The Tata Power Company Ltd	TATA POWER	*OPEN TENDER NOTIFICATION*
Tender Reference: ***CC27AAM002***		*Document Date:* ***8th April 2026***

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 payment of Tender Participation fee
For the following package please send mail to Ms. Ayesha Abbas Mujawar (ayesha.mujawar@tatapower.com) with copy to Mr. Rameshkumar P N (pnramesh@tatapower.com).					
1.	1 year OLA for supply of 2 MVA dry type transformers	CC27AAM002	4,00,000/-	2,000 /-	20th April 2026

B. Procedure to Participate in Tender.

Following steps to be done before "Last date and time for Payment of Tender Participation Fee" as mentioned above

1. 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

2. 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 ayesha.mujawar@tatapower.com with copy to pnramesh@tatapower.com before "Last date and time for Payment of Tender Participation Fee"

Interested bidders to submit Tender Participation Fee and Authorization Letter before Last date and time as indicated above after which 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 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.

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OPEN TENDER NOTIFICATION

FOR

CC27AAM002-1 year OLA for supply of 2 MVA dry type transformers

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

Section A : Tender Notice including Instruction to Bidders

1. Tender Details

1.1 Key Tender Specific Details

Reference Number	**CC27AAM002**
Description	**1 year OLA for supply of 2 MVA dry type transformers**
Type of Tender	**Outline Agreement**
Estimated Period	**1 year**
Tender Fee	**Rs 2000/-**
Earnest Money Deposit (EMD)	**Rs 4,00,000/-** **Rs. Four Lakh Only**
Price Basis	**PV clause applicable**
Executive Handling this Tender*	Name: Ms. Ayesha Abbas Mujawar E-Mail ID: ayesha.mujawar@tatapower.com
Technical Query *	Name: Mr. Pote .R.R E-mail id- rrpote@tatapower.com

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

1.2 Calendar of Events

(a)	Payment of Tender Fee and Submission of letter nominating authorized person by Interested Bidder indicating their intent to Buy Tender	Till 20th April 2026
(b)	Access to Tender Documents through E-Tender system to authorized person of Interested Bidder	20th April 2026
(c)	Last Date of receipt of pre-bid queries, if any.	23rd April 2026
(d)	Last Date of Posting Consolidated replies to all the pre-bid queries as received	25th April 2026
(e)	Last date and time of receipt of Bids	30th April 2026

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

1.3 Mandatory documents required along with the Bid

1.3.1 Bid Guarantee Fee (EMD) of requisite value and validity. PLEASE NOTE THAT BID GUARANTEE ONLY IN FORM OF BANK GUARANTEE WILL BE ACCEPTED.

1.3.2 Requisite Documents to ascertain fulfilling of Technical and Commercial Pre-Qualification Requirement as detailed in Tender Enquiry.

1.3.3 Technical Submission including Drawings, Type Test details etc as detailed in Technical Specification.

1.3.4 Required Commercial Submission as detailed in Tender Document

1.3.5 Technical and Commercial Clarification and Deviations as per the format attached in the Tender Enquiry

1.3.6 Proper authorization letter to sign the tender and participate in Tata Power E-Tender system on the behalf of bidder.

1.3.7 **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.

Checklist of Document Submission

Stage of Tendering	Document	Type of Format	Mode of submission
Before last date of Pre-Bid Query	Query / Clarification / Deviation (QCD) Format. (F1) Technical and Commercial	Editable Excel Format	Through message in E-tender system
Bid Submission Envelope 1 (First Part)	**Earnest Money Deposit**	**Original Bank Guarantee**	**In Sealed Envelope**
Bid Submission Envelope 2 (Second Part)	**Documents to be uploaded in Ariba only.** In case of multiple files, a zipped folder can be attached for the same (size limit of 100MB per zipped file)		
To be submitted Under Tab 2.1 in Ariba	Duly filled PQR and supporting documents		
	Duly filled PQR format	Editable Excel Format	E-Tender System
	Backup documents for Technical and Commercial PQR	Signed and Scanned documents	E-Tender System
To be submitted under Tab 2.2 in Ariba	Technical Submission and Supporting Documents		
	Duly filled Unpriced Bid Format. Signed copy of Technical Specifications indicating your acceptance of the same	Signed and scanned copy of document	E-Tender System
To be submitted under Tab 2.3 in Ariba	Commercial Submission and supporting document		

	Letter of Undertaking (FOR VENDORS NOT REGISTERED WITH TATA POWER)	Scanned Copy of letter of undertaking duly filled, stamped and signed	E-Tender System
	E-auction Undertaking form	Scanned Copy of letter of undertaking duly filled, stamped and signed	E-Tender System
Bid Submission Envelope 3 (Third Part)	**Duly filled Priced Bid Format**	Hard copy in original duly signed and stamped	**Sealed Envelope**
	Duly filled Priced Bid Format	To be entered in E-Tender System	E-Tender System

1.4 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 have to 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.

1.5 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.

1.6 Qualification Criteria

Sr no	Parameter	Tata Power Requirement	Documents To be submitted by Bidder to ascertain meeting of Pre-qualification requirement
1	Infrastructure	Bidder must be an OEM of Equipment with manufacturing facility in India. The bidder must have in-house routine and acceptance testing facilities as per specifications and relevant IS/IEC.	Bidder must submit undertaking in this regard
2	Supply and Experience	The bidder must have supplied for same (1600 KVA) or higher size and voltage dry type CRT, a) A minimum of 15 nos during last 3 years b) or b) A single order of 6 nos or c) Two orders of 3 nos last 3 years 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.
3	Type Test	The bidder shall submit Type test reports obtained from CPRI/ERDA/ International Accredited Lab for the equipment / material offered. The type tests should have been conducted on the equipment / material of the same design meeting IS guidelines. The type tests should have been conducted within 5 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).	Type Test Report. Undertaking that there is no change in design / material of construction (MOC) if Type Test Report older than 5 years. Undertaking that type test shall be carried out for the offered equipment / material from CPRI / ERDA/

		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 CPRI /ERDA/ International Accredited Lab without any cost implication to the owner and the Type Test reports shall be submitted before dispatch of the equipment / material and within 120 days of outline agreement.	International Accredited Lab without any cost implication to the owner and Type Test reports shall be submitted before dispatch of the equipment / material and within 120 days of outline agreement.
4	Commercial Capability	Average of Annual turnover of the bidder for last three years shall not be less than Rs. 8 Crs.	Copies of audited Balance Sheet and P&L Statements along with UDIN number to be submitted in this regard.
5	Performance	The bidder should have performance certificates for 2 years satisfactory performance from at least 2 reputed Distribution Utilities for equipments of similar or higher rating. The work against these issued certificates should be completed in last seven years from the date 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.	Supply List & Performance Certificates from the utilities

1.7 Pre-Bid Queries

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

1.10 Payment Terms

100% payment shall be made within **60 days** (45 days for MSME) from the receipt and acceptance of the material at the Consignee Stores/Site/Location as per the Contractual Terms and Conditions.

2. Evaluation Criteria

- The bids will be evaluated technically on the compliance to tender terms and conditions.
- The bids will be evaluated commercially on the overall all-inclusive lowest cost for the complete tender BOQ / each line item as calculated in Schedule of Items. 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 has to mandatorily quote against each item of Schedule of Items. Failing to do so, Tata Power may reject the bids.

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 (PV) Clause: .

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:

$$P = Po \left(\frac{7 + 35\,C + 30\,ES + 7\,IS + 8\,IM + 7\,ER + 6\,W}{100}\right)$$
$$CO \quad ESO \quad ISO \quad IMO \quad ERO \quad WO$$

P	Price payable as adjusted in accordance with the formula
PO	Price quoted / confirmed (Each)
C	Price of Copper - Applicable in the Month of ordering.
CO	Price of Copper - as per base month of tender.
ES	Price of CRGO - Applicable in the Month of ordering.
ESO	Price of CRGO - as per base month of tender.
IS	Price of HR Coil of 3.15mm - Applicable in the Month of ordering.
ISO	Price of HR Coil of 3.15mm - as per base month of tender.
IM	Price of Insulating Materials - Applicable in the Month of ordering.
IMO	Price of Insulating Materials - as per base month of tender.
ER	Price of Epoxy resin - Applicable in the Month of ordering.
ERO	Price of Epoxy resin - as per base month of tender.
W	All India average Consumer price index - Applicable in the Month of ordering.
WO	All India average Consumer price index average - as per base month of tender.

- Base circular shall be March. 2026 circular issued in April. 2026. 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.
- 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 Contact will be placed at PVC corrected price. The said price shall then remain firm till completion of delivery and bill payment.
- There will be no cap on both positive and negative side.

Note : If due date of bid submission is extended due to any reason, the base date will remain unchanged for the calculation of PV clause

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 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 – HDFC Bank, Maneckji Wadia Building, Nanik Motwani Marg, Fort, Mumbai 400 023.
A/c no. - 00600110000763
IFSC Code – HDFC0000060

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

First Part has to be submitted 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
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 has to be submitted through E-Tender System (ARIBA) only.

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

In response to advertisement Bidder has to 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 have to be submitted in E-Tender System.

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

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, Smart Center of Procurement Excellence,2nd Floor, Sahar Receiving Station, Near Hotel Leela, Sahar Airport Road, Andheri East, Mumbai-400059

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.

3.2 Contact Information

Communication Details: 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 as 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:

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

Or

b) In case of a successful bidder, if the Bidder, within 15 days, does not

i) accept the purchase order, or

ii) 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.

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 bidders 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.

5.1 Rate Contract / Outline Agreement

Rate Contract / Outline Agreement does not guarantee any assured 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.

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Annexure 1

Schedule Of Items

S No	Item Description	Unit	Estimated Quantity	Unit Rate	Total Value
1	2000KVA 11KV/415V CU WNDG,TRF CAST RESIN	EA	7		-
2	2000KVA 22KV/415V CU WNDG,TRF CAST RESIN	EA	5		-
	Sub Total				-
	GST	%			-
	Total Value including GST	Rs			-

AGREED TERMS & CONDITIONS (ATC)- Indigenous Supply

Bidder's Name: M/s. _____

RFQ ref. No. CC27AAM002

Enquiry Description: 1 year OLA for supply of 2 MVA dry type transformers.

Bidder's Offer Ref.: *<pls mention your offer reference no here>*

1. SUBMISSION OF THIS DOCUMENT DULY SIGNED, SHALL CONSTRUE THAT ALL THE CLAUSES OF AGREED TERMS AND CONDITIONS HAVE BEEN ACCEPTED BY YOU. PURCHASE ORDER, IF ANY, SHALL BE GOVERNED BY THE CONFIRMATION PROVIDED HERE.

S. No.	Description	BIDDER'S RESPONSE
A	**TECHNICAL**	
1	Acceptance of technical specifications / scope of work including General/Technical notes as per Tender specification **In case of deviation, confirm that the same has been furnished separately.**	
2	Confirm data sheets duly filled in have been submitted, wherever required as requested in Technical specification/ Scope of work	
B	**COMMERCIAL**	
3	**Bid Validity** Confirm Bid Validity 180 days from date of bid submission.	
4	**Firm price:**	
5	**Delivery Terms** Confirm delivery terms FOR basis	
6	**Packing & Forwarding** Confirm that Packing & Forwarding charges including Special Packaging Requirement (if applicable) are included in base price	
7	**Freight Charges** Confirm that Freight charges & Transit insurance are included in base price	
8	**Taxes and duties:** GST: __% HSN/ SAC Code: Any other tax as applicable:	
9	**LD clause**: Confirm that Bidder agrees to the LD clause mentioned in GTC	
10	**Completion/Delivery Period:** Mention your delivery timelines from the date of order	
11	**Payment Terms Acceptance:** Confirm acceptance as per GTC – Supply	
12	**Warranty / Latent Defect Liability Period:** Confirm acceptance as per GTC – Supply	
13	**Contract Performance Bank Guarantee**: Confirm acceptance to Submission of Unconditional Bank Guarantee as per GCC Supply.	
14	**Testing and Inspection charges (if applicable):** Confirm the quoted are Inclusive of all testing and inspection charges as per Tender specification	

S. No.	Description	BIDDER'S RESPONSE
15	**Compliance to other terms & conditions** Acceptance of all other terms & conditions as forming the Part of the RFQ/ Tender document and communicated vide subsequent addendum(s) if any: **In case of deviation, confirm that the same has been furnished separately.**	

*Bidders / Vendor shall note that in case of any contradiction between the Agreed Terms and Conditions (ATC); and the Bidders offer, the ATC shall prevail.

Bidder's Authorised Signatory and stamp:

Name:

TECHNICAL SPECIFICATION

22 kV/415 V, 11kV/415 & 6.6kV/415 V Dry Type Transformers (Copper winding)

The Tata Power Company Ltd.

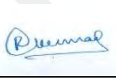
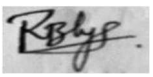
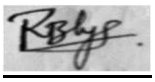
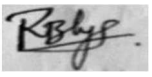
Engineering Services (ENSE),

Distribution Division, Senapati Bapat Marg,

Lower Parel, Mumbai – 400013 Maharashtra

Document No: ENSE-DS-2004-R02

Document Title: Technical specifications for 22kV/415V , 11kV/415 & 6.6kV/415V Dry Type Transformer (Copper winding)

Rev No.	Remarks	Date	Prepared By: Initials	Prepared By: Sign	Checked By: Initials	Checked By: Sign	Approved and Issued By: Initials	Approved and Issued By: Sign
03	(ENSE-DS-2004-R03)	28/03/26	KSJ		SDM		RRP	
02	(ENSE-DS-2004-R02)	20/05/25	KSJ		AVP		RMB	
01	(ENSE-DS-2004-R01)	//	KSJ		AVP		RMB	
00	For tender purpose (ENSE-DS-2004-R00)	20/11/23	KSJ		AVP		RMB	
02	D-NPCE-SPEC-03	12/07/22	SR	-SD-	AVP	-SD-	SM	-SD-

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
R02	Ketan S. Jadhav	Shreyas D. Mane	Ravindra R. Pote
Date	28/03/26	28/03/26	28/03/26

CONTENTS

1	**SCOPE**	1. This Specification covers the technical requirements of design, manufacture, testing at manufacturer's works, packing forwarding, supply at store and performance of Cast resin type, naturally cooled, three Phase 6.6/0.415kV, 11/0.415 kV & 22/0.415 kV, 50Hz, copper wound indoor 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.
2	**APPLICABLE STANDARDS**	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:

Indian Standards (IS)	Title
IS 2026 Part-11	Dry type Transformer
IS 2026 : 2011	Specification for Power Transformers
IS 104 : 2017	Specification for ready mixed paint, brushing, zinc chrome, priming
IS 191 : 2007	Copper
IS 649: 1997	Testing for steel sheets and strips and magnetic circuits.
IS 5 : 2007	Specification for Colors for ready mixed paints and enamels
IS 1576: 1992	Solid Pressboard for Electrical Purposes -Specification
IS 1897: 2008	Copper strip for electrical purposes
IS 60137 : 2017	Insulated Bushings for Alternating Voltages above 1 000 V
IS 3024 : 2015	Grain oriented electrical steel sheets and strips
IS 4253: Part II: 2008	Specification for cork composition sheets- Part II : Cork and Rubber
IS 4257(Part I): 1981	Dimensions for Clamping Arrangements for Porcelain transformer Bushings - Part I: For 12 kV to 36 kV Bushings
IS 5082:1998	Wrought Aluminum and Aluminum Alloy bars, Rods , Tubes, Sections, Plates and Sheets for Electrical Applications
IS 5561 : 2018	Specification for Electric Power Connectors
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
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: 2020	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 60529: 2001	Degrees of protection provided by enclosures (IP Code)
IEC 60076 Part 11	Dry type transformer
IEC 60626-2	Combined flexible materials for electrical insulation - Part 2: Methods of test
IEC 60076 Part 12	Loading guide for Dry type Transformers
IEC 60137 : 2017	Insulated Bushings for Alternating Voltages above 1000 V

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
4) ECBC guidelines.
3) Other alternative standards.

3	**CLIMATIC CONDITIONS OF THE INSTALLATION**		
		1	Maximum ambient temperature	43°C
		2	Max. Daily average ambient temp	35°C
		3	Min Ambient Temperature	07°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

Atmosphere is generally laden with mild acid and dust suspended during dry months and subjected to fog in cold months. The design of the equipment and accessories shall be suitable to withstand seismic forces corresponding to an acceleration of 0.1g.

4. GENERAL TECHNICAL REQUIREMENTS

Sr. No.	Description	Requirements								
1.	Continuous Rated Capacity (kVA)	315 kVA	400 kVA	500 kVA	630 kVA	800 kVA	1000 kVA	1250 kVA	1600 kVA	2000 kVA
2.	Application	Indoor								
3.	Rated voltage HV	6.6kV/ 11 kV / 22kV								
4	Max. System voltage HV	7.2kV/ 12kV /24 kV								
5.	Rated voltage LV	415-239 V								
6.a	Line current HV (A)11 KV	16.5	20.96	26.25	33.06	42.0	52.48	65.6	83.98	104.97
6.b	Line current HV (A)22 KV	8.3	10.5	13.1	16.5	21.0	26.2	32.8	42.0	52.5
6.c	Line current HV (A)6.6 KV	27.55	34.99	43.73	55.11	69.98	87.47	109.34	139.96	174.95
7.	Line current LV (A)	438.2	556.46	685.58	876.43	1113	1391.16	1738.95	2225.86	2782.33
8.	Frequency (Hz)	50 Hz +/- 5 %								
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	AN								
14.	Tap changing arrangement (off load)	+10.0% to –10% in steps of 2.5%								
15.	No. of tap positions	9								
16.	Permissible temperature rise over ambient of winding measured by resistance	115 ºC								
17.	Max. Total Losses at 50% loading at 145°C (watts)	2140	2550	3000	3570	4150	4820	5550	6760	8030
18.	Max. Total Losses at 100% loading) at 145°C (Watts)	5390	6460	7760	9440	10960	12840	14840	17980	21400

Sr. No.	Description	Requirements								
1.	Continuous Rated Capacity (kVA)	**315 kVA**	**400 kVA**	**500 kVA**	**630 kVA**	**800 kVA**	**1000 kVA**	**1250 kVA**	**1600 kVA**	**2000 kVA**
19.	Short circuit impedance voltage at 145°C (±10% tolerance)	4.5%	4.5%	4.5%	4.5%	5%	5%	5%	6.25%	6.25%
20	Noise level at rated voltage and frequency	**60 dB**	**60 dB**	**60 dB**	**62 dB**	**64 dB**	**64 dB**	**65 dB**	**66 dB**	**66 dB**
21.	Insulation Class (overall)	Class H or better								
22.	Insulation Class (winding)	Class H								
23.	Partial Discharge Level at 1.1 times rated voltage	10 pc (max.)								
24.	Max. Flux Density (at rated voltage and frequency)	1.6 Tesla								
25	Maximum Flux Density at 112.5 % of rated voltage (over fluxing.)	**1.8 Tesla**								
26.	Maximum current density (A/mm²)	2.5								
27a.	Impulse withstands voltage (for 11 kV)	75kVp								
27b.	Impulse withstands voltage (for 22 kV)	125kVp								
27c.	Impulse withstands voltage (for 6.6 kV)	60kVp								
28.	Power frequency withstand voltage									

Sr. No.	Description	Requirements								
1.	Continuous Rated Capacity (kVA)	**315 kVA**	**400 kVA**	**500 kVA**	**630 kVA**	**800 kVA**	**1000 kVA**	**1250 kVA**	**1600 kVA**	**2000 kVA**
28a.	HV for 1 min. for 11 kV	28 kV								
28b.	HV for 1 min. for 22 kV	50 kV								
28c.	HV fro 1 min. for 6.6kV	20kV								
28d.	LV for 1 min.	3 kV								
29.	Magnetising (No-load) current at: a. 100% voltage b. 112.5% Voltage	2% Max 5 % Max								
30	Permissible voltage fluctuations	+12.5% to -12.5%								
31	Neutral CT Ratio for LV side	500/5	600/5	800/5	1000/5	1250/5	1500/5	2000/5	2500/5	3000/5
32	Accuracy Class for protection CT	5P20								
33	Burden	15 VA								
34	ISF	5								
35	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.								
36.	Minimum clearances in Cable Box (mm)									
36.1	HV phase to phase/ phase to earth for 11 kV & 6.6 kV	130 / 80								
36.2	HV phase to phase/ phase to earth for 22 kV	240/140								
36.3	LV phase to phase/ phase to earth	25 / 20								
37	**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								

Sr. No.	Description	Requirements								
1.	Continuous Rated Capacity (kVA)	315 kVA	400 kVA	500 kVA	630 kVA	800 kVA	1000 kVA	1250 kVA	1600 kVA	2000 kVA
38	Clearance between HT bus bolt terminal to cable entry gland plate	600 mm								
39	Enclosure	Heavy gauge sheet steel of minimum thickness 3mm thick for the load bearing member & 2mm thick sheet for others								
40	Gasket	Neoprene rubber gasket as per IS 11149								
41	Ingress Protection	IP 33 (min) and IP 54 for marshaling box								
42	Core Material	M3 or better								
43	Altitude	1000 meter								
44	Climatic Class	Class C1: The transformer is suitable for operation at ambient temperature not below –5 °C but may be exposed during transport and storage to ambient temperatures down to –25 °C.								
45	Environmental classes	Class E2: Frequent condensation or heavy pollution or combination of both.								
46	Fire behavior classes	Class F1: Transformers subject to a fire hazard. Restricted flammability is required. The emission of toxic substances and opaque smokes shall be minimized.								

5	**GENERAL CONSTRUCTION**	1. The transformer shall be cast resin dry type, double wound, copper coil, naturally cooled (AN) and rectangular constructions per above rating. 2. The transformer shall be suitable for service with fluctuations in supply voltage up to plus 12.5% to minus 12.5%. 3. 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.
5.1	**CORE**	1. 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. 2. 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. 3. The core thickness should be 0.23mm or less and grade should be M3 or 23HP85 as per IS 3024 or better. 4. All core clamping bolts (if any) shall be effectively insulated. 5. Only one grade and one thickness of core shall be accepted and mixing of different grades shall not be allowed.

		6. Core lamination shall be coated with insulation inorganic coating equivalent to C5 type as per ESTM A976 or IS 3024 like carlite-3. 7. The complete design of the core must ensure maximum permanency of the core losses without continuous working of the transformers. 8. 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. 9. All steel sections used for supporting the core shall be thoroughly sand blasted after cutting, drilling, welding. 10. 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. 11. 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. 12. The bidder shall be required to submit the following documents in regard to procurement of core material: 1. Invoice of supplier 2. Mill's test certificate 3. Packing list 4. Bill of landing 5. Bill of entry certificate by custom 6. Description of material, electrical analysis, physical inspection certificate for surface defects, thickness and width of material. 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. 14. RTD to be placed over the core for temperature detection. 15. Provision of lifting lugs for core coil to be provided. 16. CCA frame/support structure should have engrave serial number marked.
5.2	**WINDING CONNECTIONS**	1. The conductor used in the windings shall be high grade electrolytic solid drawn copper encapsulated winding. The high voltage and low voltage windings shall be vacuum cast in epoxy in a metal mould utilizing a proven casting process that ensures the absence of voids & minimise the partial discharge. The winding shall be designed for better voltage regulation and mechanical strength. 2. All Inter turn and inter layer insulation both for HV & LV winding coils shall be suitable for Class H or better as per IS 1271-1985. Bidder to submit relevant test report. There shall be uniform insulation on the HV and LV side. 3. Copper Strips to be considered for HV winding with suitable grade insulation for handling high voltages. 4. However, enamelled conductors shall not be acceptable for any winding.

		5. All turns of windings shall be adequately supported to prevent movement. In cases where turns are spaced out, a suitable inter- turn packing shall be provided. All leads from the windings to the terminal board and bushings shall be rigidly supported to prevent injury from vibration or short circuit stresses. 6. Neutral connection shall be brazed on neutral copper busbar. 7. The current density for HV and LV winding shall not be more than 2.5 Ampere per sq.mm. The insulation between core and bolts and core and clamps shall withstand 2.5 kV for one minute. The bidder shall submit characteristics of insulation paper with the offer. 8. The transformer shall have vibration pads installed between core coil assembly and enclosure base structures to prevent the transmission of structure borne vibration. Guide tube shall be used wherever practicable. 9. The core and coil assembly shall be securely fixed in position so that no shifting or deformation occurs during movement of transformer. The core and coil assembly shall be capable of withstanding without injury, thermal and mechanical effects of short circuit at the terminals of any winding as per IS 2026 with latest amendments thereto. 10. Tolerance for the winding resistance measured from different phases but at the same Taps shall be limited to 2 %. 11. Both HV & LV windings shall be resin casted. 12. The winding shall have minimum 2 RTD pocket embedded inside resin cast on LV winding & 2 RTD/coil to be fixed in LV winding & properly wired up on junction TB placed on core-coil assembly. Then it should be further wired up to marshalling box from junction TB. The core RTD shall also wired through junction TB. 13. Hydrophobic anti tracking coating shall be applied on resin casted winding inside & outside. Bidder to provide details of the same during technical evaluation. 14. Insulated sleeves to be provided on connecting links of HV delta formation. End link of delta formation should be rounded off.
5.3	**LOSSES**	1. The bidder shall guarantee the total loss at 50% and 100% load condition (at rated voltage and frequency and at 145ºC) 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).

Description	Rating (kVA)				
	315 kVA	400 kVA	500 kVA	630 kVA	800 kVA
Maximum Losses at 50% loading at 145ºC (Watts)	2140	2550	3000	3570	4150
Maximum Losses at 100% loading at 145ºC (Watts)	5390	6460	7760	9440	10960

Description	Rating (kVA)			
	1 MVA	1.25 MVA	1.6 MVA	2 MVA
Maximum Losses at 50% loading at 145ºC (Watts)	4820	5550	6760	8030

		Maximum Losses at 100% loading at 145ºC (Watts) | 12840 | 14840 | 17980 | 21400 2. 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. 3. 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. 4. 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. 5. During testing at Bidder's works, if the temperature rise exceeds the specified values, the entire lot shall be rejected by TATA POWER. 6. 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	**ENCLOSURE**	1. The epoxy cast resin transformer shall be housed in an enclosure constructed of heavy gauge sheet steel of minimum thickness 2mm with the load bearing member should be of 3mm thick. 2. The enclosure shall provide a minimum degree of protection of IP33. 3. The housing shall have ventilation louvers / opening provided with wire mesh screens and shall be provided with a door, which shall be inter locked such that it should be possible to open the door only when power supply to the transformer is switched off. 4. A suitable danger plate should also be provided. 5. The enclosure shall be provided with a minimum of two welded heavy duty closed lifting lugs and necessary hardware for mounting on the floor. The lifting lugs shall be capable of withstanding the total weight of the transformer. The lifting lugs should be in yellow colour. 6. The base of the enclosure shall be furnished with ground pads located on opposite diagonal corners. 7. The core shall be visibly grounded to the enclosure frame by means of a removable flexible copper grounding strap. The enclosure shall be powder coated. 8. All doors shall have Limit switch with wiring up to marshalling box of door opening of transformer to be provided. 9. Door shall be earthed by flexible PVC insulated multistranded copper wire of minimum 2.5 sq.mm size (green colour). 10. The enclosure shall be such that tap position shall be visible through a transparent polycarbonate window arrangement covered by without opening the door. 11. Surge arrestor common grounding provision to be provide inside of the enclosure. 12. If the perforation done on bottom sheet of enclosure, finishing to be done with hot dip galvanizing. 13. The limiting maximum overall dimensions of transformers.

Voltage class	11kV			22kV		
KVA	**L**	**B**	**H**	**L**	**B**	**H**
315	1800	1700	1900	2100	2000	2000
400	1800	1700	1900	2100	2000	2000
500	2000	2000	2000	2200	2100	2100
630	2000	2000	2000	2200	2100	2100
800	2100	2000	2100	2300	2200	2200
1000	2200	2100	2200	2300	2200	2300
1250	2200	2000	2200	2300	2200	2300
1600	2400	2400	2300	2400	2400	2400
2000	2500	2500	2400	2500	2500	2500

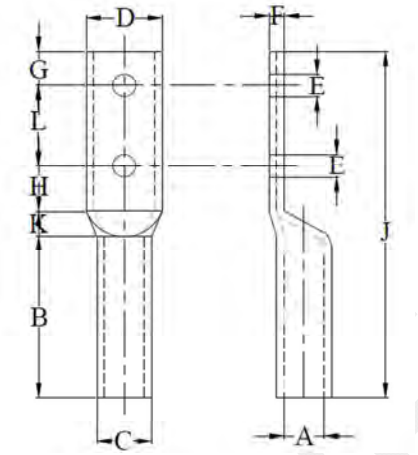
5.5	**TERMINAL ARRANGEMENT**	1. For HT side termination, tinned Copper bus bar (40 mm width x 6 mm thick) shall be provided suitable for connecting to 3R of 1C x 185 sq.mm (for 11 kV & 22 kV) cable. 2. Alluminium busbar to be provided on LT side and the arrangement shall be suitable for the cable sizes and nos. as specified in clause no. 5.6.
5.6	**CABLE BOXES**	1. The HV/LV cable boxes shall be made of Mild Steel (M.S.) Sheet. The LV cable box front cover & bottom plate shall be removable for cable termination purpose. Two suitable handles shall be provided on front cover of cable box. 2. All rating shall have HT & LT cable boxes. 3. Non-magnetic undrilled Gland plates shall be provided for both HV and LV cable box. 4. Gland plates shall be mounted separately with nut & bolt arrangement. 5. The size of the cable box cover should be moderate so that only 2 people is enough to lift it. **HV CABLE BOX:** 6. 3R of 1 C X 185 sq.mm 11kV or 22kV XLPE Cable shall be used at HV side. HV box should be suitable for heat shrink of this cable. 7. The minimum clear distance of 550 mm for HT bus bar bolt terminal to gland plate shall be maintained. **LV CABLE BOX:** 8. Neutral terminal of LV winding shall be brought out on LV phase terminals to form four wire system.

9. The neutral of the star connected winding shall be brought out to a separate bushing terminal of 1.1kV class. Neutral CT should be installed before bifurcation. The extra neutral bushing shall be provided outside body of transformer to facilitate the earth conductor down to ground level. Separate LV neutral bushing to be provided on side of LV box for neutral earthing. Connection between extra neutral bushing and neutral busbar to be done using flexible busbar with brazed ends.
10. The LV busbar shall be supported using epoxy insulators from the top side inside the LV dividing box. The neutral terminals of LV windings shall be brought out on LV phase terminals to form four wire systems.
11. The Neutral Should be mounted with FRP/Bakelite sheets, firmly, so that LV neutral bus should not touch the CT.
12. Epoxy Insulators shall be provided from top side in LV box to support each LV busbar.
13. LV busbar size for to be provided as per below table:

Rating (KVA)	FL current at LT side (A)	Busbar size (mm)	
		Height	Thickness
315	438.24	100	10
400	556.50	100	10
500	695.62	100	10
630	876.49	100	12
800	1113.00	120	12
1000	1391.25	120	15
1250	1739.06	150	15
1600	2225.99	150	15
2000	2782.49	150	20

14. Aluminum lugs to be provided by vendor suitable for 1.1 kV 4C 300 sq.mm Al armored cable sector shape. HDG- M12 size bolt to be provided for connections.
15. Double hole barrel shape aluminum lugs to be provided as shown in below diagram:

E	A	C	D	F	B	H	G	L	J
12.7	21.8	30.2	42	8.4	89	25	19	44.4	191.4



16. LV busbar shall be of AL material & shall have minimum clearances of 200 mm after nut bolts with Lugs between each phase, neutral and 150 mm with enclosure body.
17. Distance between bolt to bolt for phase & neutral busbar shall be minimum 70 mm.
18. The variation between terminal bolt diameter & busbar hole diameter/lug hole diameter shall not be more than 2 mm.
19. Bimetallic strip to be provided between alluminium and copper busbar connection.
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
630 kVA		4
800 kVA		5
1 MVA		5
1.25MVA		7
1.6 MVA		8
2 MVA		10

5.7 GASKET

Neoprene/Nitrile gasket as per IS 11149 or rubberized cork sheet as per IS:4253 (Part2).

5.8 TERMINAL CONNECTOR

HT TERMINAL CONNECTOR:

1. All ratings shall be suitable for 1CX185 sq.mm XLPE cable at HT side. For HT side termination, tinned Copper bus bar (40mm height x 6mm thick) shall be provided.

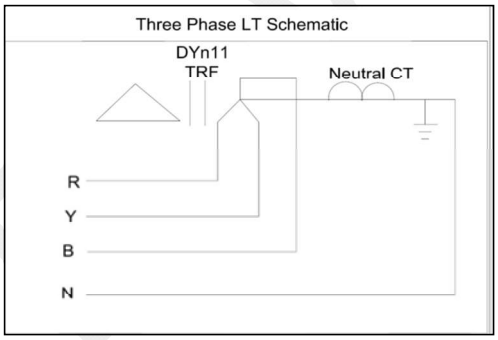
LT TERMINAL CONNECTOR:

		2. LT busbar size should be maintain as per 5.6 clause. 3. Aluminum barrel type lugs to be provided by vendor suitable for 1.1 KV 4C 300 sq.mm Al armored cable sector shape as per 5.6 clause.
5.9	**TAPS**	1. Tap changing shall be carried out by means tinned brass links when the transformer is in de-energised condition. The link should be rounded off at end terminals. 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 tapping (+10%) and position 9 shall correspond to minimum tapping (i.e,-10%). 4. Suitable plate shall be fixed for tap changing switch to know the position number of tap. Tap number punching should be done. 5. The tap position shall be visible from the transformer enclosure through a transparent polycarbonate window arrangement covered by without opening the door.
5.10	**EARTHING CONNECTIONS**	**NEUTRAL EARTHING:** 1. Separate LV neutral bushing to be provided on side of LV box for neutral earthing. Neutral bushing should have provision of connection of 2 runs of 65X10 GI strip. **BODY EARTHING:** 2. Two body earthing terminals, located on the lower side of the transformer, diagonally opposite to each other of M12 size (taken 100mm out of tank) shall be provided on Transformer Enclosure with Bolt. **Other parts earthing:** 3. Transformer all other parts shall be connected at two diagonal places with each other by tinned copper strips.
5.11	**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.
5.12	**TEMPERATURE INDICATORS**	Winding Temperature Indicator (WTI) for measuring the hot spot temperature of the winding shall be provided. It shall be suitable for control room as well as marshalling box installation and is built for long and trouble-free operation under extreme conditions of service associated with the Cast resin Dry type transformers. It shall comprise of the following devices/features: 1. Resistance Temperature Detector (RTD) sensors shall be suitable to allow the user to monitor max. Six Critical Temperature parameters on the Transformer &

		1 no on Core. Routing of cable shall be done through cable turf with necessary tying through nylon tie belts. 2. It shall be programmable to display, store and note maximum temperature such that the same can be recalled even after the power for the device is interrupted. 3. It shall be compatible for communication with Computer. 4. It shall be provided with settable set-points – a. To warn the user of high temperature b. To trip the transformer in case of excessive heating. 5. The temperature indication range shall be -25 to 300 deg C. 6. The display shall be seven segment LED type for displaying temperature and channel number. 7. The enclosure shall be of M.S. sheet box, powder coated, with acrylic viewing window and minimum degree of protection shall be IP54. 8. It shall be operated by the supply voltage of 240 V AC. 9. It shall not consume power more than 5 VA during operation. 10. It shall be suitable for operation under maximum ambient temperature conditions. Following make of WTI to be considered with back-to-back warranty with OEM: Embelink Technologies - Model TPR-108-RC with 8 channel RTD PT-100 inputs and 1no 4-20mA+ 1no RS485 outputs with inbuilt rechargeable battery
5.13	**TERMINAL MARKING**	1. All transformers shall have the primary and secondary terminal markings plainly and indelibly marked on the transformer adjacent to the relevant terminal. 2. High voltage phase windings shall be marked both in the terminal boards inside the tank and on the outside with capital letter 1U, 1V, 1W and low voltage winding for the same phase marked by corresponding small letter 2u, 2v, 2w. The neutral point terminal shall be indicated by the letter 2n. 3. Neutral terminal shall be brought out and connected to local grounding terminal by the earthing strip. 4. Sequence of marking should be 1U, 1V, 1W and 2n, 2u, 2v, 2w). Colour codes to be marked in addition to 1U, 1V, 1W & 2u, 2v, 2w and 2n.
5.14	**CURRENT TRANSFORMERS**	Only protection class Neutral CT to be provided as mentioned below: **Neutral Current transformer:** All transformer shall be supplied with LT side neutral CT before bifurcation of neutral for earthing. The Neutral CTs shall be window type, resin cast, protection class having ratio & knee voltage as per GTP (sr. no. 30). Parameter: Neutral CT Accuracy class: 5P20 Burden: 15 VA Application: Earth fault protection

Transformer rating	CT Ratio & knee point
315 KVA	500/5 & min 60 V
400 KVA	600/5 & min 60 V
500 KVA	1000/5 & min 60 V
630 KVA	1000/5 & min 60 V
800 KVA	1250/5 & min 60 V
1000 KVA	1500/5 & min 80 V
1250 KVA	2000/5 & min 100 V
1600 KVA	2500/5 & min 100 V
2000 KVA	3000/5 & min 130 V

Current transformer shall be mounted outside the tank with suitable clamping arrangement and should be C-shaped of sliding, soft material, non-screw type. The current transformer shall comply with IS 2705. The terminals shall not have shorting facility. The CTs shall have following parameters. CT terminal box for secondary of CT shall be provided of suitable size on the side of transformer. Box shall have droppable terminal blocks with shorting link.



5.15 FASTENERS

1. All bolts, studs, screw threads, pipe threads, bolt heads and nut bolts shall comply within the appropriate Indian standards for metric threads. Bolts or studs shall not be less than 6mm in diameter except when used for small wiring terminals.
2. All nuts and pins shall be adequately locked. Wherever possible bolts shall be fitted in such a manner that in the event of failure of locking resulting in the nuts working loose and falling off, the bolt shall remain in position.
3. All ferrous bolts, nuts and washers shall be hot dip galvanized, except high tensile steel bolts and spring washers which shall have electrolytic action between dissimilar metals.
4. Each bolt shall project at least one thread but more than three threads through the nut. 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.
5. All bolts of current carrying part shall have taper washers.
6. Protective washers of suitable material shall be provided on front and back of the securing screws.

5.16 FITTINGS

The following standard fittings shall be provided.

a) Rating and terminal marking plates non-detachable
b) Separate Plate mentioning Guarantee period and date of dispatch.
c) Lifting lugs on enclosure
d) Digital temperature meter with sensors. The winding temperature indicator shall be fitted with Alarm & trip contacts.
e) LV & HV cable box.
f) Danger plate as per IS 2551 on HV & LV cable box & side doors.
g) Base Channel.
h) Four bi-directional rollers (dia-150mm X 50mm wide) with distance between wheels center to center – 820 MM.
i) Marshalling box with WTI as RTD.
j) HV cable box and LV terminal box should be at 180° and shall be properly supported.
k) Separate neutral bushing.
l) Neutral Bushing CT with CT ratio mentioned
m) QR code plate (10X80 cm) which will store equipment data, like test report & drawing in TPCL server. QR code will share by TPCL during drawing approval.

5.17 SURFACE PREPARATION AND PAINTING

1. The paint shall be applied by airless spray or seven tank powder coating process as applicable to the various parts of transformer and enclosure.
2. 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).
3. Heat resistant paint shall be used for the inside surface and whereas for external surface one coat of thermosetting powder paint and one coat of epoxy primer as per table given below:

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 90

4. The transformer shall be painted with non-fading paint of shade 631 as per IS 5 or RAL 7032 as applicable with paint thickness of minimum 120 microns to be maintain.
5. 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.
6. Painting shall not affect by weather changes & performance against pilling out or fading etc. to be guaranteed for 5 Years.

		7. All paints, when applied in a normal full coat, shall be free from runs, sags, wrinkles, patchiness, brush marks or other defects. 8. All primers shall be well marked into the surface, particularly in areas where painting is evident, and the first priming coat shall be applied as soon as possible after cleaning. 9. The paint shall not scale off or crinkle or be removed by abrasion during normal handling. The Sufficient quantity of touch-up paint shall be furnished for application at site.
5.18	**MARSHALLING BOX AND PROTECTION**	1. All transformers shall have standard marshaling box. All the Links in these should be of disconnecting type and should have facility to hold ring type of lugs. All links shall be droppable type links. 2. Marshaling Box shall be suitably located not to obstruct the doors & power cables. Sufficient extra links to be provided for control wiring. Knock outs to be provided in marshaling box for control cabling. 3. Heaters shall be provided in the marshaling Box and shall be fitted in proper location without creating any obstruction to other equipment in MB. 4. Standardized TB (terminal link) table to be followed as shown below:

TBs standardization for DRY type transformer MB BOX

Sr.No.	From	Device	To (TBs)	Purpose
1	RTD sensor-1	RTD sensor	T-1,2,3 (Droppable)	Winding Temp detection (U phase)
2	RTD sensor-2	RTD sensor	T-4,5,6 (Droppable)	Winding Temp detection (V phase)
3	RTD sensor-3	RTD sensor	T-7,8,9 (Droppable)	Winding Temp detection(W phase)
4	RTD sensor-4	RTD sensor	T-10,11,12 (Droppable)	Winding Temp detection(U phase)
5	RTD sensor-5	RTD sensor	T-13,14,15 (Droppable)	Winding Temp detection (V phase)
6	RTD sensor-6	RTD sensor	T-16,17,18 (Droppable)	Winding Temp detection (W phase)
7	RTD sensor-7	RTD sensor	T-19,20,21 (Droppable)	Core Temp detection
8	RTD sensor-8	RTD sensor	T-22,23,24 (Droppable)	Spare RTD channel
9	Fault contact of RTD	RTD sensor	T-25,26,27 (Droppable)	Customer Use
10	Alarm contact of RTD	RTD sensor	T-28,29 (Droppable)	Customer Use
11	Trip contact of RTD	RTD sensor	T-30,31 (Droppable)	Customer Use
12	Contact for FAN	RTD sensor	T-32,33 (Droppable)	Customer Use
13	Door –Trip (No contact)	DOORS	T-34,35 (Droppable)	Customer Use

14	NCT (S1,S2)	Neutral CT	T-36,37 (Droppable)	Customer Use
15			T-38 (Droppable)	Ground
16	T- 35,36	Loop	T-39,40 (Droppable)	Heater & Light & Socket
17	AC Aux Supply	AC source	T-41,42 (Droppable)	For RTD power up
18		TB	T-43, 44 (Droppable)	Spare
19	RTD SCADA point	RTD sensor	T-45, 46, 47 (Droppable)	SCADA

5. The spare TBs (T-43 to T-44) must be of black color.
6. Any new scheme or spare contacts of any device to be wired by O&M after T-47.
7. All Terminal in marshalling box should be of Connectwell / Elmex make, CDTS type, Droppable, 1.1 kV rated, with ring type termination.
8. All the control circuit wiring shall be properly dressed using wire trough made up of flame-retardant material.
9. Two spare RTD PT100 sensor to be provided per transformer which can be easily interchangeable within existing circuit.

5.20 Surge Arrestor

1. The HT side of the transformer shall have polymeric surge arresters of DH class inside the main body.
2. For 22 KV Surge Arrestor 18 kV, 10 kA & for 11 KV Surge Arrestor rating of 9 kV, 10 KA to be used.
3. Connection to LA shall be through insulated cable of rating equal to HV voltage of TRF.
4. Surge arrestor common grounding provision to be provide inside of the enclosure.
5. Insulation terminal cap to be provided over the terminal connection of surge arrestor.

5.32 MAKE OF MAJOR COMPONENTS & RAW MATERIALS

The BA shall procure the following constituent items from the designated vendors as follows:

Sr. no	RAW MATERIAL/EQUIPMENT	MAKE
1	Transformer Raw Materials	
a)	Copper	M/S Sterlite, M/S Hindustan Copper, M/S Hindalco

		b)	Core	AK Steels, POSCO, Kawasaki, JFE, TKES, Nippon Steel, VIS STAL, COGENT, NLMK
		c)	Insulation paper	Raman Boards- Mysore, Senapathy Whiteley – Bangalore
		d)	Gaskets & Corks	Nu Cork, Anchor Corks, Dirak, R. k. Profiles, Perfect Rubber Industries
		e)	Steel	M/S TISCO, M/S SAIL, M/S Bhushan Steel, M/S ISSCO, M/S RINL, M/S Jindal Steel
		2	Marshalling box	
		a)	WTI scanner	Embelink Technologies- Model TPR-108-RC
		b)	Terminal connectors	Connectwell , Elmex
		c)	MCB	Siemens, MDS, GE. L&T, Indo Asian, C&S, Schneider, ABB
		d)	Thermostat	APT
		3	CT	Newtek electricals, Indcoil transformers pvt.ltd., Siemens, Satec Powerful solutions, Pragati Electricals, Reco Transformers
		4	Surge Arrestor	Raychem, LAMCO, CG, Oblum
		5	Bushing	BHEL, Genesis, Baroda Bushing & Insulators, Bharti Electricals

***Vendor shall take prior approval before using any other make than approved make.**

Bidder has to provide all test certificates from original manufacturers & relevant sourcing documents. BA shall also have shot blasting facility.

6.0	**NAME PLATE AND MARKING**
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 **IS 1180-Part 1**. 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 WHICHEVER IS LATER"

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.
Bolts	Rivet type bolts to be used for name plates fixing

5. Control Circuit drawing Plates:

- Engraved drawing for control circuit unit shall be available on Marshalling box.

6.2 NAME PLATE DETAILS

The name plate shall be strictly as per **IS**. Additionally, following points shall be displayed :

1) Actual no load losses of transformer.
2) Actual total losses of transformer at 50% load and 100% load.
3) "**PROPERTY OF Tata Power Company**" shall be written in bold letters.
4) PO number with date has to be mentioned.
5) Material code as mentioned in PO.
6) Overall dimensions of the transformer.
7) Type of transformer
8) Relevant standard**.**
9) Manufacturer's Name
10) Manufacturer's Serial No.
11) Year of Manufacture
12) No. of phases
13) Temperature class of insulation
14) Rated kVA
15) Rated frequency
16) Rated Voltage

		17) Rated current 18) Connection symbol 19) Percentage impedance voltage at rated current 20) Type of cooling 21) Total mass 22) BIL (Basic Impulse Insulation Level) 23) IP rating 24) Winding material In addition to the above information the rating plate shall also contain the following: Guaranteed values of no load and full load losses. a) Temperature rise. b) Table giving the tapping voltage, tapping current and tapping power of each tap. c) Indication of winding which is fitted with tapings. d) Value of short circuit impedance on extreme tapping and on principal tapping and indication of winding to which impedance is related.
7.0	**TESTS**	All routine, acceptance & type tests shall be carried out in accordance with the IS 2026. 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**	a. Temperature rise test for determining the maximum temperature rise after continuous full load Run. The ambient temperature and time of test should be stated in the test certificate. b. Impulse voltage test: with chopped wave of IS 2026 (part-III). BIL for 11kV shall be 75 kV peak & for 22kV 125kV peak on all three phases. c. Short-circuit test – Thermal and dynamic ability. d. Noise level measurement. e. Measurement of Zero-phase sequence impedance. f. Measurement of Harmonics of no-load current. g. IP test for enclosure Note: - Out of the above-mentioned type tests, the tests under sr. no. a, b, c shall be conducted at CPRI/ERDA labs and the balance shall be acceptable as in-house NABL accreditation test lab.
7.2	**ROUTINE TEST**	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. Magnetic balance test.

		4. Measurement of short circuit impedance and load loss at 50% and 100% load at principle & extreme taps [As per IS 2026 (Part 1)]. 5. Measurement of insulation resistance [As per IS 2026 (Part 1)]. 6. Induced over voltage withstand test [As per IS 2026 (Part 3)]. 7. Separate Source voltage withstand test [As per IS 2026 (Part 3)]. 8. 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)]. 9. Neutral current measurement: The value of the zero sequence current in the neutral of the star winding shall not be more than 2% of the full load current 10. CORE IR at 500 V. 11. Calibration of WTI as RTD 12. 2 kV withstand test for all secondary windings. 13. Partial discharge measurement
7.3	**ACCEPTANCE TEST**	1. Temperature Rise Test (on one unit of every lot offered for inspection for each rating). 2. Checking of weight, dimensions, fitting and accessories, enclosure sheet thickness, material finish and workmanship, physical verification of core coil assembly on the offered lot with reference to the GTP and contract drawings. 3. **Each rating/unit 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: 2026. 4. All LT wiring shall be tested for 2kV withstand test during acceptance. 5. During acceptance test - Magnetic Balance Test on HV & LV side, with magnetizing current HV and LV side.
8.0	**TYPE TEST CERTIFICATES**	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 as mentioned in clause no.7.1. 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.
9.0	**PRE-DESPATCH INSPECTION**	**9.1** 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 TATA POWER and the equipment if found unsatisfactory as to workmanship or material, the same is liable to rejection. Bidder shall grant free access to the places of manufacture to Tata Power representatives at all times 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:

a) Test reports
b) MDCC issued by TATA POWER
c) Invoice in duplicate
d) Packing list
e) Drawings & catalogue
f) Guarantee / Warrantee card
g) Delivery Challan
h) Other Documents (as applicable)

9.2 In respect of raw material such as core stampings, winding conductors, insulating paper, 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 Purchaser. The bidder shall furnish following documents along with their offer in respect of the raw materials:

a) Invoice of supplier.
b) Mill's certificate
c) Packing List.
d) Bill of Landing
e) Bill of entry certificate by custom.

9.3 To ensure about the quality of transformers, the inspection shall be carried out by the Purchaser's representative at following two stages;-

a) Online anytime during receipt of raw material and manufacture/assembly whenever the Purchaser desires.
b) At finished stage i.e. transformers are fully assembled and are ready for dispatch.

9.4 The stage inspection shall be carried out for routine/acceptance tests in presence of TATA POWER's representative at the place of manufacturer during manufacturing of the transformers without any extra charges. After the main raw-material i.e. core and coil material are arranged and transformers are taken for production on the shop floor and a few assembly have been completed, the bidder shall intimate the Purchaser in this regard, so that an officer for carrying out inspection could be deputed, as far as possible within seven days from the date of intimation. During the stage inspection a few assembled core shall be dismantled to ensure that the CRGO laminations used are of good quality. During inspection the bidder shall also furnish the information regarding various components as mentioned below:

Sl. No.	Item	Source of Material	Place of Manufacture	Place of testing and Inspection
1.	Laminations			
2.	Copper Conductor			
3.	Insulating winding wires			

4.	Insulating material				
5.	MS Plates/ Angles/Channels				
6.	Gaskets				
7.	Paints				
8.	Resin Material				

9.5 Further an offer intimating 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 Purchaser at the earliest after receipt of offer for pre-delivery inspection.

9.6 In case of any defect/defective workmanship observed at any stage by the Purchaser's Inspecting officer, the same shall be pointed out to the bidder in writing for taking remedial measures. Further processing shall only be done after clearance from the inspecting officer / Purchaser.

9.7 All tests and inspection shall be carried out at the place of manufacture unless otherwise specifically agreed upon by the manufacturer and Purchaser at the time of purchase. The manufacturer shall offer the inspector representing the Purchaser 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.

9.8 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.

9.9 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.

10.0	**INSPECTION AFTER RECEIPT AT STORE**	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. 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.

		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. 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. 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. 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.
11.0	**GUARANTEE:**	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 later.** 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 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. 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 45 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. **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.
12.0	**PACKING**	1. 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.

		2. 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**	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. The following information shall necessarily be submitted with the bid: 1. 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. 2. List of manufacturing facilities available, level of automation achieved and the areas where manual process exists. 3. List of areas in manufacturing process where stage inspections are normally carried out for quality control and details of these tests and inspections 4. List of testing equipment for final testing with valid calibration reports. Manufacturer shall possess 0.1 class instruments for measurement of losses. **5.** 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 ND TOOLS**	1. 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 works. The Purchaser may order additional spares at any time during the contract period at the rates stated in the Contract document. 2. 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.

		3. 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**	Following drawings and documents shall be prepared based on TATA POWER specifications and statutory requirements and shall be submitted with the bid: 1. Completely filled in Technical Particulars (General Technical Particulars, General Technical Requirements, Additional Details, and Fittings). 2. Description of the transformer and all components including brochures. 3. General arrangement for Transformer. 4. Foundation plan. 5. Bill of material. 6. Experience List 7. Type test certificates. **Drawings / documents to be submitted after the award of the contract are as under**: **<u>List of Drawings/Parameters to be submitted:</u>** 1) 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). 2) 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). 3) Internal Core arrangement drawing. 4) Internal Core-coil assembly drawing. 5) Marking plates and Markings (as mentioned in clause 6) 6) Foundation Plan drawing. 7) HV and LV bushings drawing (with internal view and metal parts) 8) HT cable termination diagram 9) LV Cable termination diagram 10) HV and LV Box drawing. 11) Gland Plate for HV/LV box. 12) CT Terminal Box drawing with internal wiring arrangement. 13) Test Certificates. 14) Installation Instructions. 15) QA/QC plan. 16) Temperature class H suitability certification for conductor/winding insulation as well as for resin-hardener combination. 17) Climatic, Environmental, Fire Class compliance certificates to be provided. **<u>List of Calculations to be submitted:</u>**

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 (145 deg. C)
2. Load Losses Calculation (at 145 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. Cooling Calculations

Additional Documents to be submitted :

a. List of raw materials as well as bought out accessories and the names of sub-suppliers selected from those furnished along with offer.
b. Type test certificates of the raw materials and bought out accessories.
c. 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

In addition to above individual clause wise compliance following details to be provided.

Sl. No.	Description	Unit	As Specified by TATA POWER	As furnished by Bidder
1	Application		Indoor	
2	Continuous Rating	kVA	315/400/500/630/800/1000/ 1250/1600/2000	
3	Type of Transformer		Cast Resin	

	4	Name of Manufacturer		To be furnished by Bidder	
	5	Place of Manufacture		To be furnished by Bidder	
	6	Voltage ratio	kV	11/0.415 22/0.415	
	7	Vector group		Dyn-11	
	8	Type of cooling		AN	
	9	Class of Insulation(Over all)		Class H	
	10	Winding Material		Copper	
	11	Core material used and Grade			
		a) Thickness		0.23 or less	
		b) Grade		M3 or better grade to be mentioned as per IS 3024	
		c) Flux Density at normal voltage	Wb/mm^2	1.6	
		d) Over fluxing without saturation (Curve to be furnished by the Manufacture in support of his claim)	Wb/mm^2	**1.8**	
	12	Maximum temperature rise of:			
		a) Windings by resistance method	Deg.C	**115**	
	13	Magnetizing (no-load) current at:			
		a) 90% Voltage	%	To be furnished by Bidder	
		b) 100% Voltage	%	2	
		c) 112.5% Voltage	%	5	
	14	Resistance of windings at 20 deg.C			
		a) HV windings	Ohms/Ph	To be furnished by Bidder	
		b) LV windings	Ohms/Ph	To be furnished by Bidder	
	15	No load losses		To be furnished by Bidder	
	16	Load Losses @50% loading at 145 deg C		To be furnished by Bidder	
	17	Load Losses @ 100% loading at 145 degC		To be furnished by Bidder	
	18	Total losses@50% load at 145°C	W	As per specification	
	19	Total Losses@100%load at 145°C	W	As per specification	
	20	Winding insulation class		Class H	
	21	**Winding construction details**			
	21.a	**Insulation material for HV (Inter turn/inter layers)**		To be furnished by Bidder	

21.b	**Insulation material for LV (Inter turn/inter layers)**		To be furnished by Bidder	
21.c	**HV coils fully resin casted/ not**		To be furnished by Bidder	
21.d	**LV coils fully resin casted/ not**		To be furnished by Bidder	
22	Current density used for :			
	a) HV winding	Amp./sq. mm	≤ 2.5	
	b) LV winding	Amp./sq. mm	≤ 2.5	
23	Clearances :			
	a) Core and LV	mm	To be furnished by Bidder	
	b) LV and HV	mm	To be furnished by Bidder	
	c) HV Phase to phase	mm	To be furnished by Bidder	
24	Efficiency at 75°C			
	a) Unity P.F	%	To be furnished by Bidder	
	1) 125% load	%	To be furnished by Bidder	
	2) 100% load	%	To be furnished by Bidder	
	3) 75% load	%	To be furnished by Bidder	
	4) 50% load	%	To be furnished by Bidder	
	5) 25% load	%	To be furnished by Bidder	
	b) 0.8 P.F.	%	To be furnished by Bidder	
	1) 125% load	%	To be furnished by Bidder	
	2) 100% load	%	To be furnished by Bidder	
	3) 75% load	%	To be furnished by Bidder	
	4) 50% load	%	To be furnished by Bidder	
	5) 25% load	%	To be furnished by Bidder	
25	Regulation at :			
	a) Unity P.F.	%	To be furnished by Bidder	
	b) 0.8 P.F. at 145°C	%	To be furnished by Bidder	
26	% Impedance at 145°C	%	To be furnished by Bidder	
27	Power frequency voltage withstand test:			
	a) HV for 1 minute	kV	28 (For 11kV) 50 (For 22kV)	
	b) LV for 1 minute	kV	3	

	28	a) Over potential Test (Double voltage and double frequency for 1 minute)	V	830	
		b) Impulse voltage withstand test (HV)	kVP	75 (For 11kV) 125 (For 22kV)	
	29	Mass of :			
		a) Core lamination (minimum)	Kg	To be furnished by Bidder	
		b) Windings (minimum)	Kg	To be furnished by Bidder	
		c) Total weight	Kg	To be furnished by Bidder	
	30	Transformer Overall limiting length × Breadth × Height	mm × mm × mm	To be furnished by Bidder	
	31	Inter layer insulation provided in design for :			
		a) In between all layer	mm	To be furnished by Bidder	
	32	Insulation materials provided			
		a) For conductors			
		1. HV		To be furnished by Bidder	
		2. LV		To be furnished by Bidder	
		3. Core		To be furnished by Bidder	
	33	Material and size of the wire used			
		1) HV Strip	mm /SWG	To be furnished by Bidder	
		a) Total area of cross section	sq.mm	To be furnished by Bidder	
		2) LV	mm /SWG	To be furnished by Bidder	
		a) Strip size/Foil	mm	To be furnished by Bidder	
		b) No. of conductors in parallel	Nos.	To be furnished by Bidder	
		c) Total area of cross section	sq.mm	To be furnished by Bidder	
	34	Painting as per Specifications	YES/NO	To be furnished by Bidder	
	35	Whether the ventilation louvers / opening provided with the wire mesh screen as per specifications	YES/ NO	To be furnished by Bidder	
	36	Whether enclosure is provided with a minimum of two welded heavy duty closed lifting lugs and	YES/NO	To be furnished by Bidder	

	necessary hardware for mounting on the floor as required in Specifications			
37	Whether the enclosure furnished with ground pads located on opposite diagonal corners as per Specifications	YES/NO	To be furnished by Bidder	
38	Whether the danger plate provided as required in Specifications	YES/NO	To be furnished by Bidder	
39	Whether the name plate gives all particulars as required in Specifications	YES/NO	To be furnished by Bidder	
40	Whether the offer conforms to the limits of impedance mentioned in the specification	YES/ NO	To be furnished by Bidder	
41	Whether the offer conforms the limits of temperature rise mentioned in the specification	YES/NO	To be furnished by Bidder	
42	Whether the losses of the transformers offered are within the limits specified.	YES/NO	To be furnished by Bidder	
43	Whether the transformer offered is already type tested for the design and test reports enclosed.	YES/NO	To be furnished by Bidder	
44	Hydrophobic anti tracking coating shall be applied on resin casted winding inside & outside	YES/NO	To be furnished by Bidder	
45	Climatic, Environmental, Fire Class compliance certificates	YES/NO	To be furnished by Bidder	

Additional Points:

Sl. No.	Description	Unit	As Specified by TATA POWER	As furnished by Bidder
1	Core grade		M3 or better	
2	Core diameter	mm	To be furnished by Bidder	
3	Gross core area	Sq.cm	To be furnished by Bidder	
4	Net core area	Sq.cm	To be furnished by Bidder	
5	Flux density (Calculated)	Tesla	To be furnished by Bidder	
6	Mass of core	Kg	To be furnished by Bidder	
7	Loss per Kg of core at the above specified flux density	Watt	To be furnished by Bidder	
8	Core window height	mm	To be furnished by Bidder	
9	Center to center distance of the core	mm	To be furnished by Bidder	
10	No. of LV Turns		To be furnished by Bidder	
11	No. of HV Turns		To be furnished by Bidder	
12	Size of LV conductor bare/covered	mm	To be furnished by Bidder	

13	No. of parallels		To be furnished by Bidder	
14	Size of HV conductor bare/covered	mm	To be furnished by Bidder	
15	Current density of LV winding (Calculated)	A/sq.mm	To be furnished by Bidder	
16	Current density of HV winding (Calculated)	A/sq.mm	To be furnished by Bidder	
17	Wt. of the LV winding (including cast resin)	Kg	To be furnished by Bidder	
(a)	Weight of LV Winding (Bare copper)		To be furnished by Bidder	
18	Wt. of the HV winding(including cast resin)	Kg	To be furnished by Bidder	
(a)	Weight of HV Winding (Bare copper)		To be furnished by Bidder	
19	No. of LV coils/phase		To be furnished by Bidder	
20	No. of HV coils/phase		To be furnished by Bidder	
21	Height of LV winding	mm	To be furnished by Bidder	
22	Height of HV winding	mm	To be furnished by Bidder	
23	ID/OD of HV winding	mm	To be furnished by Bidder	
24	ID/OD of LV winding	mm	To be furnished by Bidder	
25	Size of the duct in LV winding	mm	To be furnished by Bidder	
26	Size of the duct in HV winding	mm	To be furnished by Bidder	
27	Size of the duct between HV and LV	mm	To be furnished by Bidder	
28	Calculated Impedance	%	To be furnished by Bidder	

20.0 SCHEDULE OF DEVIATIONS

(TO BE ENCLOSED WITH THE BID)

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:

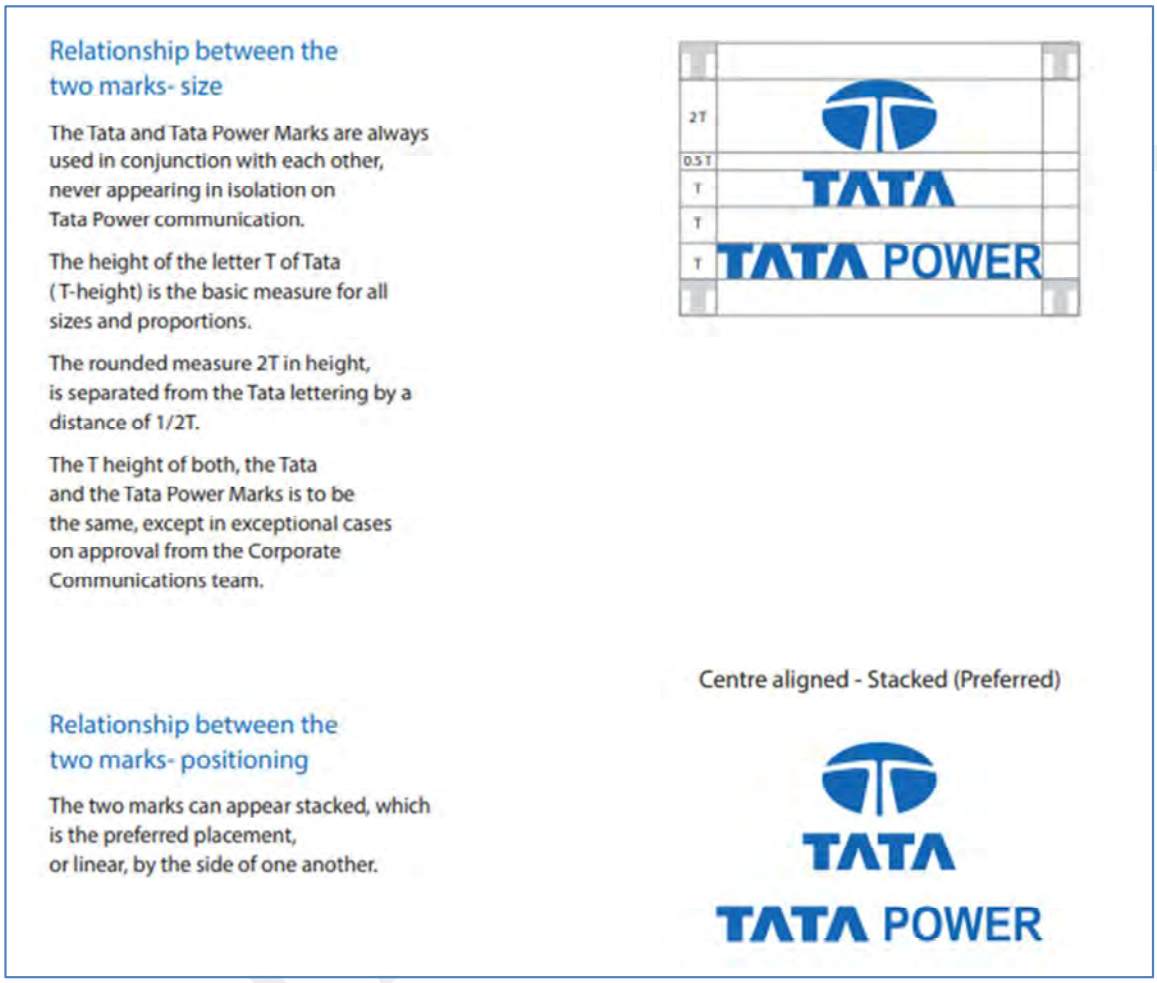
Sr.No.	Clause No.	Details of deviation with justifications

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

	Seal of the Company: Signature Designation

Tata power Branding Name plate -

Separate metallic name plate with Tata Power Logo. Logo of Dimension **12 X 12** Inches in clear font as shown below.



LOGO COLOUR

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 for following quantity in a lot:-

a) Core coil assembly of further at least 30% of the quantity offered has been completed.

b) 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)	**Inspection of Core :** (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			
	As offered :			

	Step No.	1	2	3	4	5	6	7	8	9	10	11	12
	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) Core Diameter (mm)			
	(2) Core length (leg center to leg center)			
	(3) Window height.			
	(4) Core height			
(D)	**INSPECTION OF WINDING**			
	(I) Winding material (Verify From TC)			
	(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			
	b) LV winding			
	1) Type of insulation for conductor of:			
	a) HV winding – Class H material			
	b) LV winding – Class H material			
	2) Dimension of strip used for delta formation (mm)			
	3) Diameter of coils in:			
	a) LV winding			
	a) Internal Diameter (mm)			
	b) Outer diameter (mm)			
	b) HV winding			
	i) Internal diameter (mm)			
	ii) Outer diameter (mm)			
	4) Whether neutral formation on top/side			
	5) HV coils / Phase :			
	a) Number			
	b) Turns/coil			

	c) Total turns			
	6) LV coils /Phase:			
	a) Number			
	b) Turns / coil			
	c) Total turns			
	7) Total weight of coils of :			
	a) LV winding (Kg)			
	b) HV winding (Kg)			
	8) HV & LV Windings resin casted			
(E)	**INSULATION MATERIALS**			
	(I) Material (Verify From TC)			
	1) Class H paper			
	a) Make			
	b) Thickness (mm)			
	c) Test certificate of manufacturer (enclose copy)			
	2) FRP duct/Pressboard			
	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) (Verify From TC)			
	a) Between core and LV			
	b) Spacers			
	c) Interlayer			
	d) Between HV and LV winding			
	e) Between phases			
	Resin Material			
	1) Make of resin			
	2) Class H material combination			
	3) Anti tracking paint on finished coils (Inside/Outside)			
(F)	**CLEARANCES: (mm)**			
	(I) Related to core and winding			
	1) LV to core (radial)			
	2) Between HV and LV (Radial)			
	3) Phase to phase between HV conductor			
	4) Thickness of duct between HV and LV coil mm			
(G)	**COLOUR & THICKNESS OF ENCLOSURE, Cable boxes**			
	1) Inside			
	2) Outside			
(M)	**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			
	5) Insulation Resistance test			
	6) Vector group Test (phase relationship)			
	7) Ratio and Polarity test relationship			
	8) Magnetic Balance			
	9) Measurement of winding resistance (HV and LV both)			
	10) Induced over voltage withstand test (Double voltage and Double frequency			
	11) Separate source power frequency withstand test at 28kV for HV and 3kV (One minute).			
	12) Unbalanced current test			
	13) Temperature rise (Heat run) test.			
	14) Partial Discharge test			
(I)	**Additional check points**			
	1. Casting and curing cycle process check report.			
	2. All the control circuit wiring shall be properly dressed using wire trough made up of flame-retardant material inside Enclosure.			
	3. Hydrophobic anti-tracking coating shall be applied on resin casted windings both inside & outside.			
	4. Tap changing shall be carried out by means tinned brass links. Link ends should be rounded off.			

PURCHASER'S OFFICER BIDDER'S REPRESENTATIVE

DATE OF INSPECTION

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	
		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/ 50 KV for 60 secs	
	LV	3 kV for 60 secs.	
7.	Induced over-voltage withstand test at double voltage and double frequency.	100 Hz, 866 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.	Heat run test	To be carried out against every offered lot	
13.	Partial Discharge test		
14.	Bushing clearance (mm)	HV	LV
	a) Phase to Phase		
	b) Phase to earth		
15.	Comments on compliance by the firm on the modifications done as per stage inspection clearance letter issued.		
16.	Whether fittings of the order have been verified.		

ANNEXURE – III

- Inspection & testing to be carried out as per approved QAP.
- Calibration certificates of metering equipment to be enclosed.

DRY TYPE TRANSFORMER FINAL INSPECTION CHECK LIST

Date -15 Dec-24

A	GENERAL ARRANGEMENT & FOUNDATION	Remarks
1	Comments on compliance by the firm as per stage inspection clearance.	
2	Thickness of steel Enclosure min 2mm & 3mm for load Bearing member.	
3	TRF painted with Paint shade RAL 7032 with minimum thickness of 120 micron.	
4	Enclosure with transparent polycarbonate window to view tap position.	
5	Lifting lugs should be marked in yellow colour.	
6	For complete lifting of transformer Suitable label to be provided.	
7	Size of the Overall TRF as per the GA drawing.	
8	Four bi-directional rollers (dia-150mm X 50mm wide)	
9	Distance between wheels centre to centre – 820mm all sides.	
10	All Fastener, bolts of HDG. Thickness should be check(Optional)	
11	Separate Plate mentioning guarantee period and date of dispatch.	
12	Tata Power logo (300 mm x 300 mm) as per drawing.	
13	Danger plate at suitable location. (Hindi/Marathi & English)	
14	Rating, danger, guarantee and terminal marking plates should be non-detachable	
15	Name plate verification to be done.	
16	Door should be interlocked with limit switch.	
17	Door locking/unlocking functional should check.	
18	Two body earthing terminals, located on the lower side of the transformer, diagonally opposite to each other.	
19	Enclosure louvers should be checked as per drawing.	
20	Louvers should have wire mesh net.	
21	HT side of the transformer shall have 3 polymeric surge arresters.	
22	Connection to surge arrestor shall be through insulated cable of HV voltage rating.	
23	Surge arrestor earthing provision should be done with FRP insulation sheet.	
24	Earthing symbol to be stick near to surge arrestor earthing point.	

25	FG insulation sleeve to be used for dressing of control wiring throughout the enclosure.	
26	Terminal marking on both HV side with colour coding inside and outside of tank.	
B	**CORE & COIL ASSEMBLY**	**Remarks**
27	In taping arrangement principle tap position should be 5.	
28	Total 9 number of taps. Connection to check as per drawing.	
29	The connecting HV delta links & its ends shall be with insulation sleeve.	
30	Tapping should done by engraving/punching of tap numbers (Stickers not accepted).	
31	Tap link - tinned brass material. Link ends should be rounded off.	
32	Removable copper core earthing link, at single location only.	
33	All core bolt with check nuts arrangements.	
34	All core clamping bolts shall be effectively insulated.	
35	CCA Marking plate with sr. no	
36	Hydrophobic anti tracking coating on casted coils.	
37	FG insulation conduit used for dressing RTD wires over the core.	
38	Vibration pad installed between CCA and enclosure base structure	
39	The winding with two RTD per coil inserted in LV winding and one RTD for core.	
40	One RTD to be placed over the core.	
41	All RTD should be properly fix with silicone glue.	
42	Core earthing to be provided with removable copper link at single location.	
C	**CABLE BOX HT**	**Remarks**
43	HT side termination tinned Cu busbar with size of as per drawing	
44	Dia. of hole on the cu busbar should M12 size.	
45	Nonmagnetic undrilled gland plate with thickness min 3mm	
46	Epoxy insulator support for HT terminal. (Not required for insulator bushing used)	
47	Gland plate should in in two parts.	
48	Air Clearances in Cable Box should be as per GTP/Drawing	
49	The minimum clearance between HT terminations to gland plate to be as per drawing.	
50	Removable Cu Link for door earthing to be provided.	
51	Earthing bush on both side of HT box.	
52	Cable box door should open/close using bolting. (Not hinge type)	
D	**CABLE BOX LT & NUETRAL CT**	**Remarks**
53	Aluminium busbar for LV termination for suitable runs as per drawing.	

54	Two separate brought out neutral from main neutral bus bar.	
55	Neutral bushing should provide side of LV box. (Not on top)	
56	Bushing rating should be as per drawing.	
57	LT side neutral CT should place before bifurcation of neutral for earthing.	
58	Neutral CT with CT ratio mentioned as per GTP/Drawing.	
59	LV busbar clearances and size as per drawing to be check	
60	Epoxy Insulators shall be provided from top side in LV box	
61	Nonmagnetic undrilled gland plate should be provided with thickness min 3mm	
62	Aluminium lugs as per the drawing suitable to connect required runs of 4C, 300 sq.mm.	
63	AL lug to busbar connection with not gap between them.	
64	The Neutral CT Should be mounted with FRP/Bakelite sheets.	
65	Air Clearances in Cable Box should be as per Drawing.	
66	Epoxy support Insulators on top side in LV box.	
67	Three part gland pate to be provided.	
E	**MARSHALLING BOX**	**Remarks**
68	7 no's RTDs wired through junction TB to marshalling box.	
69	Doors Limit switches with wiring up to marshalling.	
70	Marshalling box with space heater, thermostat with fuse, lamp & 3 pin socket with switch.	
71	spare droppable link for neutral CT grounding	
72	Digital temperature meter with sensors. The winding temperature indicator shall be fitted with Alarm, fault & trip contacts.	
73	All TB in marshalling box should be as per approved make as per drawing.	
74	Droppable & hold ring type termination.	
75	WTI make should be Embelink Technologies- Model TPR-108-RC	
76	Vermin proofing to be done at all cable entry in MB.	
77	Control circuit diagram plate to be installed on door (inside) of MB.	
78	Wires shall be numbered with ferrules	
79	Wiring in MB to be done using 4 sq.mm FRLS Cu wire.	
80	NCT wiring to be done using 2.5 sq.mm FRLS Cu wire.	

ANNEXURE – IV

SOURCE OF MATERIAL/PLACES OF MANUFACTURE, TESTING AND INSPECTION

Sr. No.	Item	Source of Material	Place of Manufacture	Place of testing and Inspection
1.	Laminations			
2.	Copper Conductor			
3.	Insulating winding wires			
4.	Insulating material			
5.	MS Plates/ Angles/Channels			
6.	Bushing/Insulators			
7.	Paints			
8.	Resin Material			
9.	WTI scanner			

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 Contact.

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 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 it's 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

TATA POWER
Lighting up Lives!

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 Tohmatsu India LLP, 6 floor, AIPL Business, Sector 62, Gurugram, Haryana 122102