at the option of the purchaser and the equipment if found unsatisfactory as to workmanship or material, the same is liable to rejection. Bidder shall always grant free access to the places of manufacture to TATA POWER's representatives when the work is in progress. Inspection by the TATA POWER or its authorized representatives shall not relieve the supplier of his obligation of furnishing equipment in accordance with the specifications. Material shall be dispatched after specific MDCC (Material Dispatch Clearance Certificate) is issued by TATA POWER. following documents shall be sent along with material: <ol style="list-style-type: none"> Test reports MDCC issued by TATA POWER Invoice in duplicate Packing list Drawings & catalogue Guarantee / Warrantee card Delivery Challan. Other Documents (as applicable) To ascertain the quality of the transformer oil, the original manufacturer's tests report shall be submitted at the time of inspection. Arrangements shall also be made for testing of transformer oil, after taking out the sample from the manufactured transformers and tested in the presence of TATA POWER's representative. In respect of raw material such as core stampings, winding conductors, insulating paper and oil, bidder shall use materials manufactured/supplied by standard manufacturers and furnish the manufacturers' test certificate as well as the proof of purchase from these manufacturers (excise gate pass) for information of the TATA POWER. The bidder shall furnish following documents along with their offer in respect of the raw materials: <ol style="list-style-type: none"> Invoice of supplier. Mill's certificate Packing List. Bill of Landing Bill of entry certificate by custom. To ensure about the quality of transformers, the inspection shall be carried out by the TATA POWER's representative at following two stages: <ol style="list-style-type: none"> Online anytime during receipt of raw material and manufacture/assembly whenever the TATA POWER desires. 	

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		<p>2. At finished stage i.e. transformers are fully assembled and are ready for dispatch.</p> <p>6. The stage inspection shall be carried out as per Annexure-I.</p> <p>7. After the main raw-material i.e. core and coil material and tanks are arranged and transformers are taken for production on the shop floor and a few assembly have been completed, the Bidder shall intimate the TATA POWER in this regard, so that an officer for carrying out such inspection could be deputed, as far as possible within seven days from the date of intimation. The inspection shall be done as per the format given in Annexure – II. During the inspection, the bidder shall also furnish the information regard various components as per Annexure – III.</p> <p>8. During the stage inspection a few assembled core shall be dismantled (only in case of CRGO material) to ensure that the CRGO laminations used are of good quality. Further, about the readiness of the transformers, for final inspection for carrying out tests as per relevant IS/IECs shall be sent by the Bidder along with routine test certificates. The inspection shall normally be arranged by the TATA POWER at the earliest after receipt of offer for pre-delivery inspection.</p> <p>9. All tests and inspection shall be carried out at the place of manufacture unless otherwise specifically agreed upon by the manufacturer and TATA POWER at the time of purchase. The manufacturer shall offer the inspector representing the TATA POWER all reasonable facilities, without charges, to satisfy him that the material is being supplied in accordance with this specification. This will include Stage Inspection during manufacturing stage as well as Active Inspection during Acceptance Tests.</p> <p>10. The bidder shall provide all services to establish and maintain quality of workmanship in his works and that of his sub-contractors to ensure the mechanical / electrical performance of components, compliance with drawings, identification and acceptability of all materials, parts and equipment as per latest quality standards of ISO 9000.</p> <p>11. The TATA POWER has the right to have the test carried out at his own by an independent agency wherever there is a dispute regarding the quality supplied. TATA POWER has right to test 1% of the supply selected either from the stores or field to check the quality of the product. In case of any deviation TATA POWER have every right to reject the entire lot or penalize the bidder, which may lead to blacklisting, among other things.</p> <p>12. TATA POWER also reserves the right to inspect the tank of transformer before surface preparation and painting. The same shall be informed to TATA POWER accordingly.</p>	
10.0	INSPECTION AFTER RECEIPT AT STORE	<p>1. The material received at the TATA POWER store shall be inspected for acceptance and shall be liable for rejection, if found different from the reports of the pre-dispatch inspection.</p> <p>2. In case the transformers proposed for supply against the order are not exactly as per the tested design, the Bidder shall be required to carry out the short circuit test and impulse voltage withstand test at its own cost in the presence of the representative of TATA POWER.</p> <p>3. The supply shall be accepted only after such test is done successfully, as it confirms on successful withstand of short circuit and healthiness of the active parts thereafter on un-tanking after a short circuit test.</p> <p>4. Apart from dynamic ability test, the transformers shall also be required to withstand thermal ability test or thermal withstand ability will have to be established by way of calculations.</p> <p>5. TATA POWER reserves the right to conduct all tests on Transformer after arrival at site / stores and the manufacturer shall guarantee test certificate figures under actual service conditions.</p> <p>6. TATA POWER reserves the right to conduct short circuit test and impulse voltage withstand test in accordance to IS, afresh on each ordered rating at purchaser cost, even if the transformer of the same rating and similar design are already tested. This test shall be carried out on a transformer to be selected TATA POWER either at the manufacturer's works when they are offered in a lot for supply or randomly from the supplies already made to TATA POWER stores. The findings and conclusions of these tests shall be binding on the bidder.</p>	

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11.0	GUARANTEE:	<ol style="list-style-type: none"> Bidder shall stand guarantee towards design, materials, workmanship & quality of process/manufacturing of items under the contract for due and intended performance of the same, as an integrated product delivered under this contract. In the event any defect is found by the Purchaser up to a period of 48 months from the date of commissioning or 60 months from the date of last supplies made under the contract, whichever is earlier. Bidder shall be liable to undertake to replace/rectify such defects at his own costs within mutually agreed timeframe and to the entire satisfaction of the TATA POWER, failing which the TATA POWER will be at liberty to get it replaced/rectified at Bidder's risks and costs and recover all such expenses plus the TATA POWER's own charges (@ 20% of expenses incurred), from the Bidder or from the "Security cum Performance Deposit" as the case may be. In case of Distribution transformer fails within the guarantee period TATA POWER will immediately inform the Bidder who shall take back the failed Distribution Transformer within 15 days from the date of intimation at his own cost and replace / repair the transformer within forty five days of date of intimation with a roll over guarantee. The outage period i.e. period from the date of failure till unit is repaired / replaced shall not be counted for arriving at the guarantee period. Bidder shall further be responsible for 'free replacement' for another period of THREE years from the end of the guarantee period for any 'Latent Defects' if noticed and reported by the Purchaser. 	
12.0	PACKING	Bidder shall ensure that all the equipment covered under this specification shall be prepared for rail/road transport in a manner so as to protect the equipment from damage in transit. No single use plastic to be used in packaging. The packaging material shall be environmentally friendly & recyclable.	
13.0	TENDER SAMPLE	NA	
14.0	QUALITY CONTROL	<p>The bidder shall submit with the offer Quality assurance plan indicating the various stages of inspection, the tests and checks which will be carried out on the material of construction, components during manufacture and bought out items and fully assembled component and equipment after finishing. As part of the plan, a schedule for stage and final inspection within the parameters of the delivery schedule shall be furnished. TATA POWER's engineer or its nominated representative shall have free access to the manufacturer's/sub-supplier's works to carry out inspections.</p> <p>The following information shall necessarily be submitted with the bid:</p> <ol style="list-style-type: none"> List of important raw materials, names of sub-suppliers for raw materials, standards to which raw material is tested and the copies of test reports of the tests carried out on raw materials in presence of Bidder's representatives. List of manufacturing facilities available, level of automation achieved and the areas where manual process exists. List of areas in manufacturing process where stage inspections are normally carried out for quality control and details of these tests and inspections List of testing equipment for final testing with valid calibration reports. Manufacturer shall possess 0.1 class instruments for measurement of losses. QAP withhold points for Tata Power inspection. 	
15.0	MINIMUM TESTING FACILITIES	Bidder shall have adequate in house testing facilities for carrying out all routine tests, acceptance tests and pre-dispatch inspection as per relevant International / Indian standards.	
16.0	MANUFACTURING ACTIVITIES	The successful bidder will have to submit GTP & Drawing with 15 days from placement of order/OLA for approval. The date of Code -2/ Code-1 approval given by TATA Power will be treated as first day for assessment of LD (if applicable).	
17.0	SPARES, ACCESSORIES AND TOOLS	<ol style="list-style-type: none"> Bidder shall provide a list of recommended spares with quantity and unit prices for 5 years of operation after commissioning. The Purchaser may order all or any of the spare part listed at the time of award of contract and these parts shall be supplied as a part of definite 	

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		<p>works. The Purchaser may order additional spares at any time during the contract period at the rates stated in the Contract document.</p> <ol style="list-style-type: none"> Bidder shall give an assurance that the reparability of transformer, spare parts and consumable items will continue to be available through the life of the equipment which shall be 25 years minimum. However, the Purchaser shall be given a minimum of 12 months' notice in the event that the Bidder or any sub-vendor plans to discontinue manufacture of any component used in this equipment. Any spare apparatus, parts or tools shall be subject to the same specification, tests and conditions as similar material supplied under the Contract. They shall be strictly interchangeable and suitable for use in place of the corresponding parts supplied with the plant and must be suitably marked and numbered for identification. 	
18.0	DRAWINGS AND DOCUMENTS	<p>Following drawings and documents shall be prepared based on TATA POWER specifications and statutory requirements and shall be submitted with the bid:</p> <ol style="list-style-type: none"> Completely filled in Technical Particulars (General Technical Particulars, General Technical Requirements, Additional Details, and Fittings as per clause 5.29). Description of the transformer and all components including brochures. General arrangement for Transformer. Foundation plan. Bill of material. Experience List Type test certificates. <p>Drawings / documents to be submitted after the award of the contract are as under:</p> <ol style="list-style-type: none"> List of Drawings/Parameters to be submitted: <ol style="list-style-type: none"> Technical Parameters as asked in Specification (General Technical Particulars, General Technical Requirements, Additional Details, Fittings, Type test Reports and Routine test certificates of bought out accessories). General Arrangement Drawing of the Transformer (Front view, Top view and both sides view. Complete list of fittings to be displayed and quantities to be mentioned with the drawing). Internal Core arrangement drawing. Internal Core-coil assembly drawing. Marking plates and Markings (as mentioned in clause 6) Foundation Plan drawing. HV and LV bushings drawing (with internal view and metal parts) HT connector / LT connector (palm connector), Aluminium Busbar and Al lugs drawings. HV and LV Box drawing. Gland Plate for HV/LV box. Conservator drawing. Prismatic oil level gauge drawing. Silica Gel Breather drawing. CT Terminal Box drawing with internal wiring arrangement. Gland plate of CT Terminal. Test Certificates. Installation Instructions. Transport/Shipping dimension drawing. QA/QC plan. List of Calculations to be submitted: 	

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All the calculations shall be step by step showing the use of formulas and other practical considerations. **Concise calculations in table or excel sheet shall not be accepted.** Also, the reference (only standard sources as IS, IEC or any such standard is acceptable) of the formulas shall be mentioned.

1. Resistance Calculation (75 deg. C)
2. Load Losses Calculation (at 75 deg. C)
3. No load Losses.
4. Stray Losses.
5. Weight of Copper (Bare and with Insulation also).
6. Weight of Core.
7. Flux Density calculations.
8. Current Density Calculations.
9. Short Circuit withstand.
10. Temperature Rise Calculations.
11. Conservator Volume calculations.
12. Cooling Calculations showing cooling with tank and radiators separately with no. of radiators and fins mentioned specifically.
13. Lifting lugs.

3. **Additional Documents to be submitted :**

1. List of raw materials as well as bought out accessories and the names of sub-suppliers selected from those furnished along with offer.
2. Type test certificates of the raw materials and bought out accessories.
3. The successful Bidder shall submit the **routine test certificates of bought out accessories** and central excise passes for raw material at the time of routine testing.

All the documents & drawings shall be in English language.

After the receipt of the order, the successful bidder will be required to furnish all relevant drawings/parameters/calculation to TATA POWER for approval.

Instruction Manuals:

Bidder shall furnish softcopies of nicely bound manuals (In English language) covering erection and maintenance instructions and all relevant information and drawings pertaining to the main equipment as well as auxiliary devices.

19.0

GUARANTEED TECHNICAL PARTICULARS

Sr. No.	Description	Unit	As Specified by bidder	As Furnished by Bidder.
1	Continuous Rating	kVA	315/400/500/630/800/1000/1250/1600/2000	
2	Type of Transformer		Conventional	
3	Name of Manufacturer		To be furnished by Bidder	
4	Place of Manufacture		To be furnished by Bidder	
5	Voltage ratio	kV	11/0.433 33/0.433	
6	Vector group		Dyn-11	
7	Type of cooling		ONAN	
8	Class of Insulation		Class A	

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9	Winding Material		Copper	
10	Core material used and Grade			
10.1	Thickness		To be furnished by Bidder	
10.2	Grade		M3 or better	
10.3	Flux Density at normal voltage	Tesla	1.69 T	
10.4	Overfluxing without saturation	Tesla	1.9 T	
11	Maximum temperature rise of:			
11.1	Windings by resistance method	Deg. C	45° C	
11.2	Oil by thermometer	Deg. C	40° C	
12	Magnetizing (no-load) current at:			
12.1	90% Voltage	%	To be furnished by Bidder	
12.2	100% Voltage	%	To be furnished by Bidder	
12.3	112.5% Voltage	%	To be furnished by Bidder	
13	Resistance of windings at 20 deg. C			
13.1	HV windings	Ohms/phase	To be furnished by Bidder	
13.2	LV windings	Ohms/phase	To be furnished by Bidder	
14	No Load losses	Watts	To be furnished by Bidder	
15	Load losses at 50%loading at 75° C	Watts	To be furnished by Bidder	
16	Load losses at 100% loading at 75° C	Watts	To be furnished by Bidder	
17	Total losses at 100%load at 75° C	Watts	To be furnished by Bidder	
18	Total losses at 50% load at 75° C	Watts	To be furnished by Bidder	
19	Current density used for:			
19.1	HV winding	Amp./mm ²	< or = 2.5	
19.2	LV winding	Amp./mm ²	< or = 2.5	
20	Clearances			
20.1	Core and LV	mm	To be furnished by Bidder	
20.2	LV and HV	mm	To be furnished by Bidder	
20.3	HV Phase to phase	mm	To be furnished by Bidder	
20.4	Between HV winding and Yoke	mm	To be furnished by Bidder	
20.5	Between LV winding and Yoke	mm	To be furnished by Bidder	
20.6	Between yoke and inside of tank to cover	mm	To be furnished by Bidder	
20.7	Between yoke and bottom	mm	To be furnished by Bidder	
20.8	Any point of winding to tank	mm	To be furnished by Bidder	
21	Efficiency at 75 deg. C			
21.1	Unity P.F.			
	125% load	%	To be furnished by Bidder	
	100% load	%	To be furnished by Bidder	
	75% load	%	To be furnished by Bidder	
	50% load	%	To be furnished by Bidder	
	25% load	%	To be furnished by Bidder	
21.2	0.8 P.F.			
	125% load	%	To be furnished by Bidder	

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	100% load	%	To be furnished by Bidder	
	75% load	%	To be furnished by Bidder	
	50% load	%	To be furnished by Bidder	
	25% load	%	To be furnished by Bidder	
22	Regulation at :			
22.1	Unity P.F. at 75 deg. C	%	To be furnished by Bidder	
22.2	0.8 P.F. at 75 deg. C	%	To be furnished by Bidder	
23	% Impedance at 75 deg. C	%	To be furnished by Bidder	
24	Power frequency voltage withstand test			
24.1	HV for 1 minute	kV	28 (for 11kV) 70 (for 33kV)	
24.2	LV for 1 minute	kV	3	
25	Over potential Test (Double voltage and double frequency for 1 minute)	V	866	
26	Impulse voltage withstand test (HV)	kVp	75 (for 11kV) 170 (for 33kV)	
27	Mass of :			
27.1	Core lamination (minimum)	kg	To be furnished by Bidder	
27.2	Windings (minimum)	kg	To be furnished by Bidder	
27.3	Tank and fittings	kg	To be furnished by Bidder	
27.4	Oil	kg	To be furnished by Bidder	
27.5	Oil quantity (minimum)	Ltr	To be furnished by Bidder	
27.6	Total weight	kg	To be furnished by Bidder	
28	Oil Data:			
28.1	Quantity for first filling (minimum)	Ltr	To be furnished by Bidder	
28.2	Grade of oil used		To be furnished by Bidder	
28.3	Marker's name		To be furnished by Bidder	
28.4	BDV at the time of filling	kV	To be furnished by Bidder	
29	Transformer:			
29.1	Overall length × Breadth × Height	mm X mm X mm	To be furnished by Bidder	
29.2	Tank length × breadth × height	mm X mm X mm	To be furnished by Bidder	
29.3	Thickness of plates for			
29.3.1	Side plate (min.)	mm	5	
29.3.2	Top and bottom Plate (min.)	mm	6	
30	Conservator:			
30.1	Tank diameter*height	mm*mm	To be furnished by Bidder	
30.2	Volume of oil in conservator	Liters	To be furnished by Bidder	
31	Radiators:			
31.1	Heat dissipation by tank walls excluding top and bottom		To be furnished by Bidder	
31.2	Heat dissipation by cooling Radiator		To be furnished by Bidder	
31.3	Size and thickness of sheet		To be furnished by Bidder	
31.4	No of bank/fins		To be furnished by Bidder	

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32	Inter layer insulation provided in design for In between all layer		To be furnished by Bidder	
33	Insulation materials provided			
33.1	For conductors			
33.1.1	HV		To be furnished by Bidder	
33.1.2	LV		To be furnished by Bidder	
33.1.3	Core		To be furnished by Bidder	
34	Material and size of the wire used			
34.1	HV Conductor			
34.1.1	Size	mm	To be furnished by Bidder	
34.1.2	Area of cross section	Sq.mm	To be furnished by Bidder	
34.2	LV Conductor			
34.2.1	Strip size	mm	To be furnished by Bidder	
34.2.2	No. of conductors in parallel	Nos.	To be furnished by Bidder	
34.2.3	Total area of cross section	Sq.mm	To be furnished by Bidder	
35	Whether the name plate gives all particulars as required in specifications	YES/NO	To be furnished by Bidder	
36	Particulars of bushings HV			
36.1	Manufacturer's name		To be furnished by Bidder	
36.2	Compliance to standard IS 8603		To be furnished by Bidder	
36.3	Rating as per IS		To be furnished by Bidder	
36.4	Dry power frequency voltage withstand test		To be furnished by Bidder	
36.5	Wet power frequency voltage withstand test		To be furnished by Bidder	
37	Particulars of bushings LV			
37.1	Manufacturer's name		To be furnished by Bidder	
37.2	Compliance to standard IS-3347		To be furnished by Bidder	
37.3	Rating as per IS		To be furnished by Bidder	
37.4	Dry power frequency voltage withstand test		To be furnished by Bidder	
37.5	Wet power frequency voltage withstand test		To be furnished by Bidder	
38	Whether the offer conforms to the limits of impedance mentioned in specification		To be furnished by Bidder	
39	Whether the offer conforms the limits of temperature rise mentioned in specification		To be furnished by Bidder	
40	Whether the losses of transformers offered are within the limits specified		To be furnished by Bidder	
41	Whether the transformer offered is already type tested for design and test reports enclosed		To be furnished by Bidder	
ADDITIONAL DETAILS:				

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Sl. No.	Description	Unit	As Specified by TPCL	As furnished by bidder
1	Core grade		M3 or Better	
2	Thickness of core	mm	To be furnished by Bidder	
3	Core diameter	mm	To be furnished by Bidder	
4	Gross core area	Sq.cm	To be furnished by Bidder	
5	Net core area	Sq.cm	To be furnished by Bidder	
6	Flux density (calculated)	Tesla	To be furnished by Bidder	
7	Mass of core	Kg	To be furnished by Bidder	
8	Loss per Kg of core at the above specified flux density	Watt	To be furnished by Bidder	
9	Core window height	mm	To be furnished by Bidder	
10	Center to center distance of the core	mm	To be furnished by Bidder	
11	No. of LV Turns		To be furnished by Bidder	
12	No. of HV Turns		To be furnished by Bidder	
13	Size of LV conductor bare/covered	mm	To be furnished by Bidder	
14	No. of parallels		To be furnished by Bidder	
15	Size of HV conductor bare/covered	mm	To be furnished by Bidder	
16	Current density of LV winding(calculated)	A/sq.mm	To be furnished by Bidder	
17	Current density of HV winding(calculated)	A/sq.mm	To be furnished by Bidder	
18	Wt. of the LV winding	Kg	To be furnished by Bidder	
19	Wt. of the HV winding	Kg	To be furnished by Bidder	
20	No. of LV coils/phase		To be furnished by Bidder	
21	No. of HV coils/phase		To be furnished by Bidder	
22	Height of LV winding	mm	To be furnished by Bidder	
23	Height of HV winding	mm	To be furnished by Bidder	
24	ID/OD of HV winding	mm	To be furnished by Bidder	
25	ID/OD of LV winding	mm	To be furnished by Bidder	
26	Thickness of the duct in LV winding	mm	To be furnished by Bidder	
27	Thickness of the duct in HV winding	mm	To be furnished by Bidder	
28	Thickness of the duct between HV and LV	mm	To be furnished by Bidder	
29	Calculated Impedance	%	To be furnished by Bidder	
30	HV to earth creep age distance in oil	mm	To be furnished by Bidder	
31	LV to earth creep age distance in oil	mm	To be furnished by Bidder	

20.0 SCHEDULE OF DEVIATIONS

(TO BE ENCLOSED WITH THE BID)

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R00	Ketan S. Jadhav	Ajay V. Potdar	Ravindra M. Bhanage
	Xx/xx/24	Xx/xx24	Xx/xx/24

The Tata Power Company Ltd



**TECHNICAL SPECIFICATION FOR
11kV/433V & 33kV/433V OIL FILLED
DISTRIBUTION TRANSFORMER**

ENSE-EV-200X-R0

Date of Issue: xx/05/2024

All deviations from this specification shall be set out by the Bidders, clause by Clause in this schedule. Unless specifically mentioned in this Schedule, the tender shall be deemed to confirm the purchaser's specifications:

Sr. No.	Clause No.	Details of deviation with justifications

We confirm that there are no deviations apart from those detailed above.

Seal of the Company:

Signature

Designation

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ANNEXURE-I

PROFORMA FOR STAGE INSPECTION OF DISTRIBUTION TRANSFORMER

S No.	Particulars	Details
(A)	GENERAL INFORMATION:	
1	Name of firm	
2	Order No. and Date	
3	Details of offer	
a)	Rating	
b)	Quantity	
c)	Serial Numbers	
4	Details of last stage inspected lot:	
a)	Total quantity inspected	
b)	Serial Numbers	
c)	Date of stage inspection	
d)	Quantity offered for final inspection of (a) above with date	
(B)	Position of manufacturing for the offered quantity:	
a)	Complete tanked assembly	
b)	Core and coil assembly ready	
c)	Core assembled	
d)	Coils ready for assembly	
	i) HV coils	
	ii) LV coils	

Note: i) The stage inspection shall be carried out in case:-

- a) At least 50% quantity has been tanked and
- b) Core coil assembly of further at least 30% of the quantity offered has been completed.
- c) Rest of quantity shall be in form of core assembly & coils.

ii) Quantity offered for stage inspection should be offered for final inspection within 15 days from the date of issuance of clearance for stage inspection, otherwise stage inspection already cleared shall be liable for cancellation.

S No.	Particulars	As offered	As observed	Deviation and Remarks
(C)	<u>Inspection of Core:</u> (I) Core Material 1) Manufacturer's characteristic certificate in respect of grade of lamination used. (Please furnish test certificate) 2) Thickness of core lamination 3) Remarks regarding Rusting and smoothness of core. 4) Whether laminations used for top and bottom yoke are in one piece. (II) Core Construction: (1) No. of steps (2) Dimension of steps			
	<u>As offered:</u>			
	Step No.	1	2	3
		4	5	6
		7	8	9
		10	11	12

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W mm													
T mm													
As found:													
Step No.	1	2	3	4	5	6	7	8	9	10	11	12	
W mm													
T mm													
(1)													
(2) Core Diameter (mm)													
(3) Total cross sectional area of core													
(4) Effective cross sectional area of core													
(5) Whether top yoke is cut for LV connection.													
(6) If yes, at 6 above, whether Reinforcement is done.													
(7) Core length (leg center to leg center)													
(8) Window height.													
(9) Core height													
(10) Core weight only													
(D) INSPECTION OF WINDING													
(I) Winding material													
(1) Material used for													
a) HV winding													
b) LV winding													
(2) Grade of material for													
a) HV winding													
b) LV winding													
(3) Test certificate of manufacturer (enclosed copy) for winding material of:													
a) HV													
b) LV													
(II) Construction Details													
1) Size of Cross sectional area of conductor for :													
a) HV winding													
a) LV winding													
2) Type of insulation for conductor of :													
a) HV winding													
b) LV winding													
3) Diameter of wire used for delta formation (mm)													
4) Diameter of coils in:													
a) LV winding													
a) Internal Diameter (mm)													
ii) Outer diameter (mm)													
b) HV winding													
a) Internal diameter (mm)													
ii) Outer diameter (mm)													
5) Current density of winding material used for:													
a) HV													
b) LV													
6) Whether neutral formation on top.													
7) HV coils / Phase													
a) Number													
b) Turns/coil													

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	c) Total turns			
8)	LV coils /Phase			
	a) Number			
	b) Turns / coil			
	c) Total turns			
9)	Total weight of coils of			
	a) LV winding (Kg)			
	b) HV winding (Kg)			
(E)	INSULATION MATERIALS			
	(I) Material			
	1) Craft paper			
	a) Make			
	b) Thickness (mm)			
	c) Test certificate of manufacturer (enclose copy)			
	2) Press Board			
	a) Make			
	a) Thickness (mm)			
	b) Test certificate of manufacturer (enclose copy)			
	3) Material used for top and bottom yoke and insulation			
(II)	Type and Thickness of material used : (mm)			
	a) Between core and LV			
	b) Spacers			
	c) Interlayer			
	d) Between HV and LV winding			
	e) Between phases			
(F)	CLEARANCES: (mm)			
	(I) Related to core and winding			
	1) LV to core (radial)			
	2) Between Hv and LV (Radial)			
	3) (i) Phase to phase between HV conductor			
	(ii) Whether two nos. press board each of minimum 1mm thick provided to cover the tie rods.			
	4) Thickness of duct between HV and LV coil mm			
	(II) Between core – coil assembly and tank:			
	1) Between winding and body			
	a) Tank length wise			
	b) Tank breadth wise			
(G)	TANK :			
	(I) Construction Details:			
	1) Rectangular shape			
	2) Thickness of side wall (mm)			
	3) Thickness of top and bottom plate (mm)			
	4) Provision of sloping top cover towards HV bushing.			
	5) Tank internal dimensions (mm)			
	a) Length			
	b) Breadth			
	c) Height			
	h) On HV side			
	ii) On LV side			
	(II) General Details :			

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	1) Inside painted by oil corrosion resistant paint (please specify which type of coating done)			
	2) Gasket between top cover and tank			
	a) Material			
	i) Thickness (mm)			
	ii) Jointing over laps (mm)			
	3) Provision of lifting lugs:			
	a) Numbers			
	b) Either reinforced by welded plates edge wise below the lug up to re-enforcing angle of the tank done.			
	4) Pulling lug of MS plate			
	a) Nos.			
	b) Thickness (mm)			
	c) Whether provided on breadth side or length side			
	5) Provision of air release plug			
	6) Provision of hot dip galvanized GI Nuts Bolts with 1no. plain and 1no. spring washer.			
	7) Deformation of length wise side wall of tank when subject to:			
	a) Vacuum of (-) 0.7 Kg/sq.cm for 30 minutes.			
	b) Pressure of 0.8 Kg/sq.cm. for 30 minutes.			
(H)	RADIATORS:			
	1) Fin radiators of 1.25 mm thick sheet			
	a) Dimension of each fin (L × B × T)			
	b) Fins per radiator			
	c) Total No. of radiators bank			
	2) Verification of manufacturer's test certificate regarding Heat dissipation (excluding Top and Bottom) in w/sq.m			
	3) Verification of position of radiator with respect to bushing.			
(I)	CONSERVATOR			
	1) Dimensions (L × D) (in mm.)			
	2) Volume (m ³)			
	3) Inside dia. of conservator tank pipe (mm)			
	4) Whether conservator outlet pipe is projected approx. 20 mm inside the conservator tank.			
	5) Whether arrangement made so that oil does not fall on active parts.			
	6) Whether die cast metal oil level gauge indicator having three positions at (-5 deg C , 30 deg. C and 98 deg.C)			
	7) Whether drain plug and filling hole with cover is provided.			
	8) Inner side of the conservator Tank painted with -			
(J)	BREATHER:			
	1) Whether UV protected seamless acrylic body breather for silica gel provided.			
	2) Make			
	3) Capacity			
(K)	TERMINALS:			
	1) Material whether of Brass Rods/Tinned Copper.			
	a) HV			

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	b) LV			
	2) Size (dia. In mm)			
	a) HV			
	b) LV			
	3) Whether SRBP tube / insulated paper used for formation of Delta on HV.			
(L)	BUSHINGS			
	1) Whether HV bushings mounted on top cover/ side walls.			
	a) HV			
	b) LV			
	2) Whether arrangement for studs for fitting of HV Bushing are in diamond shape (so that arcing horns are placed vertically.)			
	3) Position of mounting of LV bushings			
	4) Bushing Clearance: (mm)			
	a) LV to Earth			
	b) HV to Earth			
	c) Between LV bushings			
	d) Between HV bushings			
(M)	TANK BASE CHANNEL/ ROLLERS:			
	1) Size of channel (mm)			
	2) Whether channels welded across the length of the tank			
(N)	OIL:			
	1) Name of supplier			
	2) Breakdown voltage of oil: (kV)			
	a) Filled in tanked transformer			
	b) In storage tank (to be tested by Inspecting officer).			
	3) Supplier's test certificate (enclose copy)			
(O)	ENGRAVING:			
	1) Engraving of Sl. No. and name of firm.			
	a) On bottom of clamping channel of core-coil assembly.			
	b) On Top cover of tank			
(P)	i) MS Plate of size 125× 125 mm welded on width side of stiffner.			
	ii) Following details engraved (as per approved GTP):			
	a) Serial Number			
	b) Name of firm			
	c) Order No. and date			
	d) Rating			
	e) Date of dispatch			
(Q)	NAME PLATE DETAILS:			
	Whether Name Plate is as per approved drawing			
(R)	COLOUR OF TRANSFORMER			
	1) Tank body with			
	2) Conservator with			
(S)	CHECKING OF TESTING FACILITIES:			
	(Calibration certificate also to be checked for its validity)			
	TESTS:			
	1) No Load Current			
	2) No Load Loss			
	3) % Impedance			
	4) Load losses			

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	5) Insulation Resistance test			
	6) Vector group Test (phase relationship)			
	7) Ratio and Polarity test relationship			
	8) Transformer oil Test (Break Down Voltage)			
	9) Magnetic Balance			
	10) Measurement of winding resistance (HV and LV both)			
	11) Induced over voltage withstand test (Double voltage and Double frequency)			
	12) Separate source power frequency withstand test at 28kV for HV and 3kV (One minute).			
	13) Air, pressure/oil leakage Test			
	14) Vacuum Test			
	15) Unbalanced current test			
	16) Temperature rise (Heat run) test.			
(T)	We have specifically checked the following and found the same as per G.T.P/ deviations observed as mentioned against each:			
	(i) Rustlessness of CRGO laminations used			
	ii) Core steps			
	iii) Core area			
	iv) Core weight			
	v)Core lamination thickness			
	vi) Winding cross sectional area			
	a) LV			
	b) HV			
	vii) Weight of windings			
	viii) Clearance between winding and wall of tank (mm)			
	a) Length-wise			
	b) Breadth-wise			
	ix) Clearance between top yoke/ top most live part of tap changer to tank cover.			
	x) Details of Neutral formation			
	xi) Connections to Bushings:			
	a) LV			
	b) HV			
	xii) Slope of tank top			
	xiii) Position of mounting of bushings			

PURCHASER'S OFFICER

BIDDER'S REPRESENTATIVE

DATE OF INSPECTION

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ANNEXURE-II

PERFORMA FOR PRE-DELIVERY INSPECTION OF DISTRIBUTION TRANSFORMERS

1.	Name of the firm	
2.	Details of offer made	
	(i) Order No. and date	
	(ii) Rating	
	(iii) Quantity	
	(iv) Sl. No. of transformers	
3.	Date of stage inspection of the lot	
4.	Reference of stage inspection clearance	
5.	Quantity offered and inspected against the order prior to this lot	

ACCEPTANCE TESTS TO BE CARRIED OUT

S No.	PARTICULARS	OBSERVATIONS
1.	(a) Ratio Test	AB/an
		BC/bn
		CA/cn
	(b) Polarity Test	
2.	No load loss measurement	
		W1
		W2
		W3
	TOTAL	
	Multiplying factor	
	CT	
	Watt meter	
	Total × MF	
	NET LOSS	
3.	Load loss measurement	
		W1
		W2
		W3
	Total	
	Multiplying factors:-	
	CT	
	Watt meter	
	PT	
	Total × MF	
	Loss at ambient temperature (Watt)	
	Loss at 75 deg C (with calculation sheet) (Watt)	
4.	Winding Resistance :	
	H.V. (in Ohms)	
	At ambient temperature of _____deg.C	A-B

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		B-C
		C-A
	Resistance at 75 deg.C	A-B
		B-C
		C-A
	L.V. (in Ohms)	
	At ambient temperature of _____deg.C	a-b
		b-c
		c-a
	Per Phase resistance at 75 deg.C	a-b
		b-c
		c-a
5.	Insulation resistance (M ohm)	HV-LV
		HV-E
		LV-E
6.	Separate source Voltage withstand test voltage:	
	HV	28 kV for 60 secs.
	LV	3 kV for 60 secs.
7.	Induced over-voltage withstand test at double voltage and double frequency	100 Hz, 830 volts for 60 seconds.
8.	No load current at	
	90% volts	
	100%	
	112.5% volts	
9.	Unbalance current	
10.	Vector group test	Diagram and readings be shown in separate sheets
11.	Percentage Impedance at 75 deg.C (Please furnish calculation sheet)	
12.	Transformer oil test (Break down voltage)	
13.	Oil leakage test	
14.	Heat run test	To be carried out against the every offered lot
15.	Bushing clearance (mm)	HV
	a) Phase to Phase	
	b) Phase to earth	
16.	Comments on compliance by the firm on the modifications done as per stage inspection clearance letter issued.	
17.	Whether fittings of the order have been verified.	
18.	Whether UV protected seamless acrylic tube silica gel breather is fitted on the transformers offered.	
19.	Whether engraving of Sl.no. and name of firm on core clamping channel, side wall and top cover of tank has been verified.	
20.	Whether MS Plate of size 125 × 125 mm welded on with side of stiffner.	

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21.	Whether engraving of name of firm, S No., rating of transformer, Order No. and date and Date of Dispatch on MS Plate.	
22.	Copy of calibration certificates of metering equipment be enclosed.	

POINTS TO BE SEEN / DIMENSIONS TO BE NOTED AT THE TIME OF DISMANTLING OF TRANSFORMERS:

S No.	PARTICULARS	OBSERVATIONS
1.	Details of the transformer dismantled for physical verification	
	a) Rating (kVA)	
	b) Sl. No.	
2.	Whether Hot dip galvanized Nuts and Bolts with one spring one plain washer provided for tightening the tank cover.	
3.	Details of Gasket used between top cover and tank Material	
	a) Thickness (mm)	
	b) Type of joints	
4.	Whether core is earthed properly with copper strip (one end should be tightened in between the core laminations and other end bolted on core clamping channel).	
5.	Connections from winding to bushings (describe the manner in which it has been done)	
	a) HV	
	b) LV	
6.	Winding wire dia. and cross sectional area	
	a) HV	
	I) Dia. (mm)	
	II) Area (sq.mm)	
	b) LV	
	I) L × W × Nos. of layer	
	II) Area (sq.mm)	
7.	Thickness of pressboard (s) provided between HV coils to cover the tie rods	
8.	Whether painted with oil and corrosion resistant paint	
	a) Inside the tank	
	b) Inside the conservator tank	
	c) Core clamping and core base channels	
	d) Tie rods	
	e) Core bolts	
9.	Whether tie rods and core bolts insulated, if yes, material of insulation.	
10.	Whether flap on inner side of top cover provided to prevent direct falling of oil on core – coil assembly.	
11.	Method of joints	
	a) Between HV coils	
	b) Between tap coils	

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	c) For tap changer	
12.	Whether engraving of Sl. No. and name of firm done on the bottom channel of core coil assembly.	
13.	Diameter of copper wire, used for formation of delta (should not be less than 1.5 times the dia. Of conductor). (mm)	
14.	Whether empire sleeves provided up to the end portion of HV winding jointing to bushing	
15.	HV coils :	
	a) Inner dia. (mm)	
	b) Outer dia. (mm)	
16.	LV coils :	
	c) Inner dia. (mm)	
	d) Outer dia. (mm)	
17.	Core dia.	
18.	Core height including base channel and insulation in between (mm)	
19.	Leg Center of core	
20.	Clearances between	
	a) Core and LV (mm)	
	b) HV and LV (mm)	
	c) Phase to Phase of HV coils (mm)	
	d) Core coil assembly and tank body (mm)	
	I) Length wise	
	II) Width wise	
	e) Top of yoke and top cover (mm)	
	f) Top most live part of tap changer and top cover	
21.	Weight of core only (Kg.)	
22.	Weight of windings (Kg.)	
	a) LV	
	b) HV	
23.	Whether core laminations are in one piece, used for	
	a) Bottom yoke	
	b) Top yoke	
24.	Specific remarks regarding smoothness and rusting of core used.	
25.	Volume of oil filled (to be done once against the order)	
	a) In conservator tank	
	b) In tank of the transformer	
26.	Weight of transformer (inclusive of all fittings, accessories, oil etc. complete)	
27.	Inner dimensions of the tank	
	a) Length	
	b) Width	
	c) Height	
	I) LV side	
	II) HV side	
28.	Remarks, if any :	

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Note: Please ensure that complete details have been filled in the Performa and no column has been left blank.

SIGNATURE OF PURCHASER'S
INSPECTING OFFICER
(Name and designation)

SIGNATURE OF BIDDER'S
REPRESENTATIVE
(Name and designation)

DATE OF INSPECTION: _____

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ANNEXURE-III

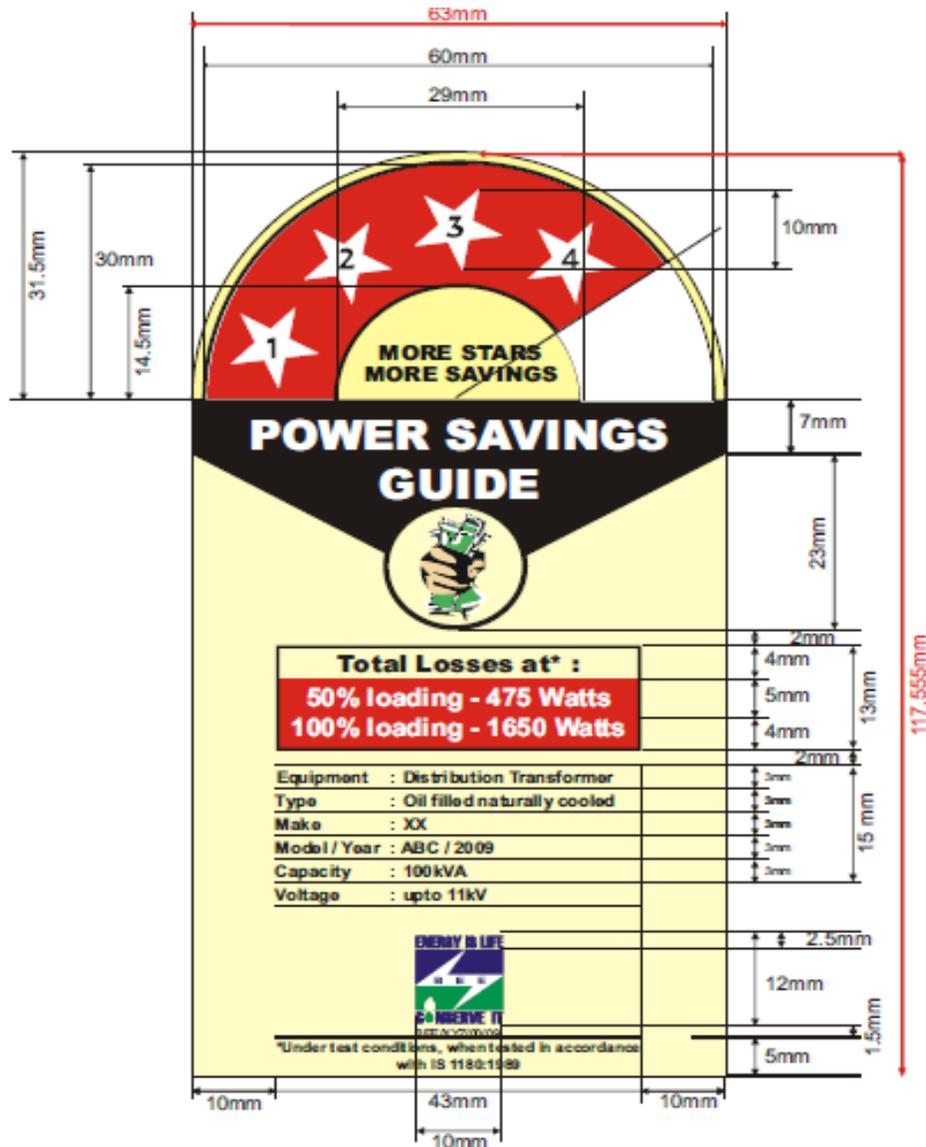
SOURCE OF MATERIAL/PLACES OF MANUFACTURE, TESTING AND INSPECTION

S No.	Item	Source of Material	Place of Manufacture	Place of testing and Inspection
1.	Laminations			
2.	Copper Conductor			
3.	Insulating winding wires			
4.	Oil			
5.	Press Boards			
6.	Kraft paper			
7.	MS Plates/Angles/Channels			
8.	Gaskets			
9.	Bushing HV/LV			
10.	Paints			

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ANNEXURE-IV

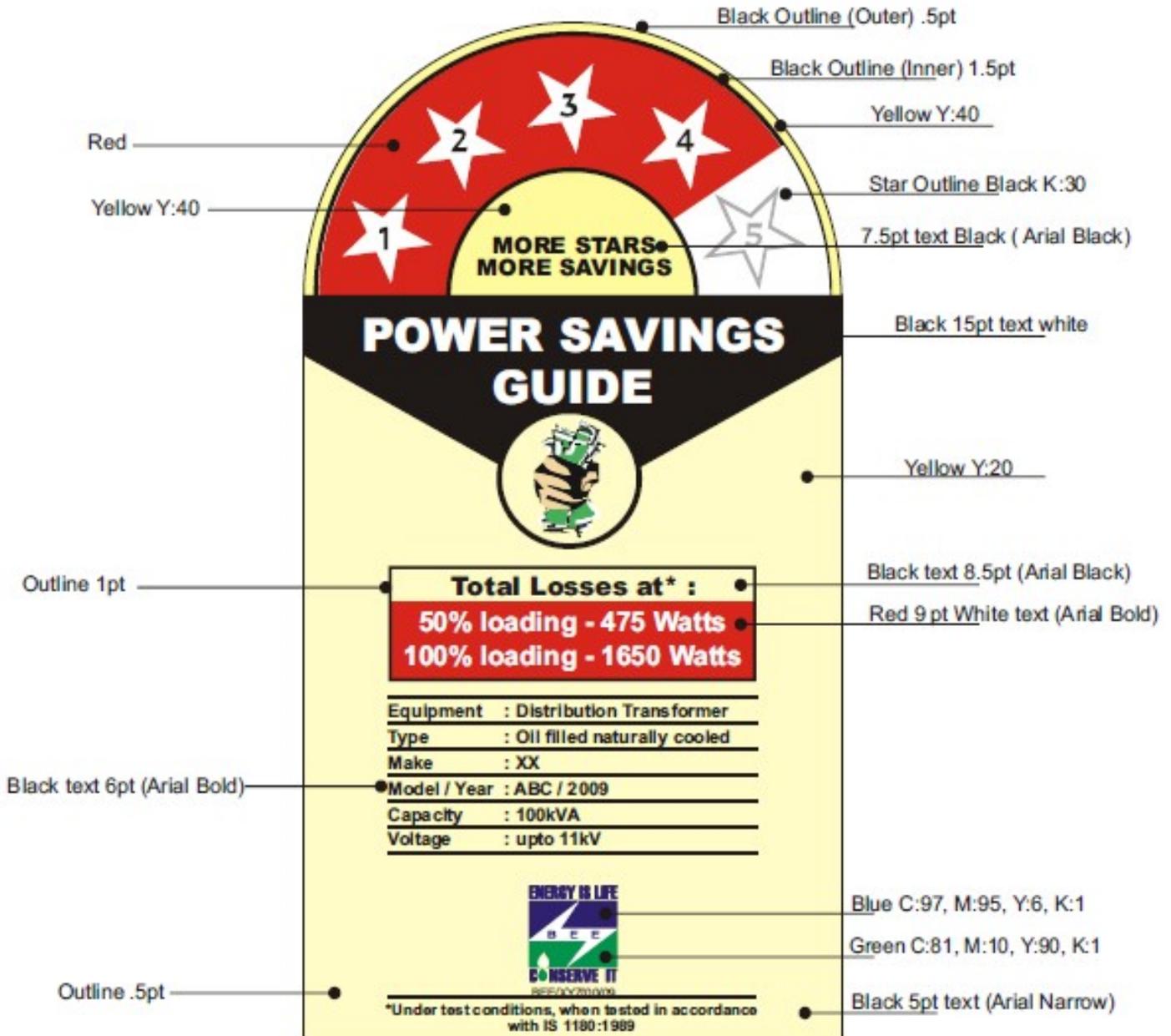
- The label shall be applied on the front base of the equipment near the name plate, so as to be prominently visible on the equipment.



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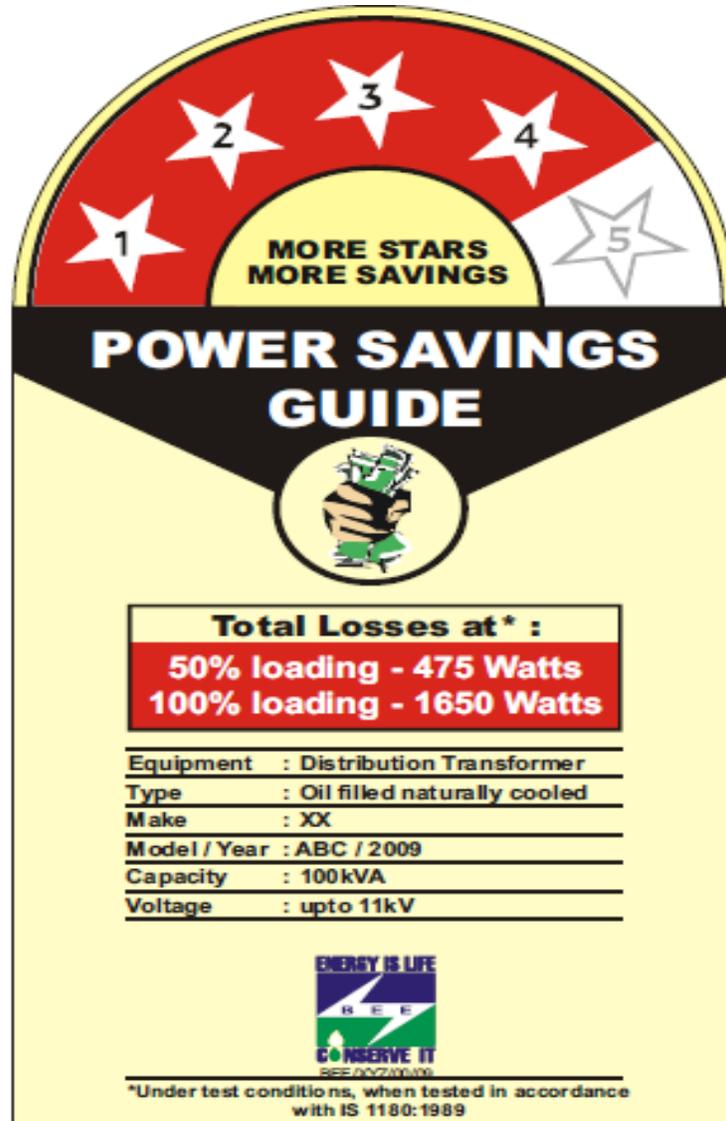
2. The following colour scheme for the label, namely:



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The Tata Power Company Ltd		TECHNICAL SPECIFICATION FOR 11kV/433V & 33kV/433V OIL FILLED DISTRIBUTION TRANSFORMER
ENSE-EV-200X-R0		Date of Issue: xx/05/2024

3. Detailed label specifications (size, colour scheme, font size, security features, if any, etc), content of the label (parameters displayed on the label) is provided below:



Rev No.	Prepared By & Date	Checked By & Date	Approved for Issue By & Date
R00	Ketan S. Jadhav Xx/xx/24	Ajay V. Potdar Xx/xx24	Ravindra M. Bhanage Xx/xx/24

The Tata Power Company Ltd		OPEN TENDER NOTIFICATION
Tender Reference: 4100035742/CC25ADO014		Document Date: 12 th August 2024

ANNEXURE III

Schedule of Deviations

*Bidders are advised to refrain from taking any deviations on this TENDER. Still in case of any deviations, all such deviations from this tender document shall be set out by the Bidders, 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 TPC's specifications:

S. No.	Clause No.	Tender Clause Details	Details of 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:

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ANNEXURE IV

Schedule of Commercial Specifications

(The bidders shall mandatorily fill in this schedule and enclose it with the offer Part I: Technical Bid. In the absence of all these details, the offer may not be acceptable.)

S. No.	Particulars	Remarks
1.	Prices firm or subject to variation (If variable indicate the price variation clause with the ceiling if applicable)	Firm / Variable
1a.	If variable price variation on clause given	Yes / No
1b.	Ceiling	----- %
1c.	Inclusive of Excise Duty	Yes / No (If Yes, indicate % rate)
1d.	Sales tax applicable at concessional rate	Yes / No (If Yes, indicate % rate)
1e.	Octroi payable extra	Yes / No (If Yes, indicate % rate)
1f.	Inclusive of transit insurance	Yes / No
2.	Delivery	Weeks / months
3.	Guarantee clause acceptable	Yes / No
4.	Terms of payment acceptable	Yes / No
5.	Performance Bank Guarantee acceptable	Yes / No
6.	Liquidated damages clause acceptable	Yes / No
7.	Validity (180 days) (From the date of opening of technical bid)	Yes / No
8.	Inspection during stage of manufacture	Yes / No
9.	Rebate for increased quantity	Yes / No (If Yes, indicate value)
10.	Change in price for reduced quantity	Yes / No (If Yes, indicate value)
11.	Covered under Small Scale and Ancillary Industrial Undertaking Act 1992	Yes / No (If Yes, indicate, SSI Reg'n No.)

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ANNEXURE V

Checklist of all the documents to be submitted with the Bid

Bidder has to mandatorily fill in the checklist mentioned below:-

S. No.	Documents attached	Yes / No / Not Applicable
1	EMD of required value	
2	Tender Fee as mentioned in this RFQ	
3	Company profile/organ gram	
4	Signed copy of this RFQ as an unconditional acceptance	
5	Duly filled schedule of commercial specifications (Annexure IV)	
6	Sheet of commercial/technical deviation if any (Annexure III)	
7	Balance sheet for the last completed three financial years; mandatorily enclosing Profit & loss account statement	
8	Acknowledgement for Testing facilities if available (duly mentioned on bidder letter head)	
9	List of Machine/tools with updated calibration certificates if applicable	
10	Details of order copy (duly mentioned on bidder letter head)	
11	Order copies as a proof of quantity executed	
12	Details of Type Tests if applicable (duly mentioned on bidder letter head)	
13	All the relevant Type test certificates as per relevant IS/IEC (CPRI/ERDA/other certified agency) if applicable	
14	Project/supply Completion certificates	
15	Performance certificates	
16	Client Testimonial/Performance Certificates	
17	Credit rating/solvency certificate	
18	Undertaking regarding non blacklisting (On company letter head)	
19	List of trained/untrained Manpower	

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ANNEXURE VI

Acceptance Form for Participation In Reverse Auction Event

(To be signed and stamped by the bidder)

In a bid to make our entire procurement process more fair and transparent, TPC intends to use the reverse auctions through SAP-SRM tool as an integral part of the entire tendering process. All the bidders who are found as technically 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. TPC shall provide the user id and password to the authorized representative of the bidder. *(Authorization Letter in lieu of the same shall be submitted along with the signed and stamped Acceptance Form).*
2. TPC will make every effort to make the bid process transparent. However, the award decision by TPC would be final and binding on the supplier.
3. The bidder agrees to non-disclosure of trade information regarding the purchase, identity of TPC, bid process, bid technology, bid documentation and bid details.
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 TPC.
6. In case of intranet medium, TPC shall provide the infrastructure to bidders. Further, TPC 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 TPC.
8. The bidder shall be prepared with competitive price quotes on the day of the bidding 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 at TPC 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 TPC.
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

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Annexure VII
Inspection Test Plan

Not Applicable

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Annexure VIII
General Conditions of Contract

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The Tata Power Company Limited is hereunder referred to as the "Purchaser" or "Company". The person, firm or company selling the goods, the subject of this purchase order is referred to as "Vendor" or "Contractor". The subject of this purchase order is hereinafter referred to as the "Material(s)" or "Goods".

The Contract shall mean the contract as derived from the following:

1. Purchase Order (with 'Commercial Notes' and Annexures to the Purchase Order referred thereon)
2. Technical Specifications.
3. General Terms & Conditions

The documents including all reference document (s) and Annexures forming the Contract are to be read together as a whole and are to be taken as mutually explanatory.

1. Price:

Unless otherwise specifically stipulated, the price shall be firm and shall not be subject to escalation for any reason till the validity of this Contract.

Unless otherwise specifically stipulated, the price shall be inclusive of road/ rail worthy water-proof packing & forwarding charges up to effecting delivery at FOT/ FOR despatch point, GST and shall also be inclusive of inland freight, terminal taxes and entry taxes as leviable on the transportation or entry of goods into any local area limits pursuant to the Contract.

2. Taxes and Duties:

- 2.1 The Contract Price shall be inclusive of all taxes, duties, including but not limited to GST or any local taxes, levies imposed by State/Central/Local governments
- 2.2 Taxes as mentioned in the Contract Price or Price Schedule shall be paid to the contractor subject to the Contractor complying with all the statutory requirements and furnishing the relevant documents including error free invoices containing detailed break-up of the taxes
- 2.3 However the payment of GST or local levies shall be restricted to the total amount as indicated in the price schedule.
- 2.4 Any duties, levies or taxes not mentioned in Contract Price or Price Schedule but applicable as per any statute (s) shall be deemed to be

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included in the Contract price and shall be to the account of the Contractor.

- 2.5 Any statutory variation in duties, levies or taxes if applicable and specified in this Contract till the scheduled date for supply of Goods and limited to direct invoices of the Contractor shall be to the account of Purchaser. The Contractor shall have the obligation to provide the necessary documentary evidence / supporting by way of gazetted notifications etc. to prove the change in such levies or taxes between the due date of submission of the Bid and the scheduled date of supply of goods to claim the difference.
- 2.6 The Contractor shall pass on to the Purchaser all the benefits of either reduction in tax rates, exemptions, concessions, rebate, set off, credits etc. or introduction of new tax rates exemptions, concessions, rebate, set off, credits etc. pertaining to all taxes, duties, imposts, fees and levies in respect of the supplies of Goods or performance of obligations under the contract. This would specifically include reduction of tax rates as a result of statutory changes or judicial rulings.
- 2.7 Any other taxes, levies and duties not mentioned in Contract Price or Price Schedule but applicable as per any statute (s) or introduction (omission) of new taxes, levies and duties shall be deemed to be included in the Contract Price and shall be to the account of the Contractor.
- 2.8 For facilitating availment of a credit, set-off, rebate, drawback or like benefit available to the Purchaser, the Contractor will facilitate the Purchaser by providing the necessary documentary and/or procedural support. In any process of assessment or re-assessment, of taxes payable by the Purchaser. Wherever expressly agreed the purchaser would provide the statutory form 'C' to the seller for availing the concessional rate of Central sales tax.
- 2.9 The Contractor shall bear and pay all the costs, liabilities, levies, interest, penalties in respect of non-compliances of any legal requirements as per various statutory provisions. The contractor shall keep the owner indemnified at all times from any tax liability, interest, penalties or assessments that may be imposed by the statutory authorities for non-compliances or non-observation of any statutory requirements by the Contractor.
- 2.10 Purchaser shall pay the invoices to the Vendor after necessary deductions as prescribed under the applicable law, income - tax or other

deductions under the State Tax laws as may be applicable to the Contract.

3 Packing details:

Packing details: The material must be packed in suitable packing to suit the mode of transport and to ensure its safe receipt at point of delivery. Any damage to material noticed at the time of delivery at site, due to improper packing or any other reason whatsoever shall be the responsibility of the Vendor. Such damaged goods shall be replaced within 14 days from intimation from the Purchaser.

4 Transportation and Unloading at Site:

The Vendor shall deliver the Material(s) at site/ Stores as per the delivery address specified in the Purchase order. The unloading at delivery shall be organised by the Purchaser unless otherwise specified. The receipt of the material/ equipment is subject to inspection and rejection if Material(s) is found unsatisfactory or any of the clauses under this purchase order are violated.

5 Insurance:

Unless otherwise specified, Purchaser will be responsible to obtain transit insurance for the Material(s). The Vendor shall intimate the Order Manager (as mentioned in the Purchase Order) along with Invoice, packing list, the Railway Receipt/Truck or Lorry Receipt etc. immediately after the consignment is booked, at the e-mail id mentioned in the Purchase order.

6 Payment Terms:

100% payment shall be made within 60 days from the receipt and acceptance of the material at the Consignee Stores/ Site/ Location as per the Contractual terms and conditions herein.

7 Bills and invoice:

The tax invoices should contain the details to comply with the GST Law. The supplier shall:

- i) Furnish (electronically) and communicate to the Owner, the details of Goods or Services supplied by the 10th of the month succeeding the said tax period,
- ii) Upon discovery of any discrepancy, rectify it and shall pay the tax and interest thereof,
- iii) Furnish the returns (electronically), for the inward and outward supplies of

Goods and/or Services, before the specified dates as per the GST Law,
iv) Communicate the tax paid, credits etc. as and when credited.

v) The Invoice should clearly state the description of the goods, quantity, sale price, tax %, and tax amount;

vi) The Invoice should be signed by an Authorized Signatory.

Bills/Invoices in the name of The Tata Power Company Ltd. with packing lists in triplicate shall be forwarded along with the equipment.

Contractor to furnish GST Registration no. in all invoices as well as Purchaser's (Tata Power's) GST no.

8 Transfer of Title and risk:

The transfer of property and risk of Material(s) shall be deemed to take place as follows:

a. For delivery F.O.R. or F.O.T. despatch point: Transfer of property on handing over the Material(s) to the carrier against receipt of clean Railway Receipt/Truck or Lorry Receipt and such receipt having been handed over to Purchaser. However, the risk of loss shall pass to the Purchaser on delivery of goods at the specified destination.

b. In case the Material(s) are procured by the Vendor from sub-vendors on receipt of duly endorsed documents of title to the goods.

9 Contract Performance Bank Guarantee (In case applicable):

9.1 The Vendor shall within 15 days of issue of this Purchase Order furnish an unconditional irrevocable bank guarantee duly stamped and strictly as per the prescribed format of the Purchaser from any nationalized bank or any scheduled bank having a branch in Mumbai and approved by the Purchaser for a sum equivalent to 10% of the Total value of Order valid for a period not less than 6 months from the expiry of the Warranty period.

9.2 Irrespective of the performance demonstrated as part of the Factory Acceptance Tests Take-over tests / Performance Tests etc, the Purchaser may call for re-validation of performance of the system during the performance guarantee period by conducting fresh performance tests if in its opinion, the

system is not able to deliver the designed performances based on its operational performance results. If the equipment fails to prove the performance during such performance tests, the Purchaser may allow the Vendor to either rectify the system by addition / modification of equipment etc at the Vendor's costs & risk to restore the performance levels. Failure to rectify the system to achieve the designed performance levels may result in imposition of penalties including revocation of the Performance Bank Guarantee and forfeiture of the entire amount under the Performance Guarantee.

- 9.3 In case the Vendor fails to furnish the requisite Bank Guarantee as stipulated above, then the Company shall have the option to terminate the contract besides other contractual remedies.

10 Price reduction:

- 10.1 The Vendor agrees that time of supply of Material(s) is of prime importance. If the Vendor fails to supply Material(s) before the respective scheduled / fixed date for supply. Company may without prejudice to any other right or remedy available to the Company: -

10.1.1 Recover from the Vendor ascertained and agreed, genuine pre-estimate liquidated damages, and not by way of penalty, a sum equivalent to 1% (of total value of order) per week or part thereof for each week's delay, beyond the scheduled supply date each subject to maximum of 10% of the total order value, even though the Company may accept delay in supply after the expiry of the scheduled supply date. The Company may, at its discretion, set off the aforesaid amounts from any other amounts owed by the Company to the Vendor or recover such amounts in other manner as may be permissible under applicable laws.

10.1.2 Arrange to get supply from elsewhere on account and at the sole risk of the Vendor, such decision of the Company being final and binding on the Vendor; or

10.1.3 Terminate the contract or a portion of supply of the supply work thereof, and if so desired, arrange for the supply in default by the Vendor to be attained from elsewhere at the sole risks and costs of the Vendor.

- 10.2 Liquidated damages for performance shortfall (if applicable) shall be specified in the Technical Specifications.

- 10.3 The Liquidated Damages referred in this clause 10 may be recovered by the Company from the Vendor as set off against any monies owed by the Company to the Vendor or in any other manner permissible under applicable laws.

11 Warranties:

- 11.1 Materials and Workmanship: Vendor shall fully warrant that all the stores, equipment and component supplied under the order shall be new and of first class quality according to the specifications and shall be free from defects (even concealed fault, deficiency in design, materials and workmanship).

11.2 Should any defects be noticed in design, material and/or workmanship within 12 months after the Material(s) or any portion thereof as the case may be have been commissioned or for 24 months from the date of delivery, whichever period concludes earlier. Purchaser shall inform Vendor and Vendor shall immediately on receipt of such intimation, depute their personnel within 7 days to investigate the causes of defects and arrange rectification/ replacement/modification of the defective equipment at site, without any cost to Purchaser within a reasonable period. If the Vendor fails to take proper corrective action to repair/replace defects satisfactorily within a reasonable period, Purchaser shall be free to take such corrective action as may be deemed necessary at Vendor's risk and cost after giving notice to the Vendor, including arranging supply of the Goods from elsewhere at the sole risk and cost of the Vendor.

11.3 In case defects are of such nature that equipment shall have to be taken to Vendor's work for rectification etc., Vendor shall take the equipment at his costs after giving necessary undertaking or security as may be required by Purchaser. After repair Vendor shall deliver the equipment at site on freight paid basis. Any taxes applicable in relation to this repair shall be to the Vendor's account. All risks in transit to and fro shall be borne by the Vendor.

11.4 Equipment or spare parts thereof replaced shall have further warranty for a period of 12 months from the date of acceptance.

12 Quality, Testing, inspection, installation:

- 12.1 All Material(s) supplied under this Contract shall be new and unused.

- 12.2 Wherever a specific Quality Assurance Plan is provided with the Request for Quotation (RFQ) or agreed as part of the commercial/ technical discussions, the same shall be binding on the Vendor.
- 12.3 The material shall be inspected
- a. At consignee end by Purchaser.
 - b. At factory premise of the Vendor/ sub-vendor by Purchaser or third party duly nominated by Purchaser. The Vendor shall extend all necessary co-operation to Purchaser/ third party inspector carrying out the inspection. The Inspector(s) shall have the right to carry out the inspection or testing, which will include inspection and testing of the raw materials at manufacturers shop, at fabricators shop and at the time of actual despatch before and/or after completion of packing.
- 12.4 The Vendor will inform Purchaser at least eight (8) days in advance of the exact place, date and time of tendering the Material(s) for required inspection and provide free access to the Inspector(s) during normal working hours at Vendor's or his/ its sub-Suppliers works, and place at the disposal of the Inspector(s) all useful means for undertaking the Inspection, checking the results of tests performed, marking the Material(s), getting additional tests conducted and final stamping of the Material(s).
- 12.5 Even if the inspection and tests are fully carried out, the Vendor shall not be absolved from its responsibilities to ensure that the Material(s), raw materials, components and other inputs are supplied strictly to conform and comply with all the requirements of the Contract at all stages, whether during manufacture and fabrication, or at the time of Delivery as on arrival at site and after its erection or start up or consumption, and during the defect liability period. The inspections and tests are merely intended to prima facie satisfy Purchaser that the Material(s) and the parts and components comply with the requirements of the Contract.
- 12.6 *All costs associated with the inspection shall be included in cost of Material(s).*
- 12.7 Original material test certificate/ performance test certificate/ fitment certificate/ test reports etc. relevant/ applicable as per the specifications/ standards shall be dispatched along with the material supply failing which the material may be rejected.
- 13 Rejection:**
- 13.1 Rejected goods shall be removed and replaced within 14 days of the date of communication of rejection.
- 13.2 Claim in respect of breakage/shortages in any cases shall be referred on the Vendor within ninety (90) days from the date of receipt of Goods by the Purchaser which shall be replaced/made good by the Vendor at his own cost. All risk of loss or damage to the material shall be upon the Vendor till it is delivered to the purchaser/consignee.
- 14 General Indemnity:**
- The Vendor shall indemnify and keep the Purchaser indemnified from and against any and all claims, costs, liabilities (financial), litigations, compensations, judgments, expenses or damages (including attorney's fees and other related expenses) arising out of any breach or alleged breach of any of the conditions of this Contract, performance of the obligations hereunder, or any representation or misrepresentation made by the Vendor or any third party with regard to the subject of this Contract.
- 15 Indemnity against IPR:**
- The equipment, system, drawings, and other materials that shall be supplied against the order will become the Purchaser's property. Without limitation of any liability of whatsoever nature, the Purchaser shall be indemnified and kept indemnified against any claim for infringement or breach of any of the statues, rules & regulations by the use of or sale of any article or material supplied by the Vendor. The indemnity shall include any infringement of patent, trade mark, design, copyright or other property rights whether in Country of Origin, or elsewhere resulting from the Vendor's design, manufacture, use, supply or re-supply & would also cover use or sale of any article or material supplied by the Vendor to the Purchaser under the Purchase Order. The Indemnity shall cover any claim/action taken by a third party either directly against the Purchaser or any claim/action made against the Vendor & where under the Purchaser is made liable. The

Indemnity shall be for losses, damages, and costs including litigation costs, attorney fees etc incurred by the Purchaser in relation to the Purchase Order.

16 Latent Defects Liability period (if applicable):

Notwithstanding the inspections, acceptance tests, quality checks etc carried out by the Vendor and witnessed/accepted by the Purchaser, the Vendor shall further warrant the equipment for any latent defects in its design, material or workmanship against the specifications set forth and shall make good any such defects by way of repair or replacement of the part or whole of the defective product at its own cost & risks as and when such latent defects are observed and intimated by the Purchaser and intimated to the Vendor within 36 months of completion of warranty period.

17 Force Majeure:

- 17.1 In the event of either party being rendered unable by force majeure to perform any obligation required to be performed by it under this Contract the relative obligation of the party affected by such force majeure shall, after notice under this articles be suspended for the period during which such cause lasts. The term 'Force Majeure' as employed herein shall mean acts of God, wars (declared or undeclared), riots or civil commotion, fire, floods, and acts and regulations of the Government of India or State Government or any of the statutory agencies. Both the party shall pay to the other party, the amount payable upon the date of the occurrence of such force majeure.
- 17.2 Upon the occurrence of such cause and upon its termination, the party alleging that it has been rendered unable as aforesaid, thereby shall notify the other party in writing immediately but not later than twenty four (24) hours of the alleged beginning and ending thereof giving full particulars and satisfactory evidence in support of the claims.
- 17.3 During the period, the obligations of the parties are suspended by force majeure, the contractor shall not be entitled to payment of any rate.
- 17.4 In the event of the force majeure conditions continuing or reasonably expected to continue for a period more than thirty (30) days, Purchaser shall have the option of terminating the contract by giving seven (7) days notice thereof to the contractor.

18 Variation:

Except for any provisions in this Purchase Order, any change /modification to the terms and conditions of this Order can be issued only by Purchaser or with the prior written approval from Purchaser.

19 Termination

- 19.1 The Contract shall be deemed to be terminated on completion of delivery of Material(s)
- 19.2 Termination of Default by Vendor:
Purchaser may terminate the contract at any time if the Vendor fails to carry out any of his obligations including timely delivery under this Contract. Prior to termination, the Vendor shall be advised in writing of the causes of unsatisfactory performance to be improved upon 15 days of the receipt of notice. In case, if the Vendor fails to bring about the improvement to the satisfaction of the Purchaser, then the order shall be terminated.
- 19.3 Without prejudice to the rights and remedies available to Purchaser, Purchaser may terminate the Contract or part thereof with immediate effect with written notice to the Vendor if,:
- 19.3.1 The Vendor becomes bankrupt or goes into liquidation.
- 19.3.2 The Vendor makes a general assignment for the benefit of creditors.
- 19.3.3 A receiver is appointed for any substantial property owned by the Vendor.
- 19.3.4 The Vendor has misrepresented to Purchaser, acting on which misrepresentation Purchaser has placed the Purchase Order on the Vendor.

The Vendor/ Contractor shall not be entitled to any further payment under the Contract if the Contract is terminated. If the order is terminated under clause 19.2 and 19.3, the Vendor shall not be entitled to any further payment, except that, if Purchaser completes the supply of Material(s) and the costs of completion are less than the Total Order value, the Purchaser shall pay Vendor an amount properly allocable to supply of Material(s) fully performed by Vendor prior to termination for which payment was not made to Vendor. In case, the cost of completion of Material(s) exceed the total Order value, the additional cost incurred by Purchaser for such completion shall be paid by the Vendor.

19.4 Purchaser shall be entitled to terminate the Contract at its convenience, at any time by giving thirty (30) Days prior notice to the Contractor. Such notice of termination shall specify that termination is for Companies convenience and the date upon which such termination becomes effective. Upon receipt of such notice, the Contractor shall proceed as follows:

- 19.4.1 cease all further work, except for such work as may be necessary and instructed by the Company/ Company's representative for the purpose of protecting those parts of the supplies already manufactured;
- 19.4.2 stop all further sub-contracting or purchasing activity, and terminate Sub-contracts;
- 19.4.3 handover all Documents, equipment, materials and spares relating to the supply of goods prepared by the Contractor or procured from other sources up to the date of termination for which the Contractor has received payment equivalent to the value thereof; and
- 19.4.4 handover those parts of the supplies manufactured by the Contractor up to the date of termination.

Upon termination pursuant to clause 19.4, the Vendor shall be entitled to be paid the full value on the Material(s) delivered in accordance with the Contract.

19.5 The Contractor shall not be released from any of his obligations or liabilities accrued under the Contract on termination. For the avoidance of doubt, the termination of the Contract in accordance with this clause shall neither relieve the Contractor of his accrued obligations for Warranty or his accrued liability to pay (liquidated) damages for Delay nor shall entitle him to reduce the value of Performance Security.

20 Sub letting and assignment:

The contractor shall not without prior consent in writing of the Purchaser, sublet, transfer or assign the contract or any part thereof or interest therein or benefit or advantage thereof in any manner whatsoever, provided nevertheless that any such consent shall not relieve the contractor from any obligation, duty or responsibility under the contract.

21 Dispute Resolution:

Dispute or differences arising out or relating to this Order shall be resolved amicably by the parties. Failing such amicable resolution of dispute / differences either party may refer the matter to arbitration of a Sole Arbitrator to be appointed jointly by both the parties. The award of the Arbitrator shall be final, binding and conclusive on the parties. The venue for arbitration shall be Mumbai. The Arbitration proceedings will be governed and regulated by the provisions of Indian Arbitration and Conciliation Act, 1996 as amended from time to time and the rules framed there under.

22 Governing laws

This Contract shall be construed in accordance with and governed by the Laws of India without giving effect to any principle of conflict of law.

23 Jurisdiction

This Contract and the transaction contemplated herein shall be subject to the exclusive jurisdiction of the competent Courts in Mumbai only.

24 Limitation of Liability

Notwithstanding anything contained in the Contract, the Contractor's aggregate liability under this Contract shall be limited 100% of the Total order value. This shall however, exclude liability arising pursuant to clause 2.8- tax indemnity, clause 14- General Indemnity, clause 15- Indemnity against IPR, clause 25 – Confidentiality and liabilities arising due to wilful misconduct, gross negligence, third party claims and corrupt acts attributable to the Vendor.

25 Confidentiality:

The Vendor shall use the Confidential Information of the Purchaser only in furtherance of this Contract and shall not transfer or otherwise disclose the Confidential Information to any third party. The Vendor shall (i) give access to such Confidential Information solely to those employees with a need to have access thereto; and (ii) take the same security precautions to protect against disclosure or unauthorized use of such Confidential Information that the party takes with its own confidential information but, in no

event, shall a party apply less than a reasonable standard of care to prevent such disclosure or unauthorized use.

26 Consequential Damages:

Unless otherwise specified, neither Party shall be responsible for and nor shall be liable to the other Party for indirect/consequential losses and damages suffered by such Party including for loss of use, loss of profit whether such liability or claims are based upon any negligence on the part of the other Party or its employees in connection with the performance of the Purchase Order.

27 New Legislation (The Micro, Small and Medium Enterprise Development Act 2006)

- a. This Act has been enacted and made effective from 2nd October 2006. The Interest on Delayed Payments to Small Scale and Ancillary Industrial Undertaking Act, 1993 is repealed.
- b. Vendor is requested to inform the purchaser if vendor fall under The Micro, Small and Medium Enterprises Development Act, 2006 legislation and provide the purchaser, registration number and date to enable purchaser to take necessary care. The vendors are also requested to mention the same on their invoice / bill.

28 Relation between parties:

The Purchase Order shall be entered into on a principal-to-principal basis only. The Purchase order shall not be construed as a partnership or an association of persons. There is no agent and principal relationship between the parties. Each party shall be responsible for its own conduct. The Vendor shall ensure at all times that all the work carried out under this contract either by its own person or through any of its sub-Vendors shall be always done under its own direct supervision.

29 Environment / ISO 14001 Certification:

The Vendor to confirm whether their organization is ISO 14001 certified. If not, the Vendor must certify that the handling, use and disposal of their product / by-products conform to practices consistent with sound environmental management and local statutes. The Vendor shall ensure that all the wastes are disposed in environmental friendly way with strict compliance to applicable laws including

adherence to MoEF guidelines with respect to disposal of batteries, lead waste, copper cables, ash, waste oil, e-waste etc which shall be disposed through MoEF approved parties only. The Vendor shall also be responsible to collect and recycle all the e-waste generated at the end of the product life cycle at its own costs and risks as per the MoEF guidelines/ orders.

30 Tata Code of Conduct

The Purchaser abides by the Tata Code of Conduct in all its dealing with stake holders and the same shall be binding on the Purchaser and the Vendor for dealings under this Purchase Order. A copy of the Tata Code of Conduct is available at our website: <http://www.tatapower.com/aboutus/code-of-conduct.aspx>. The Vendor is requested to bring any concerns regarding this to the notice of our Chief Ethics Officer on the e-mail ID: cecounsellor@tatapower.com.

31 Responsible Supply Chain Management:

The Purchaser is committed for a cleaner environment and respect of Human rights through its Responsible Supply Chain Management policy. The Vendor is required to comply with all the environment & Human rights related laws, including emission norms, Labour and environmental regulations. The Purchaser encourages its Vendors/ Contractors/ Business partners to pay more attention to green design, green supply, green production, green logistics and green packaging in performing their business obligations.

The Vendor is required to abide by the Tata Power Corporate Environment policy, Energy Conservation and Corporate Sustainability Policy.

A copy of the Responsible Supply Chain Management Policy along with Environment policy, Energy Conservation policy, Sustainability policy, Health & Safety policy and Human Rights policy is available at website: <http://www.tatapower.com/sustainability/policies.aspx>.

Vendor/Bidder is required to completely fill the attached "Supplier Sustainability Questionnaire" in support of their Green Supply Chain Management initiatives and submit the same with their offer.

The Owner recognizes that diversity in the workplace positively impacts business. The Owner is committed to help people from SC/ST background either by helping them to become entrepreneurs or by engaging workforce from SC/ST community under the contracts agreed herein. To encourage engaging SC/ST community, the owner may consider on the merit to incentivize the Contractor by paying additional 1% of the service contract portion if the number of SC/ST workforce engaged in the contract exceeds 30% of the total deployed strength and 2%, if the strength goes beyond 50%. While the Contractor will assist the workforce so engaged to become self-reliant in meeting the work expectation, the Owner may also volunteer its training resources to the extent possible to improve their employability. The Contractor shall maintain the proper documentation of such category of the workforce engaged and the owner may consider to pay the incentive after its verification.

The Owner may also consider extending price preference of 5% in the bid evaluation for an order value up to Rs.50 Lacs, provided the company is owned by a person from SC/ST community having minimum 50% holding in the company.

32 Vendor rating

You are requested to ensure compliance to the terms of the individual orders with regards to timely delivery, provision of all applicable documents / challans / test certificate, quality of the material etc. Your performance with respect to the said factors will be taken into consideration for future business.

33 Vendor Feedback:

- 33.1 In this dealing Vendors feedback is important for the purchaser to improve its processes. If vendor have to report any grievance, problem or require any clarification, information, vendor is requested to contact purchaser at email ID: CC_CUSTOMERFEEDBACK@tatapower.com
- 33.2 Vendor is requested to ensure compliance to the terms of the individual orders with regards to timely delivery, provision of all applicable documents / challans / test certificate, quality of the material etc. Vendor performance with

respect to the said factors will be taken into consideration for future business.

34 Non-Waiver:

Failure of Purchaser or its representatives to insist upon adherence to any of the terms or conditions incorporated in the Contract or failure or delay to exercise any right or remedies herein or by law accruing, or failure to promptly notify the Vendor in the event of breach or the acceptance of or the payment of any Material(s) hereunder or approval of any design or Material(s) shall not release the Vendor and shall not be deemed a waiver of any right of Purchaser to insist upon the strict performance thereof or of any of its rights or remedies as to any such Material(s) regardless of when the Material(s) are shipped, received or accepted not shall any purported oral modification or revisions of the Contract by Purchaser or its representative(s) act as waiver of the terms hereof.

35 Repeat Order:

Purchaser may place the repeat order for 100% of ordered quantities within a span of 6 months from the date of issue of this Purchase Order & Vendor shall execute it at same rates, terms and conditions.

36 Severability

If any provision of this Contract is invalid, unenforceable or prohibited by law, this Contract shall be considered divisible as to such provision and such provision shall be inoperative and shall not be part of the consideration moving from any Party hereto to the others, and the remainder of this Contract shall be valid, binding and of like effect as though such provision was not included herein.

ESG FRAMEWORK FOR BUSINESS ASSOCIATES

Tata Power's Sustainability philosophy sits at the core of its Business Strategy. Tata Power Sustainability Model has an overarching objective of 'Leadership with care' with key elements of 'Care for the Environment'; 'Care for the Community'; 'Care for our Customers / Partners' and 'Care for our People'. These sustainability objectives encompass the Environmental, Social and Governance objectives driven as integrated elements.

Tata Power, together with its stakeholders is determined to achieve sustainable growth while creating shared value for all.

As a part of future ready roadmap, Tata Power has targeted following as our Environment, Social and Governance priorities:

- Being Carbon Net Zero before 2045
- Growing Clean capacity (80% by 2030)
- Customer centricity
- Becoming water neutral before 2030
- Achieving zero waste to landfill before 2030
- No net loss of biodiversity before 2030
- Positively impacting 80 million lives by 2027

In order to create a sustainable business ecosystem, Tata Power expects that all its Business Associates (BA) which includes its suppliers, vendors, consultants and service providers to align to its ESG and sustainability commitments.

Tata Power encourages improved efficiencies and scaling up of green initiatives through technology and innovation taking us farther on the journey of reducing carbon emissions and preparing the entire eco-system towards products and services that would have net positive impact on the environment and communities that we operate in.

The Vendors/ bidders wishing to associate with Tata Power are expected to share their own sustainability and ESG journey. We at Tata Power promote all Business Associates to have a sustainable procurement policy for their supplier and service providers to contribute to our integrated approach in achieving a sustainable supply chain. The BA is encouraged to carry out the assessment of their sub-contractors and sub-vendors on sustainability readiness so that they are aware of the expectation/ business requirement.

The Vendor/ Bidder shall fill-in the 'Environment, Social and Governance Compliance Screening Questionnaire for Business Associates' attached at Annexure-I and submit the same along with the Bid in Ariba online platform.

Responsible Supply Chain Management:

Tata Power is committed for a cleaner environment and respect of Human rights through its Responsible Supply Chain Management policy.

Tata Power Business Associate (BA) shall comply with all the environment & Human rights related laws, including emission norms, Labour and environmental regulations.

Tata Power encourages its BA to focus on green design, green supply, green production, green logistics and green packaging in performing their business obligations. The BA is expected to abide by the Tata Power Corporate Environment policy, Energy Conservation and Corporate Sustainability Policy (enclosed with this document as Annexure-II).

The BA is expected to:

- Strive towards Conservation of Energy, Water, Resources and optimize transportation of Men & Materials to minimize environmental impact and reduce carbon footprint.
- Carry out the assessment of materials used for construction, operation & maintenance, consumables and accordingly phase out those materials which are environmentally hazardous.
- Be cognizant that diversity in the workplace positively impacts business.
- Promote affirmative action by supporting people from SC/ ST background by engaging workforce from SC/ ST community under the contracts agreed herein.
- Share the commitment of 'No child labour', 'No forced labour', Non-discrimination on the basis of caste, colour, religion, gender, disability, maternity or pregnancy or any other factor unrelated to the requirements of the job
- Pay the wages or remuneration to the workforce, personnel deployed in compliance to all applicable laws and regulations.
- Provide its employees/ deployed labor with an employment environment that is free of physical or psychological harassment.
- Carry out the assessment of their Sub-contractors on their Sustainability Readiness so that they are aware of the above expectation/ standards
- To ensure usage of suitable package material which is more environmentally sustainable. Further the packing material shall be recycled to the extent possible. The material used for packing is expected to suit the mode of transport and to ensure its safe receipt at point of delivery.

Waste Disposal:

The BA is expected to follow best practices for disposal of waste, few of which are listed below:

- Have a detailed project plan that includes the waste management, segregation of all designated waste material (Recyclable/ Non-Recyclable), collecting, storing, disposing and transferring the same to pre-arranged facility/ destination in timely and safe manner as per environmental legislations. The project plan shall also include the innovative construction practice to eliminate or minimize waste, protect surface/ground water, control dust and other emissions to air and control noise.
- Have purchase policy to encourage the procurement of material with recycled and minimum packaging of goods during delivery and appropriate means for site-to-site transportation of materials to avoid damage and litter generation.
- Ensure that the residents living near the site are kept informed about proposed working schedule and timings/ duration of any abnormal noise full activity that is likely to happen.
- Ensure the regular maintenance and monitoring of vehicles and equipment for efficient fuel use so that emissions and noise are within acceptable limits to avoid air pollution.

Water Management:

The BA is expected to follow best practices for water management, few of which include a management and monitoring system for water withdrawals and consumption, procedures to reduce water usage or reuse/recycle water, and pretreatment of wastewater before disposal.

Compliance to Law:

The BA shall adhere to responsible business practices and comply with the provision of all the Statutory Acts Applicable. Special attention of the BA is drawn towards the compliance of provision of the following statues: (along with the latest amendments/additions, as applicable):

- The Child Labour (Prohibition and Regulation) ACT, 1986.
- The Contract Labour (Regulation and Abolition) ACT, 1970.
- The Employee's Pension Scheme, 1995.
- The Employee's Provident Funds and miscellaneous provisions Act, 1952.
- The Employees State Insurance Act, 1948.
- The Equal Remuneration Act, 1976.
- The Industrial Disputes Act, 1947.
- The Maternity Benefit Act, 1961.
- The Minimum Wages Act, 1948.
- The Payment of Bonus Act, 1965
- The Payment of Gratuity Act, 1972.
- The Payment of Wages Act, 1936.
- The Shops & Establishment Act, 1954.
- The Workmen's Compensation Act, 1923.
- The Employer's Liability Act, 1938.
- and any other applicable statutory act

Social Accountability (SA 8000):

Tata Power expects its BAs to follow guidelines of SA 8000:2014 on the following aspects

- Child Labour
- Forced or Compulsory Labour
- Health & Safety
- Freedom of Association & Right to Collective Bargaining
- Discrimination
- Disciplinary Practices
- Working Hours
- Remuneration
- Management System

Health and Safety

The BA is expected to ensure the health and safety of his and his Sub-contractor's staff and labour. The BA shall, in collaboration with and according to the requirements of the local health authorities, ensure that medical staff, first aid facilities, sick bay and ambulance service are available at the accommodation and on the Site at all times, and that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics. The BA shall maintain records and make reports concerning health, safety and welfare of persons deployed, and damage to property, as the Owner's Representative may reasonably require. The BA shall be responsible for the medical treatment / hospitalization of his and his Sub-contractor's staff/ labour.

The BA shall appoint a qualified Safety officer at the Site to be responsible for maintaining the safety, and protection against accidents, of all personnel on the Site. Such Safety officer shall have the authority to issue instructions and take protective measures to prevent accidents.

The BA shall comply in toto with the Tata Power's Contractor Safety Terms & Conditions, Health Safety & Environment Manual while working on Tata Power Site/ Services/ Contracts.

Grievance Mechanism

The BA is expected to have grievance procedures that allow stakeholders to anonymously bring environmental and/or work-related violations and/or concerns to the attention of management. In addition, the BA is expected to have procedures for examining reports of environmental and/or work-related violations or concerns and/or privacy complaints.

Data Protection

The BA is expected to have a formal process to address data security or privacy issues.

ANNEXURE-I



Sr. No.	Question Description	Response (Y/N)	Remarks
Organization			
1	Does your Company have Sustainability Policy at Organization Level? If Yes, Please attach		
2	Do you have sustainable procurement policy in place for your own suppliers? If Yes, Please attach		
3	Does your company do regular assessment of its suppliers on ESG parameters?		
4	Are there ESG risks, or negative impacts identified in your supply chain		
Governance			
1	Is diversity taken into consideration when appointing board members/ senior management? Do you have an independent director/s?		
2	Has your company taken initiatives to ensure ethical practices at workplace? Please share the details, Policies etc.		
3	Does your company have a formal process to address data security or privacy issues? Please share the details, Policies etc.		
4	Does your company have grievance mechanism for stakeholder issues and track resolution?		
Environment/ Planet			
1	Does your company have Environmental Policy? If Yes, Please attach		
2	Do you have a formal process for waste management including solid wastes, liquid wastes and hazardous waste?		
3	Does your company track greenhouse gas emission? Also, what percentage of own consumption comes from the renewable energy?		
4	Does your company have a formal process for water management including monitoring of water consumption and withdrawals, and if applicable, pretreatment of wastewater?		
Green Technology/ Innovation			
1	Are your facility/ Product/ Services provided by you is based on green design, green production, green packaging or green logistics considerations? Please elaborate.		
2	Do your products or services have any environmental or social features or benefits (e.g. environmental/energy certification, ecolabels, fair trade certification, etc.)?		
Social/ People			
1	Does you facility/ Company have written personnel policies in place Are you an equal opportunity employer?		
2	Please describe any formal programme / campaign in place to promote company involvement with the community (volunteering, etc.). What is the percentage of profit spend on community activities?		
3	Does your company have a written Health & Safety Policy or Program? If Yes, Please attach		
Certifications: Does your company have following certifications (valid till date-please mention validity)			
1	ISO9001 accreditation		
2	SA8000 or equivalent		
3	ISO 14001 certification		
4	ISO 18001/45001 or equivalent		
5	ISO/IEC 27001 or equivalent		
6	Any Other (Please specify)		

Signature

Business Associate Name

ANNEXURE-II

CORPORATE SUSTAINABILITY POLICY

At Tata Power, our Sustainability Policy integrates economic progress, social responsibility and environmental concerns with the objective of improving quality of life. We believe in integrating our business values and operations to meet the expectations of our customers, employees, partners, investors, communities and public at large

- We will uphold the values of honesty, partnership and fairness in our relationship with stakeholders
- We shall provide and maintain a clean, healthy and safe working environment for employees, customers, partners and the community
- We will strive to consistently enhance our value proposition to the customers and adhere to our promised standards of service delivery
- We will respect the universal declaration of human rights, International Labour Organization's fundamental conventions on core labour standards and operate as an equal opportunities employer
- We shall encourage and support our partners to adopt responsible business policies, Business Ethics and our Code of Conduct Standards
- We will continue to serve our communities:
 - By implementing sustainable Community Development Programmes including through public/private partnerships in and around our area of operations
 - By constantly protecting ecology, maintaining and renewing bio-diversity and wherever necessary conserving and protecting wild life, particularly endangered species
 - By encouraging our employees to serve communities by volunteering and by sharing their skills and expertise
 - By striving to deploy sustainable technologies and processes in all our operations and use scarce natural resources efficiently in our facilities
 - We will also help communities that are affected by natural calamities or untoward incidence, or that are physically challenged in line with the Tata Group's efforts

The management will commit all the necessary resources required to meet the goals of Corporate Sustainability.



(Praveer Sinha)
CEO & Managing Director

Date: 15th June, 2018



Supplier Code of Conduct

Tata Power follows the Tata Code of Conduct (TCoC) and the Whistle blower Policy and expect all its Suppliers to adhere to the same principles. “Supplier” here means any business, company, corporation, person or other entity that provides, sells or seeks to sell, any kind of goods or services to Tata Power, including the Supplier’s employees, agents and other representatives.

Tata Code of Conduct- (TCoC): <https://www.tatapower.com/pdf/aboutus/Tata-Code-of-Conduct.pdf>

Whistle Blower Policy: <https://www.tatapower.com/pdf/aboutus/whistle-blower-policy-and-vigil-mechanism.pdf>

Anti-Bribery & Anti-Corruption Policy: <https://www.tatapower.com/pdf/aboutus/abac-policy.pdf>

The suppliers are expected to adhere to the following Do’s and Don’ts:

Do’s

1. The Suppliers shall be committed to supplying products and services of high quality that meet all applicable standards and laws, including product packaging, labelling and after-sales service obligations.
2. Comply with all applicable laws and regulations, both in letter and in spirit, in all the territories in which it operates.
3. Strive to provide a safe, healthy and clean working environment for its employees.
4. Strive for environmental sustainability, particularly with regard to the emission of greenhouse gases, consumption of water and energy and the management of waste and hazardous materials.
5. The Supplier shall represent our company (including Tata brand) only with duly authorised written permission from our company.
6. Safeguard the confidentiality on the use of intellectual property, information and data of the Company.
7. Gifts and hospitality given or received should be modest in value and appropriate as per Company Policy.
8. The assets of Tata Power shall be employed primarily and judiciously for the purpose of conducting the business for which they are duly authorised.
9. All actual or potential conflicts due to financial or any other relationship with a Tata Power employee shall be disclosed.

Don’ts

1. The Supplier shall not make unfair or misleading statements about the products and services of competitors.
2. Children shall not be employed at workplaces.
3. Forced labour shall not be used in any form.
4. The Suppliers shall neither receive nor offer or make, directly or indirectly, any illegal payments, remunerations, gifts, donations or comparable benefits that are intended, or perceived, to obtain uncompetitive favours for the conduct of its business with Tata Power.

Reporting Violations

The Supplier shall notify the Company regarding any known or suspected improper behaviour of other suppliers or employees relating to its dealings with Tata Power, by email to: cecounsellor@tatapower.com. The same can also be raised through our 3rd party ethics helpline facility:

Toll-free Number	1800 267 4065
Email	tatapower@tip-offs.in
Website & Chatbot	www.tatapower.tip-offs.in
Postal address	Attn to: Mr. Puneet Arora, Deloitte Touch Tohmtsu India LLP, 6 floor, AIPL Business, Sector 62, Gurugram, Haryana 122102

The Tata Power Company Ltd		<i>OPEN TENDER NOTIFICATION</i>
<i>Tender Reference: 4100035742/CC25ADO014</i>		<i>Document Date: 9th August 2024</i>

Sr. No.	TOPIC	PRINCIPLES OF TERMS & CONDITIONS
1	GENERAL	<p>The following Special Conditions of Contract (SCC) shall supplement the General Terms and Conditions Supply.</p> <p>Wherever there is a conflict, the provisions herein shall prevail over those in the “General Terms and Conditions Supply”.</p>
2	Earnest Money Deposit (EMD)	<p>Bidders willing to participate in the tender shall submit an EMD for Rs. 2,70,000/- (Rs. Two Lakh Seventy Thousand only) in the form of Bank Guarantee (BG). Hard copy of EMD BG shall reach Tata Power at below mentioned address before the bid submission Date and Time.</p> <p>EMD BG shall be valid for 180 days from the due date of bid submission, favouring ‘The Tata Power Company Limited’. The EMD must be strictly in the format as mentioned in Tender Document, failing which it shall not be accepted by Tata Power and the bid as submitted shall be liable for rejection.</p> <p>Address for submission of EMD BG-</p> <p>Head – Procurement</p> <p>The Tata Power Company Limited, Smart Centre of Procurement Excellence,</p> <p>2nd Floor, Sahar Receiving Station, Near Hotel Leela,</p> <p>Sahar Airport Road, Andheri East, Mumbai-400059</p> <p>EMD BG of the successful bidder shall be returned after submission of Contract Performance Bank Guarantee. EMD BG of unsuccessful bidders shall be returned on completion of the tendering process.</p>
3	Guarantee/Warranty	<p>Guarantee shall be as per the Clause no. 11 in Technical Specifications.</p> <ol style="list-style-type: none"> 1) Bidder shall stand guarantee towards design, materials, workmanship & quality of process/manufacturing of items under the contract for due and intended performance of the same, as an integrated product delivered under this contract. In the event any defect is found by the Purchaser up to a period of 48 months from the date of commissioning or 60 months from the date of last supplies made under the contract, whichever is earlier. 2) Bidder shall be liable to undertake to replace/rectify such defects at his own costs within mutually agreed timeframe and to the entire satisfaction of the TATA POWER, failing which the TATA POWER will be at liberty to get it replaced/rectified at Bidder’s risks and costs and

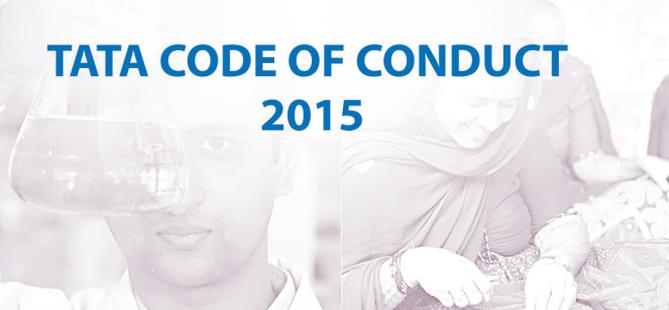
The Tata Power Company Ltd		OPEN TENDER NOTIFICATION
Tender Reference: 4100035742/CC25ADO014		Document Date: 9 th August 2024

		<p>recover all such expenses plus the TATA POWER's own charges (@ 20% of expenses incurred), from the Bidder or from the "Security cum Performance Deposit" as the case may be.</p> <p>3) In case of Distribution transformer fails within the guarantee period TATA POWER will immediately inform the Bidder who shall take back the failed Distribution Transformer within 15 days from the date of intimation at his own cost and replace / repair the transformer within forty-five days of date of intimation with a roll over guarantee. The outage period i.e., period from the date of failure till unit is repaired / replaced shall not be counted for arriving at the guarantee period.</p> <p>4) Bidder shall further be responsible for 'free replacement' for another period of THREE years from the end of the guarantee period for any 'Latent Defects' if noticed and reported by the Purchaser.</p>
4	CONTRACT PERFORMANCE BANK GUARANTEE (CPBG)	<p>This is further to General Terms & Conditions – Supply</p> <p>Vendor shall submit an unconditional and irrevocable Contract Performance Bank Guarantee (CPBG) cum performance Bank Guarantee (PBG) for a value equal to 5% of the total OLA value. CPBG shall be valid till the expiry of the Guarantee Period with a further claim period of 6 months.</p>
6	TERMS OF PAYMENT	<p>This is further to General Terms & Conditions – Supply.</p> <p>Supply Part: Invoice for 100% value shall be raised after delivery and acceptance of material at site/stores. Payment shall be made after acceptance of error free invoice along with relevant supporting documents.</p> <p>Services Part: Invoice for 100% value shall be raised after completion of supervision services at actual.</p> <p>Credit period: Credit period shall be 60 Days (NON MSME) and 45 Days (MSME) vendors after completion of job as detailed above and submission of invoice.</p> <p>The aforesaid payments shall be subject to receipt of invoices along with enclosures/supporting documents for having completed the Job according to the Scope and duly verified/certified by Owner's Order Manager against which payment is being claimed. Payments due to the Contractor shall be made after deduction of the Liquidated Damages (LD) amount, TDS etc. as applicable.</p>
7	Safety Retention	Not Applicable
8	Delivery Schedule:	Materials shall be delivered at Site/Stores within 3 Months from the date of Confirmed Order (CRO) placed against this OLA.

The Tata Power Company Ltd		OPEN TENDER NOTIFICATION
Tender Reference: 4100035742/CC25ADO014		Document Date: 9 th August 2024

9	Liquidated Damages (LD)	LD Shall be applicable as per the General Terms & Conditions – Supply.
10	INSURANCE	This is further to General Terms & Conditions Complete Insurance will be in Bidder's scope.
11	Splitting of Quantities	Tata Power reserves the right to Split the quantity among 2 or more bidders.
12	Reverse Auction	<p>Tata Power reserves the right to go for Reverse Auction (RA) for price negotiation and discover the most competitive price on ARIBA portal, Tata Power's official e-tendering platform. Date and time of e-auction will be intimated through E-Tender system to Authorized Person of Interested Bidder. This will be decided after techno-commercial evaluation of the bids. Bidders need to give their acceptance with the offer for participation in RA. Non-acceptance to participate in RA may result in non-consideration of their bids, in case Tata Power decides to go for RA.</p> <p>Only those bidders who are techno-commercially qualified shall be eligible to participate further in RA process. However, the original H1 bidder (whose price bid is the highest post techno-commercial evaluation) shall not be allowed to participate in further RA process provided minimum three techno-commercially qualified bids are available.</p>

---XXX---



**TATA CODE OF CONDUCT
2015**



LEADERSHIP THAT INSPIRES

For over 100 years, the Tata group has been led by visionaries who have stayed true to the vision of the founder, Jamsetji Tata.

A vision that placed the greater good of society at par with business growth.

A vision that put into practice pioneering social initiatives that changed the way responsible business was run.

And a vision that brought into the group a strong social conscience.



We do not claim to be more unselfish, more generous or more philanthropic than other people. But we think we started on sound and straightforward business principles, considering the interests of the shareholders our own, and the health and welfare of the employees, the sure foundation of our success.

Jamsetji Tata
Founder of the Tata group
Chairman (1868 – 1904)

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FOREWORD

Tata companies have consistently adhered to the values and ideals articulated by the Founder for over 150 years. The Tata Code of Conduct was first formalized by Mr Ratan Tata. It articulates the Group's values and ideals that guide and govern the conduct of our companies as well as our colleagues in all matters relating to business. Today, the Code is a bedrock on which we base our individual, as well as leadership commitments to core Tata values.

The Tata Code of Conduct outlines our commitment to each of our stakeholders, including the communities in which we operate, and is our guiding light when we are sometimes faced with business dilemmas that leave us at ethical crossroads. The Code is also dynamic in that it has been periodically refreshed in order to remain contemporary and contextual to the changes in law and regulations. However it remains unaltered at its core.

Our stellar reputation and success as a business entity has been defined by the powerful commitment and adherence to the core values and principles expressed in this Code, by all our employees, directors and partners. I trust every Tata colleague and Tata company will continue to not only comply with the laws and regulations that govern our business interests around the world, but will continue to set new standards of ethical conduct that will generate deep respect and inspire emulation by others.

N. Chandrasekaran

21st February, 2017



A. OUR VALUES

TATA has always been values-driven. The five core values that underpin the way we conduct our business activities are:



INTEGRITY

We will be fair, honest, transparent and ethical in our conduct; everything we do must stand the test of public scrutiny.

UNITY

We will invest in our people and partners, enable continuous learning, and build caring and collaborative relationships based on trust and mutual respect.

RESPONSIBILITY

We will integrate environmental and social principles in our businesses, ensuring that what comes from the people goes back to the people many times over.

PIONEERING

We will be bold and agile, courageously taking on challenges, using deep customer insight to develop innovative solutions.

EXCELLENCE

We will be passionate about achieving the highest standards of quality, always promoting meritocracy.

These universal values serve as the foundation for the Tata Code of Conduct. They find expression within the value system of every Tata company.

B. SCOPE AND PURPOSE OF THIS CODE

1. This Code sets out how we behave with:
 - our employees, or those who work with us;
 - our customers;
 - the communities and the environment in which we operate;
 - our value-chain partners, including suppliers and service providers, distributors, sales representatives, contractors, channel partners, consultants, intermediaries and agents;
 - our joint-venture partners or other business associates;
 - our financial stakeholders;
 - the governments of the countries in which we operate; and
 - our group companies.
 2. In this Code, “we or us” means our company, our executive directors, officers, employees and those who work with us, as the context may require.
 3. The term “our group companies” in this Code typically means companies Tata Sons intends for this Code to apply to, and / or to whom Tata Sons has issued this Code.
 4. This Code sets out our expectations of all those who work with us. We also expect those who deal with us to be aware that this Code underpins everything we do, and in order to work with us they need to act in a manner consistent with it.
-

REMEMBER...

It is our commitment to protect our reputation and our brand equity by adhering to the values and principles set out in this Code. By doing so, we strengthen our unique culture and identity.

OUR CORE PRINCIPLES



The Tata philosophy of management has always been, and is today more than ever, that corporate enterprises must be managed not merely in the interests of their owners, but equally in those of their employees, of the consumers of their products, of the local community and finally of the country as a whole.

J.R.D. Tata

Chairman, Tata Sons (1938 – 1991)

C. OUR CORE PRINCIPLES

1. We are committed to operating our businesses conforming to the highest moral and ethical standards. We do not tolerate bribery or corruption in any form. This commitment underpins everything that we do.
2. We are committed to good corporate citizenship. We treat social development activities which benefit the communities in which we operate as an integral part of our business plan.
3. We seek to contribute to the economic development of the communities of the countries and regions we operate in, while respecting their culture, norms and heritage. We seek to avoid any project or activity that is detrimental to the wider interests of the communities in which we operate.
4. We shall not compromise safety in the pursuit of commercial advantage. We shall strive to provide a safe, healthy and clean working environment for our employees and all those who work with us.
5. When representing our company, we shall act with professionalism, honesty and integrity, and conform to the highest moral and ethical standards. In the countries we operate in, we shall exhibit culturally appropriate behaviour. Our conduct shall be fair and transparent and be perceived as fair and transparent by third parties.
6. We shall respect the human rights and dignity of all our stakeholders.
7. We shall strive to balance the interests of our stakeholders, treating each of them fairly and avoiding unfair discrimination of any kind.
8. The statements that we make to our stakeholders shall be truthful and made in good faith.
9. We shall not engage in any restrictive or unfair trade practices.
10. We shall provide avenues for our stakeholders to raise concerns or queries in good faith, or report instances of actual or perceived violations of our Code.
11. We shall strive to create an environment free from fear of retribution to deal with concerns that are raised or cases reported in good faith. No one shall be punished or made to suffer for raising concerns or making disclosures in good faith or in the public interest.
12. We expect the leaders of our businesses to demonstrate their commitment to the ethical standards set out in this Code through their own behaviour and by establishing appropriate processes within their companies.
13. We shall comply with the laws of the countries in which we operate and any other laws which apply to us. With regard to those provisions of the Code that are explicitly dealt with under an applicable law or employment terms, the law and those terms shall take precedence. In the event that the standards prescribed under any applicable law are lower than that of the Code, we shall conduct ourselves as per the provisions of the Code.

REMEMBER...

“Good faith” means having a reasonable belief that the information you have provided is truthful. It does not mean having ‘all the evidence’ about the potential violation or case reported.

OUR EMPLOYEES



Once you got the best people, the people who shared our values and ideals, we left them free to act on their own. We do not fetter them. We encourage them and give them opportunities for leadership.

J.R.D. Tata

Chairman, Tata Sons (1938 – 1991)

D. OUR EMPLOYEES

Equal opportunity employer

1. We provide equal opportunities to all our employees and to all eligible applicants for employment in our company. We do not unfairly discriminate on any ground, including race, caste, religion, colour, ancestry, marital status, gender, sexual orientation, age, nationality, ethnic origin, disability or any other category protected by applicable law.
2. When recruiting, developing and promoting our employees, our decisions will be based solely on performance, merit, competence and potential.
3. We shall have fair, transparent and clear employee policies which promote diversity and equality, in accordance with applicable law and other provisions of this Code. These policies shall provide for clear terms of employment, training, development and performance management.

Q&A

A job requirement entails extensive travel. One of the candidates has excellent relevant experience and qualifications. However, this candidate is a single parent. As a result, I feel such a situation would significantly hinder this candidate's ability to cope with the job requirement. What should I do?

In accordance with the Code, the decision to recruit an employee should be based upon merit. We cannot make a presumption that the candidate would not be able to meet the travel requirements of the job. All eligible candidates should be provided with equal opportunity to demonstrate or justify that they can cope with the travel requirements of the job. Being a single parent cannot be a ground to be discriminated against at any stage of recruitment or ongoing employment in our company.

REMEMBER...

We do not tolerate harassment in any form and therefore we expect every employee to discourage such misdemeanours in the workplace.

Dignity and respect

4. Our leaders shall be responsible for creating a conducive work environment built on tolerance, understanding, mutual cooperation and respect for individual privacy.
5. Everyone in our work environment must be treated with dignity and respect. We do not tolerate any form of harassment, whether sexual, physical, verbal or psychological.
6. We have clear and fair disciplinary procedures, which necessarily include an employee's right to be heard.
7. We respect our employees' right to privacy. We have no concern with their conduct outside our work environment, unless such conduct impairs their work performance, creates conflicts of interest or adversely affects our reputation or business interests.

Human rights

8. We do not employ children at our workplaces.
9. We do not use forced labour in any form. We do not confiscate personal documents of our employees, or force them to make any payment to us or to anyone else in order to secure employment with us, or to work with us.

Bribery and corruption

10. Our employees and those representing us, including agents and intermediaries, shall not, directly or indirectly, offer or receive any illegal or improper payments or comparable benefits that are intended or perceived to obtain undue favours for the conduct of our business.

REMEMBER...

Violation by even a single employee of any law relating to anti-bribery, anti-corruption, anti-competition, data privacy, etc. could result in severe financial penalties and cause irreparable reputational damage to the company.

Gifts and hospitality

11. Business gifts and hospitality are sometimes used in the normal course of business activity. However, if offers of gifts or hospitality (including entertainment or travel) are frequent or of substantial value, they may create the perception of, or an actual conflict of interest or an 'illicit payment'. Therefore, gifts and hospitality given or received should be modest in value and appropriate, and in compliance with our company's gifts and hospitality policy.

Freedom of association

12. We recognise that employees may be interested in joining associations or involving themselves in civic or public affairs in their personal capacities, provided such activities do not create an actual or potential conflict with the interests of our company. Our employees must notify and seek prior approval for any such activity as per the 'Conflicts of Interest' clause of this Code and in accordance with applicable company policies and law.

REMEMBER...

As a general rule, we may accept gifts or hospitality from a business associate, only if such a gift:

- has modest value and does not create a perception (or an implied obligation) that the giver is entitled to preferential treatment of any kind;
- would not influence, or appear to influence, our ability to act in the best interest of our company;
- would not embarrass our company or the giver if disclosed publicly.

The following gifts are never appropriate and should never be given or accepted:

- gifts of cash or gold or other precious metals, gems or stones;
- gifts that are prohibited under applicable law;
- gifts in the nature of a bribe, payoff, kickback or facilitation payment*;
- gifts that are prohibited by the gift giver's or recipient's organisation; and
- gifts in the form of services or other non-cash benefits (e.g. a promise of employment).

(*'Facilitation' payment is a payment made to secure or speed up routine legal government actions, such as issuing permits or releasing goods held in customs.)

Working outside employment with us

13. Taking employment, accepting a position of responsibility or running a business outside employment with our company, in your own time, with or without remuneration, could interfere with your ability to work effectively at our company or create conflicts of interest. Any such activity must not be with any customer, supplier, distributor or competitor of our company. Our employees must notify and seek prior approval for any such activity as per the 'Conflicts of Interest' clause of this Code and in accordance with applicable company policies and law.

Integrity of information and assets

14. Our employees shall not make any wilful omissions or material misrepresentation that would compromise the integrity of our records, internal or external communications and reports, including the financial statements.
15. Our employees and directors shall seek proper authorisation prior to disclosing company or business-related information, and such disclosures shall be made in

accordance with our company's media and communication policy. This includes disclosures through any forum or media, including through social media.

16. Our employees shall ensure the integrity of personal data or information provided by them to our company. We shall safeguard the privacy of all such data or information given to us in accordance with applicable company policies or law.
17. Our employees shall respect and protect all confidential information and intellectual property of our company.
18. Our employees shall safeguard the confidentiality of all third party intellectual property and data. Our employees shall not misuse such intellectual property and data that comes into their possession and shall not share it with anyone, except in accordance with applicable company policies or law.
19. Our employees shall promptly report the loss, theft or destruction of any confidential information or intellectual property and data of our company or that of any third party.

Q&A

I am an accountant in the finance department of my company. Due to my artistic skills, I received an offer to pen cartoons for a children's publication for which I would receive compensation. I plan to undertake this activity during week-ends. What should I do before accepting this offer?

Before accepting the offer, you should ascertain whether the company policies and rules require you to make a disclosure to your supervisor so that the company may determine whether your undertaking this activity adversely affects our company's interests. On confirmation from the company that it does not do so, you would be free to take up the activity. It is also your duty to bring to the attention of the company whenever there is any change in the situation you have disclosed.

20. Our employees shall use all company assets, tangible and intangible, including computer and communication equipment, for the purpose for which they are provided and in order to conduct our business. Such assets shall not be misused. We shall establish processes to minimise the risk of fraud, and misappropriation or misuse of our assets.
21. We shall comply with all applicable anti-money laundering, anti-fraud and anti-corruption laws and we shall establish processes to check for and prevent any breaches of such laws.

Insider trading

22. Our employees must not indulge in any form of insider trading nor assist others, including immediate family, friends or business associates, to derive any benefit from access to and possession of price sensitive information that is not in the public domain. Such information would include information about our company, our group companies, our clients and our suppliers.

Q&A

Our company has recently announced the launch of a new business initiative. In connection with this, your friend who is a journalist with a leading business newspaper has asked you to provide some information that he could cover in his forthcoming article. He has promised not to quote you, or reveal your identity. Should you be giving him this information?

No. You should not be sharing information of this nature with the media, even if it is assured that the source would remain anonymous. Only authorised personnel in the company are permitted to speak to the media and provide information of this nature.

Our company has a “Use of Social Media” policy that lays down the “dos and don’ts” for use of social media even if you may access such media on your own time. Why is there such a policy?

External communication is a serious matter. It must be carefully managed because information put out with reference to our company or its businesses needs to be clear, truthful and not violate any undertakings we have given to other parties. In each business there are managers nominated to authorise and make different types of statements to the outside world. These managers should be consulted about any request for information you may receive or information you think we should give out.

In using social media, in particular blogs or social networking sites, you should exercise great caution while talking about our company or the business we do. It may feel like you are chatting with friends or expressing a personal opinion but even while doing so you cannot share any confidential information of our company.

REMEMBER...

We must respect the property rights of others by never misusing their assets, intellectual property or trade secrets, including the copying or downloading of unauthorised software, trademarks, copyrighted material or logos. We should never make unauthorised copies of computer software programs or use unlicensed personal software on company computers.

Prohibited drugs and substances

23. Use of prohibited drugs and substances creates genuine safety and other risks at our workplaces. We do not tolerate prohibited drugs and substances from being possessed, consumed or distributed at our workplaces, or in the course of company duties.

Conflicts of interest

24. Our employees and executive directors shall always act in the interest of our company and ensure that any business or personal association *including close personal relationships* which they may have, does not create a conflict of interest with their roles and duties in our company or the operations of our company. Further, our employees and executive directors shall not engage in any business, relationship or activity, which might conflict with the interest of our company or our group companies.
25. Should any actual or potential conflicts of interest arise, the concerned person must immediately report such conflicts and seek approvals as required by applicable law and company policy. The competent authority shall revert to the employee within a reasonable time as defined in our company's policy, so as to enable the concerned employee to take necessary action as advised to resolve or avoid the conflict in an expeditious manner.
26. In the case of all employees other than executive directors, the Chief Executive Officer / Managing Director shall be the competent authority, who in turn shall report such cases to the Board of Directors on a quarterly basis. In case of the Chief Executive Officer / Managing Director and executive directors, the Board of Directors of our company shall be the competent authority.

Q&A

You are responsible for maintaining our company's customer database. One of your friends is starting a business venture and requests you to share a few particulars from this database for marketing purposes of his business. He assures you that he would keep the data as well as his source confidential. Should you do so?

No. You should respect the confidentiality of customer information and not share any part of the database with any person without due authorisation.

You have access to revenue numbers of different business units of our company. While having a conversation with you over evening drinks, your friend enquires about the financial performance of our company. You do not share detailed information with your friend, but share approximate revenue figures. Is this conduct of yours correct?

No, it is not. You are not permitted to share financial information of our company with others who do not need to know this information. Financial information should always be safeguarded and disclosed only on a need-to-know basis after obtaining requisite approvals. Sharing of any price sensitive information that is not generally available with the public could also lead to violation of applicable insider trading laws.

27. Notwithstanding such or any other instance of conflict of interest that exists due to historical reasons, adequate and full disclosure by interested employees shall be made to our company's management. At the time of appointment in our company, our employees and executive directors shall make full disclosure to the competent authority, of any interest leading to an

actual or potential conflict that such persons or their immediate family (including parents, siblings, spouse, partner, children) or persons with whom they enjoy close personal relationships, may have in a family business or a company or firm that is a competitor, supplier, customer or distributor of, or has other business dealings with, our company.

REMEMBER...

A conflict of interest could be any known activity, transaction, relationship or service engaged in by an employee, his/her immediate family (including parents, siblings, spouse, partner, and children), relatives or a close personal relationship, which may cause concern (based upon an objective determination) that the employee could not or might not be able to fairly perform his/her duties to our company.

Examples of Potential Conflicts of Interest

A conflict of interest, actual or potential, arises where, directly or indirectly, an employee or executive director:

- (a) engages in a business, activity or relationship with anyone who is party to a transaction with our company;
- (b) is in a position to derive an improper benefit, personally or for any family member or for any person in a close personal relationship, by making or influencing decisions relating to any transaction;
- (c) conducts business on behalf of our company or is in a position to influence a decision with regard to our company's business with a supplier or customer where a relative of, or a person in close personal relationship with, an employee or executive director is a principal officer or representative, resulting in a personal benefit or a benefit to the relative;
- (d) is in a position to influence decisions with regard to award of benefits such as increase in salary or other remuneration, posting, promotion or recruitment of a relative or a person in close personal relationship employed in our company or any of our group companies;
- (e) undertakes an activity by which the interest of our company or our group companies can be compromised or defeated; or
- (f) does anything by which an independent judgement of our company's or our group companies' best interest cannot be exercised.

28. If there is a failure to make the required disclosure and our management becomes aware of an instance of conflict of interest that ought to have been disclosed by an employee or executive director, our management shall take a serious view of the matter and consider suitable disciplinary action as per the terms of employment. In all such matters, we shall follow clear and fair disciplinary procedures, respecting the employee's right to be heard.

Examples of activities normally approved (post-disclosure) as per applicable company policy

Acceptance of a position of responsibility (whether for remuneration or otherwise) in the following cases would typically be permitted, provided the time commitments these demand do not disturb or distract from the employee's primary duties and responsibilities in our company, and are promptly disclosed to the relevant competent authority:

- (a) Directorships on the Boards of any of our group companies, joint ventures or associate companies.
- (b) Memberships/positions of responsibility in educational/professional bodies, where such association will promote the interests of our company.
- (c) Memberships or participation in government committees/bodies or organisations.

Q&A

You are in a relationship with a colleague who has been recently moved into your team and would now be reporting to you. What should you do?

Romantic or close personal relationships with another employee where a reporting relationship exists and one is responsible for evaluating the other's performance, is likely to create a conflict of interest. In such a situation, you would need to report the potential conflict to your supervisor.

Your company is submitting a proposal to a company in which you were previously employed. You have confidential information pertaining to your previous employer, which you believe will help your present employer in winning the contract. Should you share this information?

No. You should not share this information with your company since it relates to confidential information of a third party. Your company respects its employees' duty to protect confidential information that they may have relating to their previous employers.

You are the purchasing manager in the procurement department of your company. You receive an invitation from a supplier to attend a premier sporting event as her guest. This particular supplier is one of the vendors who has submitted a proposal for an open tender issued by your company. Should you accept the invitation?

No. You should not accept the invitation in this instance. Since you are in a key decision-making role for the tender, any unusual benefit that you receive could be perceived as an inducement that could compromise your objectivity.

OUR CUSTOMERS



We have continued to enjoy prosperity, even with adverse times to fight against. Our relations with all concerned are the most friendly. We have maintained the same character for straight-forward dealing with our constituents and customers. Our productions have continued to be of the same high quality, and therefore command the best reputation and realise the highest prices. ... I mention these facts only to point out that with honest and straight-forward business principles, close and careful attention to details, and the ability to take advantage of favourable opportunities and circumstances, there is a scope for success.

Jamsetji Tata

Founder of the Tata group
Chairman, Tata Sons (1868 – 1904)

E. OUR CUSTOMERS

Products and services

1. We are committed to supplying products and services of world-class quality that meet all applicable standards.
2. The products and services we offer shall comply with applicable laws, including product packaging, labelling and after-sales service obligations.
3. We shall market our products and services on their own merits and not make unfair or misleading statements about the products and services of our competitors.

Export controls and trade sanctions

4. We shall comply with all relevant export controls or trade sanctions in the course of our business.

Fair competition

5. We support the development and operation of competitive open markets and the liberalisation of trade and investment in each country and market in which we operate.
6. We shall not enter into any activity constituting anti-competitive behaviour such as abuse of market dominance, collusion, participation in cartels or inappropriate exchange of information with competitors.
7. We collect competitive information only in the normal course of business and obtain the same through legally permitted sources and means.

Dealings with customers

8. Our dealings with our customers shall be professional, fair and transparent.
 9. We respect our customers' right to privacy in relation to their personal data. We shall safeguard our customers' personal data, in accordance with applicable law.
-

Q&A

You are the Regional Sales Manager of our company. You have become a member of an “informal group”, on an instant messaging service, whose members are the regional sales heads of our company’s competitors. The administrator of the group has requested an in-person meeting to informally discuss market conditions and brainstorm on “pricing strategy” from an industry perspective. What should you do?

Any meeting with competitors, especially to discuss “pricing strategy”, could be an attempt to promote an anti-competitive practice or manipulate prices. You should respond by declining this invitation and exiting the “informal group”. You should also report this incident to your supervisor and your Legal department.

You are attending a customer meeting with a colleague, and your colleague makes an untruthful statement about the company’s services. What should you do?

You should assist your colleague in correcting the inaccuracy during the meeting if possible. If this is not possible, raise the issue with your colleague after the meeting to enable him/her or the company to correct any misrepresentation made to the customer.

While working on a customer project, you receive a call from your colleague. He used to manage that customer account before you took over his role. He recalls that he had worked with the customer on developing a new ordering system which he thinks would be beneficial for another customer and requests you to send him the project details. What should you do?

You must not share this information without specific approval of the customer; you are not permitted to use a customer’s assets, including software, for another customer or for any personal use.

REMEMBER...

Striving for excellence in the standards of our work and in the quality of our goods and services is a core Tata value. It is the unwavering practice of this value that builds and sustains customer trust in our brand.

OUR COMMUNITIES AND THE ENVIRONMENT



“In a free enterprise, the community is not just another shareholder in business but is in fact the very purpose of its existence.”

Jamsetji Tata

Founder of the Tata group
Chairman, Tata Sons (1868 – 1904)

F. OUR COMMUNITIES AND THE ENVIRONMENT

Communities

1. We are committed to good corporate citizenship, and shall actively assist in the improvement of the quality of life of the people in the communities in which we operate.
2. We engage with the community and other stakeholders to minimise any adverse impact that our business operations may have on the local community and the environment.
3. We encourage our workforce to volunteer on projects that benefit the communities in which we operate, provided the principles of this Code, where applicable, and in particular the 'Conflicts of Interest' clause are followed.

The environment

4. In the production and sale of our products and services, we strive for environmental sustainability and comply with all applicable laws and regulations.
5. We seek to prevent the wasteful use of natural resources and are committed to improving the environment, particularly with regard to the emission of greenhouse gases, consumption of water and energy, and the management of waste and hazardous materials. We shall endeavour to offset the effect of climate change in our activities.

OUR VALUE-CHAIN PARTNERS



If we had done some of the things that some other groups have done, we would have been twice as big as we are today. But we didn't, and I would not have it any other way.

J.R.D. Tata

Chairman, Tata Sons (1938 – 1991)

(on the pace of expansion of the Tata group in the 1960s and 70s)

G. OUR VALUE-CHAIN PARTNERS

1. We shall select our suppliers and service providers fairly and transparently.
2. We seek to work with suppliers and service providers who can demonstrate that they share similar values. We expect them to adopt ethical standards comparable to our own.
3. Our suppliers and service providers shall represent our company only with duly authorised written permission from our company. They are expected to abide by the Code in their interactions with, and on behalf of us, including respecting the confidentiality of information shared with them.
4. We shall ensure that any gifts or hospitality received from, or given to, our suppliers or service providers comply with our company's gifts and hospitality policy.
5. We respect our obligations on the use of third party intellectual property and data.

Q&A

You head the procurement function in our company. You have tight budgetary constraints for a project that you are working on. In order to complete the project within the targeted costs, you intend to request your supplier to provide you an exceptional discount on this project order on the understanding that you would “make it up to him” in future orders. Would you be violating the Code?

Yes, you would. Inducement in any form, including future benefits to the supplier, could compromise your ability to act objectively and in the best interests of the company and therefore must be avoided.

REMEMBER...

Our value-chain partners would include our suppliers and service providers, distributors, sales representatives, contractors, channel partners, consultants, intermediaries and agents; joint-venture partners and other business associates.

OUR FINANCIAL STAKEHOLDERS



Ethical behaviour in business – in every sphere and with all constituents – has been the bedrock on which the Tata group has built, and operates, its enterprises. This has been an article of faith for the group ever since its inception, a fundamental element of our cherished heritage and the essence of our way of life.

Ratan Tata

Chairman, Tata Sons (1991 – 2012)

H. OUR FINANCIAL STAKEHOLDERS

1. We are committed to enhancing shareholder value and complying with laws and regulations that govern shareholder rights.
 2. We shall inform our financial stakeholders about relevant aspects of our business in a fair, accurate and timely manner and shall disclose such information in accordance with applicable law and agreements.
 3. We shall keep accurate records of our activities and shall adhere to disclosure standards in accordance with applicable law and industry standards.
-

GOVERNMENTS



Business, as I have seen it, places one great demand on you; it needs you to impose a framework of ethics, values, fairness and objectivity on yourself at all times. It is not easy to do this; you cannot impose it on yourself forcibly because it has to become an integral part of you.

Ratan Tata

Chairman, Tata Sons (1991 – 2012)

I. GOVERNMENTS

Political non-alignment

1. We shall act in accordance with the constitution and governance systems of the countries in which we operate. We do not seek to influence the outcome of public elections, nor to undermine or alter any system of government. We do not support any specific political party or candidate for political office. Our conduct must preclude any activity that could be interpreted as mutual dependence/favour with any political body or person, and we do not offer or give any company funds or property or other resources as donations to any specific political party, candidate or campaign.

Any financial contributions considered by our Board of Directors in order to strengthen democratic forces through a clean electoral process shall be extended only through the Progressive Electoral Trust in India, or by a similar transparent, duly-authorized, non-discriminatory and non-discretionary vehicle outside India.

Government engagement

2. We engage with the government and regulators in a constructive manner in order to promote good governance. We conduct our interactions with them in a manner consistent with our Code.
3. We do not impede, obstruct or improperly influence the conclusions of, or affect the integrity or availability of data or documents for any government review or investigation.

OUR GROUP COMPANIES



I do not think anyone was on par with Jamsetji as an industrial visionary. But that is not the sole reason why I have been an admirer of Jamsetji. The major reason was his sense of values, sterling values, which he imparted to this group. If someone were to ask me, what holds the Tata companies together, more than anything else, I would say it is our shared ideals and values which we have inherited from Jamsetji Tata.

J.R.D. Tata

Chairman, Tata Sons (1938 – 1991)

J. OUR GROUP COMPANIES

1. We seek to cooperate with our group companies, including joint ventures, by sharing knowledge, physical resources, human and management resources and adopting leading governance policies and practices in accordance with applicable law including adherence to competition law, where relevant.
2. We shall strive to achieve amicable resolution of any dispute between us and any of our group companies, through an appropriate dispute resolution mechanism so that it does not adversely affect our business interests and stakeholder value.
3. We shall have processes in place to ensure that no third party or joint venture uses the TATA name/brand to further its interests without proper authorisation.
4. Our Board of Directors shall consider for adoption policies and guidelines periodically formulated by Tata Sons and circulated to group companies.

Q&A

You are in the process of selecting potential vendors for an IT project in our company. In the final shortlist of two companies, one is a new start-up with limited references and a lower price-quotation, while the other is a Tata company with thirty years of implementation experience and good references, but a marginally higher quote for the same job. With all other parameters of choice being nearly equal, which company should you select for the job?

While price is undoubtedly an important criterion for decision making, it is clearly not the only one to be evaluated. You may also need to consider good customer references, proven track record and shared value systems in order to decide on your IT partner.

You are in the process of selecting potential vendors for a project. One of the three finalists is a group company. In reviewing the final proposals, you rank the group company second out of the three proposals based on pricing and total cost of ownership, and select the first-ranked vendor. Is this the right decision?

Yes. You should select the vendor that, on its own merits, is the vendor that is most appropriate for your company's requirements. You should not select a group company only because of its affiliation.

RAISING CONCERNS

We encourage our employees, customers, suppliers and other stakeholders to raise concerns or make disclosures when they become aware of any actual or potential violation of our Code, policies or law.

We also encourage reporting of any event (actual or potential) of misconduct that is not reflective of our values and principles.

Avenues available for raising concerns or queries or reporting cases could include:

- immediate line manager or the Human Resources department of our company
- designated ethics officials of our company
- the 'confidential reporting' third party ethics helpline (if available)
- any other reporting channel set out in our company's 'Whistleblower' policy.

We do not tolerate any form of retaliation against anyone reporting legitimate concerns. Anyone involved in targeting such a person will be subject to disciplinary action.

If you suspect that you or someone you know has been subjected to retaliation for raising a concern or for reporting a case, we encourage you to promptly contact your line manager, the company's Ethics Counsellor, the Human Resources department, the MD/CEO or the office of the group's Chief Ethics Officer.

Q&A

My supervisor has asked me to do something which I believe may be illegal. I am afraid if I do not do what I am told, I could lose my job. Should I do it?

No. Breaking the law is never an option. Discuss the situation with your supervisor to be certain that you both understand the facts. If your concerns are not resolved, contact a higher level supervisor, the Ethics Counsellor, the Legal department or report them via the company's confidential reporting system, if available.

I feel that my supervisor is treating me unfairly for reporting a concern to the Ethics Counsellor. What should I do?

Retaliation against anyone who raises a concern is a violation of the Code. You should therefore promptly report this action of your supervisor to the Ethics Counsellor or the MD/CEO of your company or via the company's confidential reporting system, if available.

ACCOUNTABILITY

This Code is more than a set of prescriptive guidelines issued solely for the purpose of formal compliance. It represents our collective commitment to our value system and to our core principles.

Every person employed by us, directly or indirectly, should expect to be held accountable for his/her behaviour. Should such behaviour violate this Code,

they may be subject to action according to their employment terms and relevant company policies.

When followed in letter and in spirit, this Code is 'lived' by our employees as well as those who work with us. It represents our shared responsibility to all our stakeholders, and our mutual commitment to each other.

SPEAK UP...

If you are unsure whether a particular action you are about to take is consistent with the principles set forth in the Code, ask yourself:

- Could it directly or indirectly endanger someone or cause them injury?
- Is it illegal/unlawful or out of line with our policies and procedures?
- Does my conscience reject it? Does it conflict with my personal values?
- Would I feel uncomfortable if the story appeared in the media? Would it shame my company, spouse, partner, parent or child?
- Does it 'feel' wrong?

If the answer to any of these questions is "Yes", please stop and consult your reporting manager, the Ethics Counsellor, the Human Resource department, the Legal department or any member of the senior management team, to assist you in making the decision.

When faced with a dilemma: Stop, Think, Act Responsibly

NOTE

The Code does not provide a comprehensive and complete explanation of all expectations from a company standpoint or obligations from a stakeholder standpoint.

Our employees have a continuing obligation to familiarise themselves with all applicable law, group-level advisories and policies, company-level policies, procedures and work rules as relevant. For any guidance on interpretation of the Code, we may seek support from our company's Ethics Counsellor or from the group's Chief Ethics Officer, as appropriate.

All joint ventures are encouraged to adopt the Tata Code of Conduct (TCOC) or a code of conduct that incorporates all elements of the TCOC.

This version of the Tata Code of Conduct supersedes all earlier versions and associated documents and stands effective from 29th July, 2015.

For any query or clarification on the Code, please contact the office of the group's Chief Ethics Officer via email at: ethicsoffice@tata.com.



TATA CODE OF CONDUCT – 2015

I acknowledge that I have received the Tata Code of Conduct.

I have read the Tata Code of Conduct and I acknowledge that as a Tata employee, I am required to comply with the guidelines described therein and failure to do so may subject me to action as per my employment terms and relevant company policies.

If I have a concern about a violation, or a potential violation of the Tata Code of Conduct, I understand that there are channels available to me in my company to report such concerns. By making use of these channels when necessary, I will play my part in maintaining the high ethical standards to which we hold ourselves.

Signature: _____

Date: _____

Name: _____

Department: _____

Address: _____

(Please submit this declaration to your Ethics Counsellor or the Human Resource department of your company.)



For further information on the Code please contact:
 The Ethics Office,
 Tata Sons Ltd.,
 Bombay House,
 24, Homi Mody Street,
 Mumbai – 400001, India.
 Email: ethicsoffice@tata.com

HEALTH AND SAFETY POLICY

We, at Tata Power, reaffirm our belief that the health and safety of our stakeholders is of the utmost importance and takes precedence in all our business decisions. In pursuit of this belief and commitment, we strive to:

- Maintain and proactively improve our management systems to minimize health and safety hazards to our stakeholders and all others influenced by our activities.
- Comply and endeavour to exceed all applicable occupational health & safety legal and other requirements by setting the highest standards.
- Integrate health & safety procedures and best practices into every operational activity with assigned line-functional responsibilities at all levels, for improving and sustaining health & safety performance.
- Involve our employees in maintaining a safe and healthy work environment through risk assessments, periodic reviews of operational procedures, safe work methods and adoption of new technology.
- Develop a culture of safety through active leadership and provide appropriate training at all levels to enable employees developing their skills to work safely.
- Incorporate appropriate health & safety criteria into business decisions for selection of plant and technology, performance appraisal of individuals and appointments in key positions.
- Ensure availability at all times of appropriate resources to fully implement the health & safety policy of the company.
- Promptly report incidents, investigate for root causes and ensure lessons learnt shared and deployed across the company.
- Ensure service providers and their workmen align with company's safety codes and practices for the health and safety of personnel working with us.
- Set safety & health metrics as indicators of excellence, monitor progress and continually improve performance.

We shall actively communicate this policy to all stakeholders by suitable means and periodically review its relevance in continuously changing business environment.



(Praveer Sinha)
CEO & Managing Director

Date: 15th June, 2018

TATA POWER

Lighting up Lives!



CORPORATE ENVIRONMENT POLICY

Tata Power is committed to a clean, safe and healthy environment, and we shall operate our facilities in an environmentally sensitive and responsible manner. Our commitment to environmental protection and stewardship will be achieved by:

- Complying with the requirements and spirit of applicable environmental laws and striving to exceed required levels of compliance wherever feasible
- Ensuring that our employees are trained to acquire the necessary skills to meet environmental standards
- Conserving natural resources by improving efficiency and reducing wastage
- Making business decisions that aim towards sustainable development
- Engaging with stakeholders to create awareness on sustainability



(Praveer Sinha)
CEO & Managing Director

Date: 15th June, 2018



FORMAT OF EMD – Bid Guarantee BG

FORMAT OF EMD – Bid Guarantee BG

Note: a) Format shall be followed in toto

b) Claim period of six months must be kept. In case of Bank is not ready to give BG for six months and claim period of six months EMD BG valid of one year to be given

c) The guarantee to be accompanied by the covering letter from the bank confirming the signatories to the guarantee on the Bank's letter head.

The Tata Power Co Ltd
34, Sant Tukaram Road
Carnac Bunder,
Mumbai 400 009

Whereas (Name of the Contractor), a Company incorporated under the Indian Companies Act 1956, having its Registered office at _____, (hereinafter called the "BIDDER") has in response to your Invitation to Bid against Enquiry No. _____ dated _____, for (name of work), offered to supply and/or execute the works as contained in Employers letter dated _____.

AND WHEREAS BIDDER is required to furnish to you a Bank Guarantee for the sum of Rs. _____/-(Rupees ____ only) as Earnest Money against Bidder's offer as aforesaid.

AND WHEREAS we, (name of the bank) having our Registered Office at _____ and Branch office at _____, have at the request of Bidder, agreed to give you this Guarantee as hereinafter contained.

NOW THEREFORE, in lieu of earnest money deposit, we, the undersigned, hereby covenant that the aforesaid Bid of the BIDDER shall remain open for acceptance by you during the period of validity as mentioned in the Bid Document or any extension thereof as requested by you and if Bidder shall for any reason back out, whether expressly or impliedly, from this said Bid during the period of its validity or any extension thereof as aforesaid, we hereby guarantee to you the payment of the sum of Rs. _____/-(Rupees ____ only) on demand and without demur and notwithstanding the existence of any dispute between you and the BIDDER in this regard and we hereby further agree as follows:

- (a) You shall have the right to file/make a claim on us under the Guarantee for a further period of six months from the said date of expiry.
- (b) That this guarantee shall not be revoked during its currency without your written express consent.
- (c) That you may without affecting this guarantee grant time or other indulgence to or negotiate further with BIDDER in regard to the conditions contained in the said Bid document and thereby modify these conditions or add thereto any further conditions as may be mutually agreed upon between you and BIDDER.
- (d) That the guarantee hereinbefore contained shall not be affected by any change in the constitution of our Bank or in the constitution of BIDDER.

- (e) That any account settled between you and BIDDER shall be conclusive evidence against us of the amount due hereunder and shall not be questioned by us.
- (f) That this guarantee commences from the date hereof and shall remain in force till BIDDER, if his Bid is accepted by you, furnishes the Contract Performance Guarantee as required under the said specifications and executes formal Contract Agreement as therein provided or till ____Days (__ days) from the date of submission of the Bid by the BIDDER i.e. (expiry date), whichever is earlier.
- (g) That the expression, BIDDER and Bank, and OWNER herein used shall, unless such an interpretation is repugnant to the subject or context, include their respective successors and assignees.
- (h) Notwithstanding anything herein contained, our liability under this guarantee is limited to Rs._____/-(Rupees _____ only) and the Guarantee will remain in force upto and including and shall be extended from time to time for such period or periods as may be desired by you. Unless a demand or claim under this Guarantee is received by us in writing within six months from (expiry date), i.e. on or before (claim period date), we shall be discharged from all liabilities under this guarantee thereafter.
- (i) Any claim/extension under the guarantee can be lodgeable at issuing outstation bank or at Mumbai branch and claim will also be payable at Mumbai Branch. **(To be confirmed by Mumbai Branch by a letter to that effect)**

Notwithstanding anything contained hereinabove :

- a) Our liability under this Bank Guarantee shall not exceed Rs._____/-(Rupees _____ only).
- b) This Bank Guarantee shall be valid upto ----- 200.
- c) Our Liability to make payment shall arise and we are liable to pay the guaranteed amount or any part there of under this Bank Guarantee only and only if you serve upon us a written claim or demand on or before ----- 200.