OPEN TENDER NOTIFICATION

FOR

1 Year Outline Agreement for Supply of 11 kV, 3W / 4W RMU

Tender Enquiry No.: CC24VJS003
(Please note this reference number has to be quoted in all submission pertaining to this tender)

The Tata Power Company Limited (Tata Power)
Corporate Contracts,

Smart Center of Procurement Excellence,

2nd Floor, Sahar Receiving Station,

Near Hotel Leela,

Sahar Airport Road,

Andheri East, Mumbai-400059

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CONTENTS OF THE ENQUIRY

Following Documents Form Part of Tender Enquiry:

Section no	Description
1	Instruction to Bidder
2	Technical specifications 11 kV RMU
3	Price Schedule
4	General Terms and Conditions- Supply
5	Tata Power Policies

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Instructions to Bidder (Two bid)

File Reference: CC24VJS003 (Request to quote the said number in all communication related to this package)

The Tata Power Company Limited (TPCL) invites electronically sealed bid for **"1 year OLA for Procurement of 11 kV, 3W & 4W RMU".**

Specific Instructions: Following documents form part of RFQ

1. Instruction to Bidders (ITB)
2. General Terms and Conditions Supply
3. Agreed T&C (ATC)
4. Technical specification, GTP and Type Test summary
5. Format for Query clarification
6. Price Schedule format
7. Other forms

In case of any technical query, you are requested to contact:

Mr. R R Pote rrpote@tatapower.com (Mobile: 9930645775)

General Instructions:

1. Bid package is issued in the name of Bidder and is non-transferable.
2. Bidder shall acknowledge the receipt of the tender in Ariba within two (2) working days from the Date of issue of this Request for Quotation (RFQ)/enquiry.
3. Bidders shall review the entire tender document (including technical documents) and ensure the given objectives expected herein can be achieved or the technical requirements can be met in totality. Any deviation or substitution must be highlighted in a separate document.
4. Bidder must carefully go through all commercial conditions of contract before quoting the price. Any exceptions pertaining to clauses affecting prices or costs either way must be clearly stated.
5. Bidders **must** get all their queries resolved in the RFQ stage.
6. Any deviation taken by Bidder may lead to rejection of the bid.
7. Bidder shall quote a firm price and shall be bound to keep this price firm without any escalation for any reason whatsoever until they complete the service against the tender.
8. Bidder shall give clear break-up of the basic price and the taxes and duties included in the price quoted.
9. The quantities mentioned in the tender are liable for change.
10. The award against the tender may be split among more than one bidder at the discretion of TPCL.
11. Tata Power reserves the right to accept or reject any or all bids or cancel/ withdraw the RFQ without assigning any reason whatsoever. In such an event, no claim shall be made arising out of such action.
12. Any time prior to the deadline for submission of Bid, Tata Power may for any reasons, whether at their own initiative or in response to clarifications requested by Bidders, modify the enquiry including specification by amendment. The amendment will be notified in writing to all qualified Bidders to whom the RFQ has been issued and will be binding on them. The Bidder shall acknowledge the receipt of the amendment promptly upon the receipt of the same. In order to afford Bidder's time in preparing of Bid due to

amendment, Tata Power may, at his discretion, extend the deadline set for submission of the Bid.

13. Tata Power will not be liable for any expenses whatsoever incurred by the Bidder for the preparation, submission and opening of bids.
14. 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.
15. 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.

Submission of Offer:-

Two bid system: Bidder shall submit complete bid including list of deviations if any to the Scope of Work and the terms & conditions of the RFQ if any as well as furnish all required and relevant enclosures and submit the same in two different envelopes as under (online in Ariba system):

- **Techno-Commercial Bid (Un-priced Bid)**

Vendor is requested to submit (upload in Ariba) the following as part of Technical Bid

1. Refer Job Scope for all Technical submissions.
2. Duly filled ATC to be attached.
3. Experience certificates/PO copies.
4. Safety Bid document and supporting files.

- **Price Bid**

Vendor is requested to submit (upload in Ariba) editable copy of price bid. Price bid has to be in the format given by Tata Power without any alteration.

Pls refer the ANNEXURE – 1 for Accessing Ariba Sourcing for submitting quotation

1. Kindly, note that the Technical Bid shall contain no price details and offers submitted with price details are liable for rejection.
2. Price shall be entered only in the template / format provided in the Ariba system. The documents submitted along with the technical offer will also contain the undertaking that the authorised personnel are making this bid submission.
3. The bidder shall sign its proposal with the exact name of the entity to which the contract is to be awarded. Each page of the bid shall be duly signed and sealed by an authorized officer of the bidder's organization.
4. The bid must be kept valid for **90 days** from the date of bid submission. In exceptional circumstances TPCL may solicit the bidders' consent for an extension of the validity period.
5. Last Date of Receipt of Queries may be raised in writing by prospect bidders in order to understand Scope of Work specified in the Tender / RFP Document in case of complex

requirements, seek clarity regarding sprit of various provisions specified in the Tender / RFP Document or request necessary modifications to the Tender / RFP Document.

For any clarification or queries associated with accessing the tender or submission of the offer please get in touch with Mr Vinayak Shinde at the contact details mentioned below.

Mr. Vinayak Shinde (Lead Engineer – Corporate Contracts)
The Tata Power Company Limited, Sahar Receiving Station,
Near Hotel Leela, Airport Road, Andheri (E), Mumbai 400059, Maharashtra, India
Mobile: 9029001432
Email: vinayak.shinde@tatapower.com Website: www.tatapower.com

6. Bidders are advised to upload the offers well before the due date so that any technical problems in doing so are addressed prior to the bid submission date and time. In electronical offer submission, the bidder will not be able to upload the offer after the due date and time of submission of bids and hence will not be eligible for further participation. TPCL shall in no way be responsible for this eventuality.

7. The bids will be evaluated by TPCL based on the information asked in this tender and those submitted by the bidder. TPCL may at its discretion ask the bidder for a clarification of its bid for evaluation and comparison of bids. The request for clarification and response should be in writing and no change in the price or substance of the bid shall be permitted unless asked for by TPCL in writing.

8. **Bidder Pre-Qualification Requirement (PQR):**

   Interested parties to note that Bidder shall be required to fulfil the pre-qualification requirement / criteria mentioned below in order to qualify for the subject tender. This is the same PQR that was mentioned in open tender advertisement as well. Bidder will be required to submit relevant supporting documents against each criterion to demonstrate their qualification during the bid submission stage. Bidders not found meeting the pre-qualification requirements given below will be disqualified from the tender.

Techno-Commercial Pre-Qualification Requirement and Submission Format			
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 / assembly in India. The bidder must have in-house routine and acceptance testing facilities for acceptance as per relevant IS/IEC	Self-undertaking to be submitted in this regard. TATA Power reserves the right to inspect the said manufacturing facility as a proof of compliance to this parameter.

2	Supply and Experience	The bidder must have supplied for same or higher size and voltage a) A minimum of 40 nos during last 3 years or b) A single order of 20 nos or c) Two orders of 12 nos during last 3 yrs 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	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
4	Commercial Capability	Average of Annual turnover of the bidder for last three years shall not be less than Rs. 5 Crs.	Copies of audited Balance Sheet and P&L Statements along with UDIN number to be submitted in this regard.
5	Type Test	The bidder shall submit Type test reports obtained from NABL/ International Accredited Lab for the equipment / material offered. The type tests should have been conducted on the equipment / material of the same design. The type tests should have been conducted within 10 years prior to the date of bid opening. Time period for type test can be extended by another 5 years as a special case, if there is no change in design / material of construction (MOC). In case the type test reports furnished are not for the quoted equipment / material but for the equipment / material with higher voltage class and/or different capacity, then type test shall be carried out for the offered equipment / material from NABL / International Accredited Lab without any cost implication to the owner and the Type Test reports shall be submitted before dispatch of the equipment / material.	Type Test Report. Undertaking that there is no change in design / material of construction (MOC) if Type Test Report older than 10 years. Undertaking that type test shall be carried out for the offered equipment / material from NABL / International Accredited Lab without any cost implication to the owner and the Type Test reports shall be submitted before dispatch of the equipment / material.

9. **Price Variation (PV) Clause:** IEEMA formulae and factors governing the price variation shall be as follows:

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

$$P = \frac{P_o}{100}\left(20 + 28\frac{Is}{Is_O} + 26\frac{C}{C_O} + 4\frac{Al}{Al_O} + 9\frac{In}{In_O} + 13\frac{W}{W_O}\right)$$

P Price payable as adjusted in accordance with the formula

PO Price quoted / confirmed (Each)

IS Wholesale price index number for 'Manufacture of Basic Metals (Base: 2011-12=100) - Applicable in the Month of ordering.

ISO Wholesale price index number for 'Manufacture of Basic Metals (Base: 2011-12=100) -as per base month of tender.

C Price of Coper wire bars- Applicable in the Month of ordering.

CO Price of Coper wire bars- as per base month of tender.

Al Price of busbar grade aluminum- Applicable in the Month of ordering.
AlO Price of busbar grade aluminum - as per base month of tender.

In Price of epoxy resin for indoor circuit breakers and switchgear OR Wholesale price index of insulator for outdoor circuit breakers (VBF and SDB) - Applicable in the Month of ordering.

InO Price of epoxy resin for indoor circuit breakers and switchgear OR Wholesale price index of insulator for outdoor circuit breakers (VBF and SDB) - 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

9.2 Base circular shall be April 2023 circular issued in May 2023. 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.

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

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

10. **Bid Security / EMD:**

    Bidder is required to furnish a Bid Security along with their Bid, in the form of a Bank Guarantee (as per the format prescribed in this tender) for an amount of **INR 50,000/-** (Indian Rupees Fifty Thousand Only) as per attached format only. Bids not accompanied by an acceptable Bid Security shall be rejected by the Owner as being non-responsive and returned to the bidder without being opened.

11. The bid package document shall remain the property of the Company.

ANNEXURE 1 –

1. Accessing Ariba Sourcing

Step 1: You will get an invitation to your email from Ariba System. Keep this email, it contains your login
Information and a direct link to Ariba.

Step 2: Click "Click Here" to access the Ariba Web Site.

Dear Santosh

This email message has been sent in response to your request to reset your password for The Tata Power Company Limited's Ariba Spend Management site.

Before you can access The Tata Power Company Limited's events, you must first move your buyer-specific username from the buyer's site to the Ariba Commerce Cloud.

Click Here to move your buyer-specific username from the buyers site to the Ariba Commerce Cloud.

If you are unable to launch a browser using this link, copy the link and paste it into the address bar of any of the supported Web browsers to form a single-line URL.

http://TATAPOWER.supplier.ariba.com?awsso_tkn=33gxEHyepD56d8154affffffffd86d6f931

NOTE: This link is only valid for 30 days. Make sure you register on the Ariba Commerce Cloud before the link expires. After you register on the Ariba Commerce Cloud, you can no longer use this link.

Thank you,
Ariba, Inc. Administrator

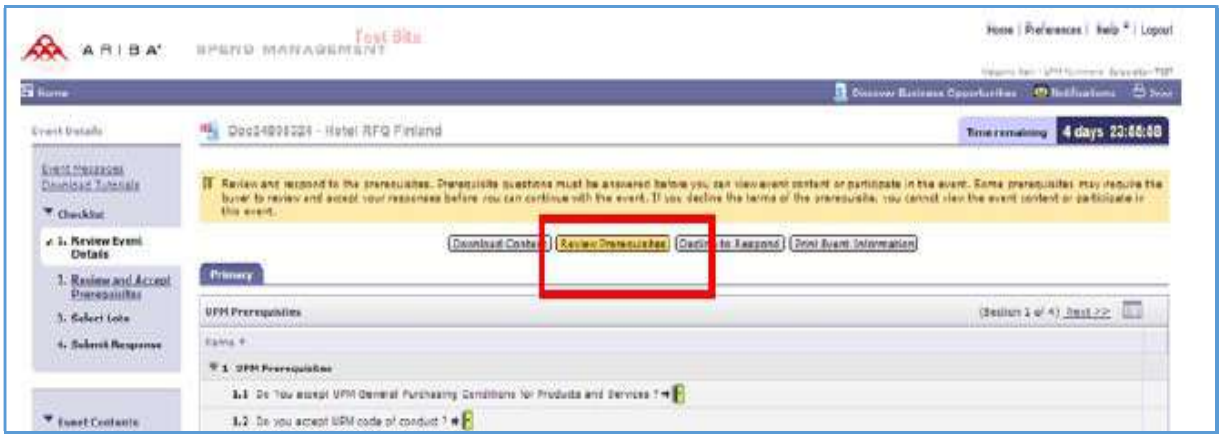
Step 3: Define your password and secret question. Click "OK"

Step 4: If it's the first time you are invited to use UPM Ariba, you'll need to accept the "Participant Terms".
Select "I accept the terms of this agreement". Click "OK".

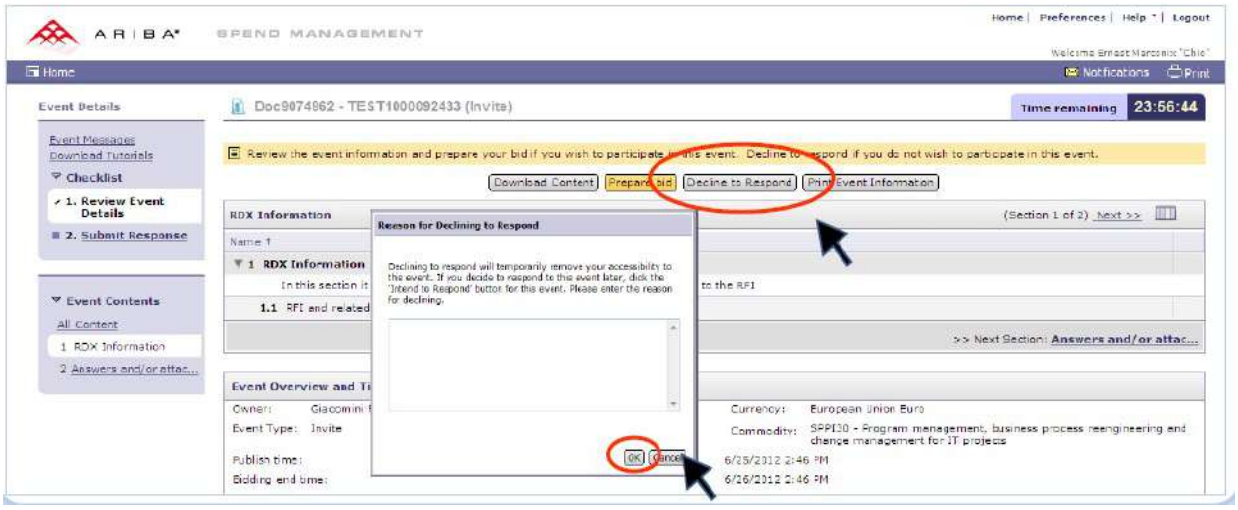
2 Submitting Your Answers / Proposal

2.1.1 Review and Approve "Prerequisites"

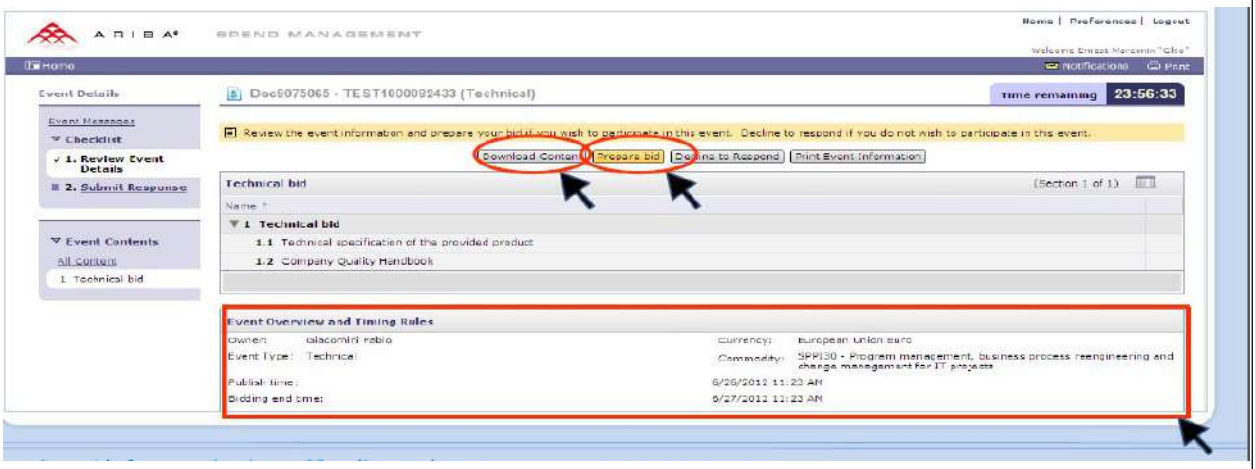
Step 1: Click "Review Prerequisites"



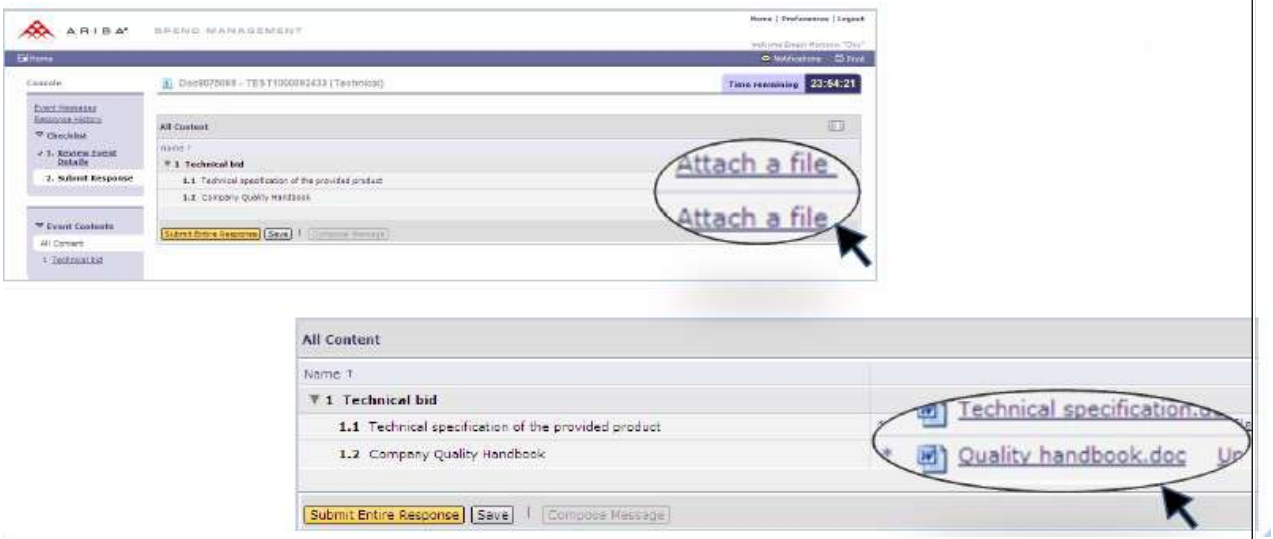
If you do not want to submit a bid, please click on the "Decline to respond" and then fill in the reason and click OK.



Click on button "Download Content" to download documents provided by buyer.



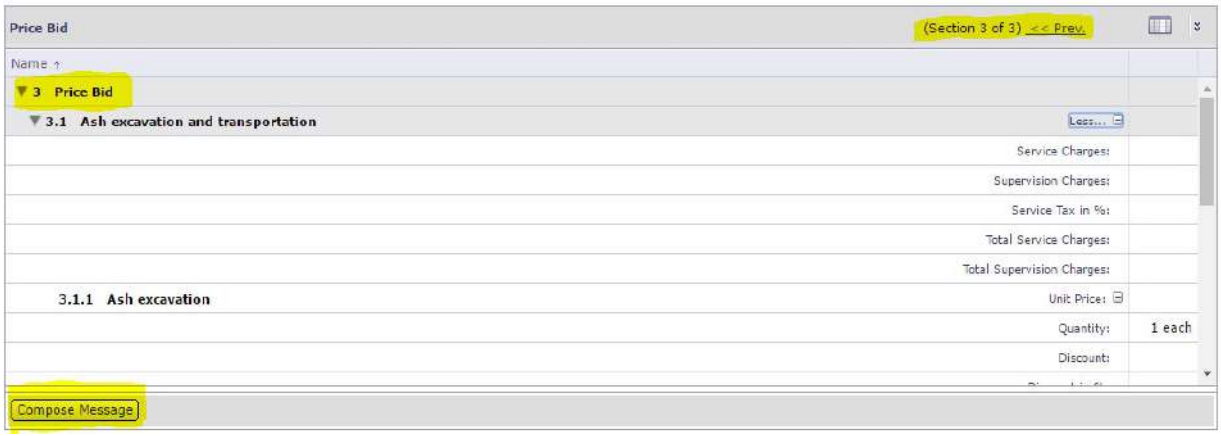
Click on “Attach a file” link and then on button “Browse” to search the documents to be uploaded on the system.



For submitting the Techno commercial offer, you can attached the file.

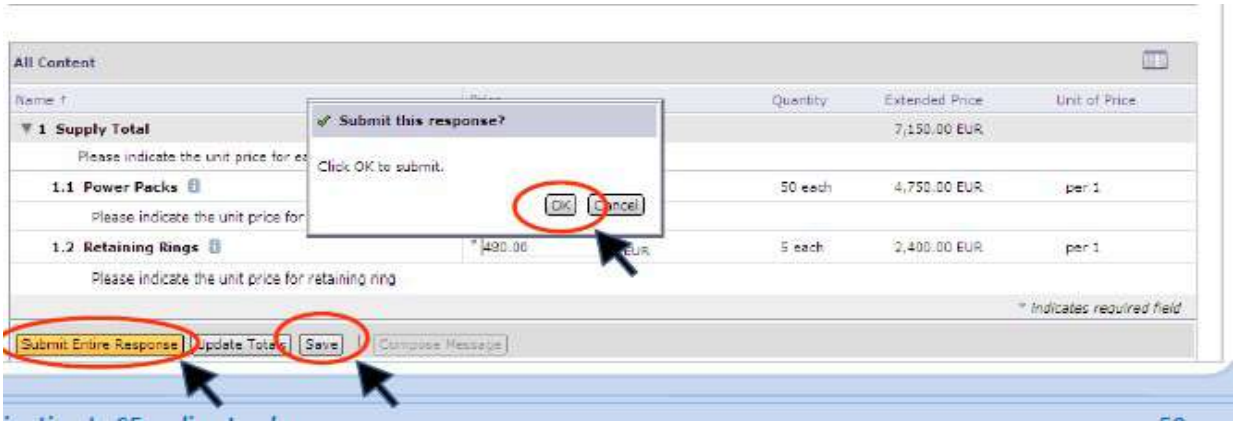
For submitting the Price bid go for 3 Price bid

Instructions to Bidder (Two bid)



Click on button “Save” to save the offer and send it afterward **or**

Click on button “Submit Entire Response” and then on “OK” to send the offer



Remember! If necessary you can review and modify your response till the event deadline by clicking on button “Revise Response”

Q :- What to do if you have a problem during the e-bidding?

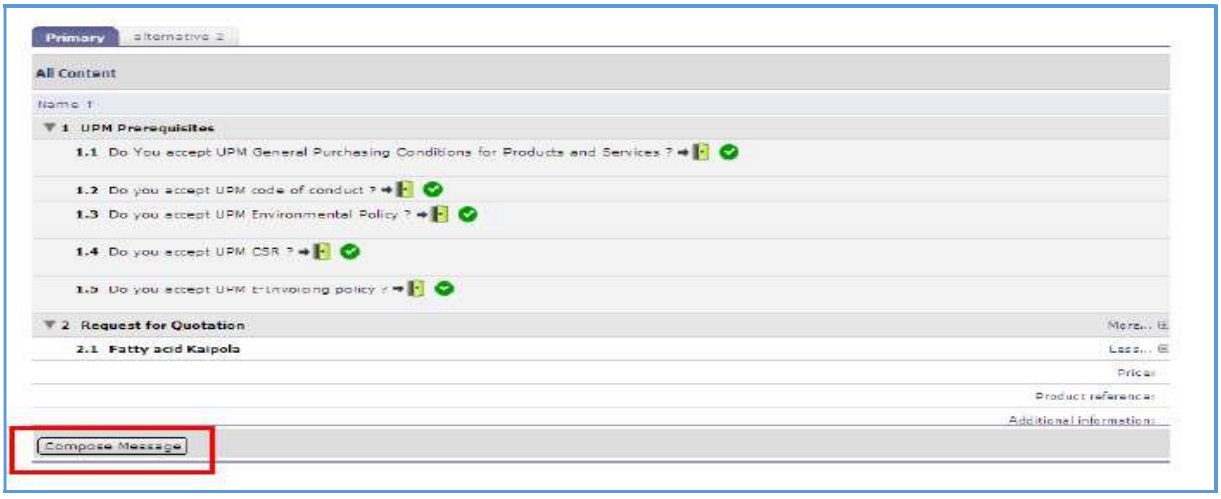
If you have any problem related the system: - **Call first Tata Power e- bidding / Auction Cell**

- **e-bidding/auction Cell details:-**

Core team		
Contact Person	**E-Mail Id**	**Contact Details**
Ravi Shingare	ravi.shingare@tatapower.com	9029004168

Q Communicating with Tata Power Auction team during auction

Step 1: Click "Compose Message".



Step 2: Compose Your Message and click "Send".

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17. SPARES, ACCESSORIES & TOOLS

18. DRAWINGS, DOCUMENTS

19. GUARANTEED TECHNICAL PARTICULARS

20. SCHEDULE OF DEVIATIONS

Initiators Vikas Koul	Checked by Ajay Potdar	Approved by - Head (Engineering) Ramesh Kharat	

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ANNEXURE-1,2 &

ENG-HV-95 : SPECIFICATION FOR SELF-POWER RELAY FOR RMU FEEDER PROTECTION

1.0	**Scope**	This specification covers the technical requirements of design, manufacture, testing at manufacturer's works, packing, forwarding, supply and unloading at site/store and performance of 11kV Ring Main Units with all accessories and necessary training for trouble free & efficient performance. It is not the intent to specify completely herein all the details of tech design and construction of material. However, the material shall conform to practices consistent with sound environmental management and local statues. It is also expected that equipment shall comply in all respects to high standards of engineering, design and workmanship and shall be capable of performing in continuous commercial operation in manner acceptable to the TATA POWER, who will interpret the meanings of drawings and specification and shall have the power to reject any work or material which, in his judgment is not in accordance therewith. The offered material shall be complete with all components necessary for their effective and trouble-free operation. Such components shall be deemed to be within the scope of Bidder's supply irrespective of whether those are specifically brought out in this specification and/or the commercial order or not.
2.0	**APPLICABLE STANDARDS**	The equipment covered by this specification shall unless otherwise stated, be designed, manufactured and tested in accordance with latest editions of the following Standards /IEC and shall conform to the regulations of local statutory authorities. IS9920: Part 1 : High Voltage Switches, Part 1: Switches for Rated Voltages Above 1kV and Less Than 52 Kv IEC 62271-200 : HV switchgear and control gear-AC Metal Enclosed switchgear and control gear for voltages above 1kV and up to and including 52Kv. IEC 62271-100 : Alternating-current circuit-breakers IS 513 : Cold Rolled Low Carbon Steel Sheets and Strips. IEC 60694 : Common specifications for high voltage switchgear and control gear standards IEC 62271-102 : HV switchgear and control gear-Alternating current disconnectors and earthing switches IEC 60265-1 : High voltage switches – Part 1: Switches for rated voltages above 1 kV and less than 52 kV IEC 60529 : Degrees of protection provided by enclosures (IP Code) IEC 62262 : Degrees of protection provided by enclosures for electrical equipment against mechanical impacts (IK Code) IEC 60060 : High-voltage test techniques IEC 60947 /IS 13947 : Low voltage switchgear and control gear IEC 60439-1 : Low-voltage switchgear and control gear assemblies- Type tested and partially type tested assemblies IEC 60255-3 : Electrical relays - Part 3: Single input energizing quantity measuring relays with dependent or independent time. IEC 60044-1 / IS 2705 : Current Transformers

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		IEC 60044-2 / IS 3156 : Voltage Transformers IEC 60376 : Specification of technical grade sulfur hexafluoride (SF6) for use in electrical equipment IEC 62271-206:2011 :High-voltage prefabricated switchgear and control gear assemblies - Voltage presence indicating systems. IS 13573-2 : Cable accessories for extruded power cable for Working Voltages from 3.3 kV up to and Including 33 Kv.
3.0	**CLIMATIC CONDITIONS OF THE INSTALLATION OF RMU:**	a) Max. Ambient Temperature : 50 deg.C b) Max. Daily average ambient temp. : 40 deg.C c) Min Ambient Temp : 0 deg C d) Maximum Humidity : 95% e) Minimum Humidity : 10% f) Average No. of thunderstorm days per annum : 50 g) Maximum Annual Rainfall : 750 mm h) Average No. of rainy days per annum : 60 i) Rainy months : June to Oct. j) Altitude above MSL not exceeding : 300 meters k) Wind Pressure : 126 kg/sq m up to an elevation at 10 m. The atmosphere is generally laden with mild acid and dust in suspension during the dry months and is subjected to fog in cold months. The design of equipment and accessories shall be suitable to withstand seismic forces corresponding to an acceleration of 0.3 g. For Mumbai the atmosphere is mainly humid across year.
4.0	**GENERAL TECHNICAL REQUIREMENTS OF RMU:**	

Sr. no.	Description	Requirement
1	Application	Three phase - Three wire
2	Rated Voltage	12kV
3	Service Voltage	11kV
4	System Frequency	50 Hz
5	Internal Arc rating	IAC AFL , AFLR or better
6	Internal Arc test	20 kA for 1 Sec.
7	Lightning Impulse withstand Voltage	75 kV Peak
8	Power Frequency withstand voltage	28 kV rms
9	Rated current of incomer load break switch	630 A
10	Rated current of Circuit-breaker	630 A
11	Rated Short time current withstand (3 sec)	21 kA
12	Rated Short circuit making current	50 kA

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			13	Number of operations at rated short circuit current on line switches, earthing switches ,CB	5 close
			14	Opening time of breaker (max.) without relay time	2.5 cycle
			15	Closing time of breaker (max.) without relay time	3 cycle
			16	Breaker Duty Cycle	O – 3min - CO - 3min - CO
			17	Rated cable charging interrupting current of incomer- - Load Break Switch	10 A
			18	Rated cable charging breaking current of breaker	25 A
			19	Insulating medium	SF6
			20	Interrupting medium	Vacuum- for CB and SF6 for LBS and earth switch
			21	Temperature Rise	Maximum permissible temperature rise for bus bar shall not be 65˚C at an ambient temperature not exceeding 40˚C, as per IEC 62271-1. However, the temperature rise for accessible enclosures and covers shall not exceed 30K and in case, they are not required to be touched during normal operation, the limit shall be raised by 10K.
			22	Cable compartment	Front opening cable compartment for all feeders

4.1 RMU CONFIGURATIONS

Types of Ring Main Units shall be as under:

A) For TATA Power-DDL, Delhi:

i) 3 Way with 1 CB (For Indoor and Outdoor application)**:** Both side extensible
2 Nos. 630A Incomer Load Break Switches + 1 No. 630A Local Feeder/transformer Control Vacuum Circuit Breaker with self powered O/C + E/F relays+ shunt trip coil (24V DC) + 1 No. Electronic Fault Passage Indicator on left LBS in each RMU

ii) 3 Way with 2CB Non extension type(For Indoor and Outdoor application)**:**
1 Nos. 630A Incomer Load Break Switches + 2 No. 630A Local Feeder/transformer Control Vacuum Circuit Breaker with self powered O/C + E/F relays+ shunt trip coil (24V DC) +1 No. Electronic Fault Passage Indicator on left LBS in each RMU + LBS with 1Cx 630 sq mm cable provisions.

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iii) 4 Way with 2CB (For Indoor and Outdoor application)**:** Both side extensible
2 Nos. 630A Load Break Switches + 2 Nos. 630A Feeder Vacuum Circuit Breakers with self powered O/C + E/F relays + shunt trip coil (24V DC) + 1 No. Electronic Fault Passage Indicator in left side LBS in each RMU

iv) 4 Way with 3 CB Non extension type (For Indoor and Outdoor application)**:**
1 Nos. 630A Incomer Load Break Switch + 3 Nos. 630A Feeder Vacuum Circuit Breakers with self powered O/C + E/F relays + Shunt trip coil (24V DC) + 1 No. Electronic Fault Passage Indicator in left side LBS in each RMU

v) 5 Way Non Extension RMU (For Indoor and Outdoor application)**:**
2 Nos. 630A Incomer Load Break Switch With Electronic Fault Passage Indicator in each LBS + 3 Nos. 630A Feeder Vacuum Circuit Breakers with self-powered O/C + E/F relays+ Shunt trip coil (24V DC)

Cable Voltage presence Indicators to be provided in each compartment of all type of RMUs in above mentioned combination. All LBS, EW and CB shall be with auxiliary contacts for SCADA status indication. Provision for future motorization of LBS and CB should be kept in configuration while designing RMU.

B) For TATA Power Distribution , Mumbai:

1. 4 Way with 4 LBS (For Indoor and Outdoor application): Non extensible
   4 Nos. 630A Load Break Switches + 3 No. Electronic Fault Passage Indicator in extreme left & right side LBS in each RMU

2. 4 Way with 2CB (For Indoor and Outdoor application): Non extensible
   2 Nos. 630A Load Break Switches + 2 Nos. 630A Feeder Vacuum Circuit Breakers with self-powered O/C + E/F relays + shunt trip coil (230V AC) + 1 No. Electronic Fault Passage Indicator in left side LBS in each RMU

3. 3 Way with 3 LBS (For Indoor and Outdoor application): Non extensible
   3 Nos. 630A Load Break Switches + 2 No. Electronic Fault Passage Indicator in extreme left & right side LBS in each RMU

4. 3 Way with 1 CB (For Indoor and Outdoor application): Non extensible
   2 Nos. 630A Incomer Load Break Switches + 1 No. 630A Local Feeder/transformer Control Vacuum Circuit Breaker with self-powered O/C + E/F relays+ shunt trip coil (230V AC) + 1 No. Electronic Fault Passage Indicator on left LBS in each RMU

Cable Voltage presence Indicators to be provided in each compartment of all type of RMUs in above mentioned combination. All LBS, EW and CB shall be with auxiliary contacts for SCADA status indication. Provision for future motorization of LBS and CB should be kept in configuration while designing RMU.

Note- All shunt trip coils shall be 24V DC for TPDDL, Delhi supply & 230V Ac for TPC, Mumbai supply

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5.0	**General construction for RMU**	
5.1	MAIN TANK	5.1.1 The switchgear and bus bar shall be contained in a stainless steel tank filled with SF6 gas and the outer body shall be made of GI high tensile steel/CRCA 2mm thick with thick gland plates as per IS 513. 5.1.2 The tank shall have SS sheet of 2.5 mm thickness minimum (or as per type tested design of bidder with undertaking on letter head) and meet the "sealed pressure system" criteria in accordance with the IEC 62271-200. This is a system for which no handling / refilling of gas shall be required throughout the expected operating life, i.e. 30 years. Sealed pressure systems are completely assembled, filled and tested in the factory. 5.1.3 The maximum leakage rate of SF6 gas shall be lower than 0.1 % of the total initial mass of SF6 gas per annum from main tank. The filling pressure for the switchgear shall be just above the atmospheric pressure so as to prevent the tendency to leak. SF6 gas used for the filling of the RMU shall be in accordance with IEC 376. 5.1.4 It is mandatory to fit an absorption material in the tank to absorb the moisture from the SF6 gas and to regenerate the SF6 gas following arc interruption. The degree of protection for RMU tank (Indoor/Outdoor) shall be IP 67. 5.1.5 The RMU shall be complete with all connection and copper bus bar with continuous current carrying capacity of 630A. The bus bar shall be fully encapsulated by SF6 gas inside the steel tank. 5.1.6 The tank shall have an separate SF6 refilling valve and the filling pressure must be mentioned near the valve. And the refilling valve should be marked properly. 5.1.7 If same valve is used for pressure indicator or remote communication then the procedure to refill to be mentioned near the NRV from with permanent sticker. 5.1.8 The SF6 tank shall be completely enclosed in the enclosure such way that any rodent entry on top or side of tank is deterred. 5.1.9 All configurations should be in one tank without any coupling/joint on main Busbar.
5.2	GENERAL DETAILS	5.2.1 The mimic board shall be provided with IP2X degree of protection for Indoor RMUs and protection for Outdoor RMUs shall be minimum IP 54(Main door closed). Cable compartment shall be IP54. 5.2.2 The RMU shall be suitable for mounting on plinth with trench below and shall have base frame on sides with mounting bolt accessibility from outside of RMU the mounting bolts provision shall be min. M12 bolts on all four sides. The mounting bolts and nuts shall be of hot dip galvanized to avoid rusting. The provision for cabling shall be through base plate from bottom of RMU through trench below. The RMU shall be designed so that the position of the different devices is visible to the operator on the front face plate with permanent type indicators. 5.2.3 The RMU shall be identified by an appropriately sized permanent labels which clearly indicates the functional units and their operation directions etc. The ON or OFF shall be marked as words and only I/O labelling shall not suffice. 5.2.4 The RMU shall be designed to be tamper proof so as to prevent access to all live

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parts during operation without the use of special tools.

5.2.5 The earth bus bar shall be covered if passing through the cable chamber and enclosed in an enclosure housing to prevent theft/tampering. Only extension out side enclosure shall open for access.

5.2.6 There shall be continuity between the metallic parts of the RMU and cables so that there is no electric field pattern in the surrounding air, thereby ensuring the safety of people. The enclosure and cable compartment and tank shall be connected to common earthing.

5.2.7 All parts of main circuit to which access is required or provided shall be capable of being earthed prior to becoming accessible. This does not apply to removable parts which become accessible after being separated from the switchgear and control gear. The cables shall be earthed by an earth switch with short-circuit making capacity in compliance with IEC 62271-102.

5.2.8 The LBS /CB shall not be closed in case Earth Switch is closed. The earth switch shall be fitted with its own operating mechanism and manual closing shall be driven by a fast-acting mechanism, independent of operator action. Mechanical interlocking systems shall prevent access to the operating shaft to avoid all operator errors such as closing the earth switch when the Load break switch is closed or when cable is charged.

5.2.9 All panel covers shall be provided with anti-vandal screw bolts so that opening of panel covers is only possible with special tools, which shall be provided by the Bidder as mandatory spare/tool.

5.2.10 The default design of cable compartment for TATA Power-DDL, Delhi shall be for 3Cx400sq.mm AL cables (91mm external dia.). Cable boots, gland plate, cable cleat, washer, bushings & terminal bolts should be suitable for 3Cx400 sq.mm cables in all RMU compartments except three way with 2 CB

5.2.11 Three way with two CB configuration following thing to be complied: The incomer LBS shall be suitable for 1Cx 630 sq.mm cable. Cable boots, gland plate, cable cleat, washer, bushings & terminal bolts should be suitable for 1Cx 630 sq.mm cable in only incomer LBS cable compartment. The other two CB compartment shall be suitable for 3Cx 400 sq.mm cable termination. The terminal bolt used in LBS compartment shall have 15mm extra length than regular bolt to accommodate the mechanical type lug having large thickness. For Incomer LBS shall be provided with nonmagnetic base plate section and suitable cable cleat for 51 mm diameter 3x1C cables.

5.2.12 The default design of cable compartment for TATA Power Mumbai shall be suitable for 3Cx300 sq.mm cables in feeder compartments & in the breaker compartment 11kV, 1CX185 sq. mm / 3C X 300 Sq. mm. cables

5.2.13 The circuit breakers, Load break switches and earthing switches shall have pad lock provision & can be locked in the open or closed position by 1 to 3 padlocks 6 to 8mm in diameter.

5.2.14 For Mumbai the atmosphere is mainly humid across year hence necessary anticorrosive fasteners & components to be provided on switchgear.

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		5.2.15 The main bus bar current density shall be less than 2.7A/sq.mm 5.2.16 The cable gland plate shall have split type design having two parts for removal of cable with termination. 5.2.17 Bidder shall conduct root cause and defect analysis of the failed unit and submit the root cause analysis report within two months of reporting of failure. 5.2.18 The vacuum interrupter shall withstand 10-7 milli-bar Vacuum Pressure ensuring high quality vacuum for interruption and shall have Copper Chromium Arcing Contacts. The interrupter manufacturing unit shall have shall be single Shot brazing and have high First pass Yield. (Shall be part of Bidders own vendor evaluation criteria) 5.2.19 For each terminals bolt should be provided with Cup or Belleville Washer and flat washers. (Note- The cut spring washers are not accepted) 5.2.20 The CT secondary wires and Trip coil wires shall not have any joint in-between CT and TB or relay. 5.2.21 Two nos. body earthing bolts of M12X70 mm to be provide on the extended bus-bar. Bolts must be hot dipped galvanized. 5.2.22
5.3	INTERNAL ARC TESTING	Any accidental over pressure inside the sealed chamber tank shall be limited by the opening of a pressure limiting device provided at the bottom part of the tank. Gas shall be released to the bottom without affecting cables and termination of the RMU with partition between cable chamber such way that gas releases away from the operator. Bidder shall provide type test report to prove compliance to the 'Internal fault IAC- A FL minimum for indoor and A-FLR for outdoor with bottom release' as per IEC 62271-200 on main tank and cable chambers. An anti-reflex mechanism on the operating lever shall prevent any attempts to reopen immediately after closing of the switch or earth switch. All manual operations shall be carried out on the front of the RMU. In case of SF6 gas leakage from gas tank or any kind of repair should be done at site or replacement of complete RMU to be done free of cost within guarantee period.
5.4	**Incomer Load Break Switches (LBS)**	5.4.1 Load break switches shall be maintenance-free. The position of the power contacts and earthing contacts shall be clearly visible on the front of the RMU. The position indicator shall provide positive contact indication in accordance with IEC 60265-1. In addition, manufacturer shall prove reliability of indication in accordance with the standard. The switches shall be of the "increased operating frequency" in accordance with IEC 60265-1. 5.4.2 The LBS shall have at least 3 positions, open-disconnected, closed, and earth (with making capacity) and shall be constructed in such a way that natural interlocking

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		prevents unauthorized operations. 5.4.3 The disconnector should have the maximum 200micro ohm contact resistance. 5.4.4 Earthing of the cable shall be either through a three position switch of a separate snap action type or Earth Switch having fault making capacity. 5.4.5 The switches shall be fully mounted and inspected in the factory. Provision for future motorisation of LBS and CB should be kept in configuration while designing RMU. 5.4.6 The load break switch and earthing switch operating mechanism shall have mechanical endurance of at least 1000 operations. The type test reports to be submitted along with Bid. 5.4.7 Load break switch shall have mechanical switch operation counter and should be visible on front in horizontal alignment. 5.4.8 The Load break switch should have minimum spare (for TATA POWER use) 3 NO+ 3 NC auxiliary contacts and 1NO+1NC for earth switch. 5.4.9 The load break switch shall be compatible for remote operation without any modification of the operating mechanism and without de-energizing the RMU, The LBS shall be fitted with an electrical operating mechanism and can remotely open-disconnected, closed and earthed from a reserved location.
5.5	**Circuit Breaker For Transformer / Local Feeder Control**	5.5.1 The circuit breakers/ interrupter shall be of the maintenance free. 5.5.2 The position of the power and earthing contacts shall be clearly visible on the front of the RMU. 5.5.3 The circuit breakers shall have at least 2 positions: Open-disconnected and closed and shall be constructed in such a way that natural interlocks prevent all unauthorized operations. 5.5.4 For TPDDL, Delhi supply & places where the RMU CB is used for switching operation & protection of feeder (cables) - In view of safety each VCB shall be assisted with feeder side disconnector having 3 positions, open-disconnected, closed, and earth (having fault making capacity) and shall be constructed in such a way that natural interlocking prevents unauthorized operations. 5.5.5 They shall be fully mounted and inspected in the factory. 5.5.6 Breaker contact resistance should be <=50 micro-ohms. The various circuit contact resistance should comply with provisions in IEC 62271-200. 5.5.7 The breaker should have minimum spare (exclusively for TATA POWER use) 4 NO+ 4 NC auxiliary contacts. 5.5.8 An operating mechanism can be used to manually close and open the circuit breaker with single push on push buttons. It shall be fitted with a local system for manual tripping by an integrated push button. There will be no mechanical automatic re-closing. 5.5.9 The operating mechanism shall be compatible for remote/ SCADA operation. The required motor for this operation shall be delivered separately to stores (at a later date) and shall be compatible with older versions of RMUs already working within the Tata Power distribution network.

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		5.5.10 The circuit breaker shall be associated with an integrated protection unit that will operate without any auxiliary power supply and shall include three toroid transformers incorporated in the transformer tee-off bushings, an electronic self-powered relay, a low energy release, and a "fast-on" test receptacle for protection testing (with or without CB tripping). 5.5.11 CT shall be mounted on cables the mounting arrangement shall be flexible to move to & fro, up and down based on site condition of cable terminations etc. The mounting arrangement shall ensure that the CT should not reach less tan 300mm from live part of bushing. The CT mounting shall be fixed at position while dispatch such that the cable entry, the bushing terminal bolt and CT core hole are co-axial. 5.5.12 Fixing bracket to be provided for fixing CT on particular position without touching termination cores. Bolting arrangement to be provided for fixing CT on the mounting bracket. 5.5.13 In any mounting the CT shall be mounted in such a way that the secondary connection shall be accessible and visible form front side after opening cable compartment door 5.5.14 Breaker shall have mechanical endurance of at least 2000 operations. Relevant type test reports to be submitted along with bid. 5.5.15 Breaker operation counter should be provided and should be visible on front in horizontal alignment. 5.5.16 The circuit breaker shall be compatible for remote operation and can close (ON) and open (OFF) by remote operation in future if automated. 5.5.17 In control cabinet the Terminal block shall have AC input wiring provision and MCB provision for incoming of LT AC supply. 5.5.18 The relay auxiliary power, communication ports and other required ports should be wired up on the TB. 5.5.19 The breaker should have one series trip coil and one shunt trip coil. 5.5.20 For Tata Power-DDL, Delhi supply - The shunt trip coil shall be of 24V DC along with charger and complete wiring up to trip coil through DC MCB and socket and switch arrangement for AC charger. 5.5.21 For TATA Power, Mumbai Supply – The shunt trip coil shall be of 230V AC & wired up on TB For Tata Power-DDL, Delhi supply 5.5.22 The protection system shall ensure circuit breaker tripping as of a minimum operating current which is the rated current of the underground network to be protected. The CT settings shall be adjustable between 60 - 400/1 Amp for outgoing feeder and transformer in relay. The pickup current of relay should be adjustable as per relay specification as per the requirement at site. 5.5.23 CT shall be resin cast only, CT shall be of Protection class having duel ratio i.e. 400/1A and 60/1A. The ratio selection shall be made available on one TB on control cubicle. The ratio section chart shall be fixed permanently at suitable nearest arrangement available. 5.5.24 The class of CT shall be 5P10 for both cores and CT Burden shall be 2.5 VA. 5.5.25 The relays shall be self-powered suitable numerical relay with necessary elements.

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		Please refer Specification no. ENG-HV-95 for Self power relay for RMU feeder protection. The preferable make of relay are ABB, Ashida, Schneider, Siemens make relay. 5.27 For TATA power Mumbai Supply- Following shall be applicable The circuit breaker shall be associated with an integrated protection unit that will operate without any auxiliary power supply and shall include: □ Three toroid transformers incorporated in the transformer tee-off bushings, □ An electronic relay,(self powered target latched by battery or capacitive unit) □ A low energy release, □ A "fast-on" test receptacle for protection testing (with or without CB tripping) The protection relaying shall have following features: □ Phase Protection: With Definite time/ IDMT element having standard characteristics of Standard Inverse, Very inverse, Extremely Inverse (as per IEC 255-3) or Fuse Characteristics. □ Earth Fault Protection: With Definite time or IDMT element having standard characteristics of Standard Inverse, Very inverse, Extremely Inverse as per IEC 255-3 standard. □ The CTs of 5P20 Class shall be employed. CT ratio shall be 200/1 (Further CT ratio may finalized during detailed engineering) □ The transformer ratings which are to be controlled by the breaker are as follows: 400kVA to 2000kVA. □ The terminal protectors to be supplied with the RMU by the vendor along with the cable termination bolt for termination 185 Sq. mm 11kV 1C cable in breaker & 300 Sq. mm 11kV 3 C for isolator compartment. There should be provision of flag Relay on each outgoing vacuum breaker module for indication of Trip on Fault The preferable make of relay at Mumbai supplies are ABB, Ashida, Schneider, Siemens, C&S, Alsthom make relay. 5.1.10 Copper chromium with silver plating or Better to be used for contact material in RMU vacuum bottle
5.6	**Bushings and Cable terminations**	5.6.1 Bushing should be of Epoxy resin. Each cable compartment shall be provided with three bushings of adequate sizes to terminate the incoming and outgoing cables. The termination bolt shall be M16 only for Tata power Delhi supplies for all bushings & M12 for Tata Power Mumbai supplies 5.6.2 The bushings shall be conveniently located for proper bend so as to allow easy working and termination of cables. The cable termination shall be done with Heat shrinkable /Push ON termination method so that adequate clearances are maintained between phases & cable shall be held by HDPE (fire retardant) cleat. The Sizes of

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		incoming and outgoing cable shall be as per clause no. 5.2.10 to 15.2.12 5.6.3 BA should provide bimetallic washer for connection between Copper bushing stud and Aluminum Lug. Necessary spring and flat washers to be provided on each terminal. The bimetallic washer shall be suitable for M16 bolt for Delhi & M12 bolt for Mumbai supply and 630A rating in all compartments with minimum thickness of 2mm and sufficiently cover the completely copper bushing stud. The bidder can alternately offer tinned copper surface of bushing then bimetallic washer not required. 5.6.4 The Terminal bolt shall have arrangement for fixing the cable test rod through cable boot opening. Cable boot should have opening for test rod insertion. 5.6.5 The bolt tightening pressure must be written inside each cable chamber with permanent sticker. 5.6.6 Cable boot for cable termination should be as per IS 13573-2. Boot should be easy to install. 5.6.7 The cable compartment must be without any holes or gaps and properly vermin proffed before inspection. 5.6.8 The cable testing provision to be ensured in design. In case cables are to be tested with front door open, doors shall have interlocks such that doors can be opened only with earth switch in closed position & a cable test rod (to be quoted as spare) which can be fixed on the terminations/ termination bolt through boot hole to facilitate testing. Termination boots as approved by the Tata Powershould have a proper opening to facilitate the testing. The opening in boot shall be covered by means of removable protection cap. 5.6.9 All cable compartments shall have front door opening. The cable cover door shall be pad lockable and shall be Tamper and Arc proof. The circuit breaker and earth switch shall be lockable in the open or closed positions by 1 to 3 padlocks. 5.6.10 In outdoor RMU the door should have pad lock provision and cable door shall have interlock so that it shall not be opened by external forces. Also it shall not be possible to operate the load break switch / isolator or breaker from outside once door closed. This is required to prevent pilferage. 5.6.11 Locking provision of cable compartment door to be provided in case of any switch/CB is at earth position to avoid pilferage. 5.6.12 Control cabinet with a terminal block (TB) located at convenient accessible location so as to wire all inputs & outputs (IOs) up to the terminal block (TB). All the cable secondary wiring should be rooted through marshaling box separately for relay, CT etc. 5.6.13 The wiring of the relay to be done on the TB for its terminals along with communication terminals. 5.6.14 All terminals wires shall have proper identification ferrules and the identification marking provided on TB. 5.6.15 Control cabinet shall have control cable entry arrangement on both sides of the RMU top control cabinet with proper grommet such that the opening are sealed in normal installations when not used for our door extension box arrangement to be provided any other arrangement to be explained in drawing during tender. Note: Supply of Cable terminations is not to be part of RMU supply.

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5.7	**Earthing:**	5.7.1 The RMU outdoor metal clad switchgear enclosure, load Break Switch, VCB, SF6 tank etc. shall be equipped with an copper earth bus throughout all compartments and securely fixed along the base of the RMU with cover. 5.7.2 The extension of this earth bus shall be taken out minimum 50mm outside the enclosure on both sides for fixing of the Tata Powers GI earth flat of 50mm width. The extension coming out of enclosure shall be properly sealed such a way to ensure vermin proofing of the cable compartment. 5.7.3 The size of copper earth bus-bar should be Min.105 sq.mm inside the enclosure to withstand short time current carrying capacity as per IEC. 5.7.4 Two nos. body earthing bolts of M12X70 mm to be provide on the extended bus-bar. 5.7.5 The mother earth need to be extended up to 250mm periphery of cable entry hole so that the cable termination earthing can be connected easily to the main mother earth with 12mm bolt and washers. This arrangement need to be provided in each compartment of RMU. 5.7.6 The main tank must be connected to mother earth at least two positions with proper contact. 5.7.7 In Three way outdoor type compact design bidders should ensure the earthing from mother earth is provided inside the cable compartment for earthing of the cable terminations. that TATA POWER shall provide only two main earthing on switchgear 5.7.8 Bidder to ensured that the earth bus shall be single conductor/bus suitable for taking specified fault current and both main earthing are interconnected by earth bus and not through thank or enclosure. 5.7.9 If bolt are provided as current carrying path then the bolt material shall be brass and size shall be suitable to carry specified fault current. 5.7.10 Two nos. body earthing bolts of M12X70 mm to be provide on the extended bus-bar. Bolts must be hot dipped galvanized.
5.8	**Voltage indicator lamps and phase comparators**	5.8.1 Each compartment of RMU shall be equipped with a fixed type voltage indicator lamps having dip ports for insertion of phase comparators or line tester to check the phase sequence or presence of charge in cable. This is to be fixed on the front face plate to indicate presence of voltage in the cables. The capacitive dividers will supply low voltage power to the indicator lamps. Three inlets can be used to check the synchronization of phases with phase comparator or other device. These devices shall be in compliance with IEC 62271-206:2011 standard. The VPIS without dip ports are not accepted. 5.8.2 All the VIPS installed on compartments shall have auxiliary contacts wired up to the terminal block of respective compartment which shall be further used for remote status indication at SCADA. The auxiliary contacts in VPIS shall be there should be electrical interlock of cable presence indicator and operation of earth switch in RMU incomer cable compartment of LBS.
5.9	**Front Cover**	

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		5.9.1 The front cover shall provide a clear mimic diagram that indicates the different functions. This shall be permanent in nature throughout the useful life of the RMU. 5.9.2 The position indicators shall give a true reflection of the position of the main contacts. Position Indicators shall be clearly visible to the operator. 5.9.3 The lever operating direction shall be clearly indicated in the mimic diagram. 5.9.4 The bidder shall provide a operating sequence process on each compartment with permanent type arrangements. So that all data shall be self-explanatory. 5.9.5 The mimic shall have clear Words for "CLOSE/OPEN/EARTH' at each desired place. 5.9.6 All status indicators shall be marked appropriately with permanent labels as Earth On/OFF, Disconnector/LBS On/OFF, CB On/OFF. 5.9.7 All operating ports shall have marking like spring charging provision, three position disconnector port and Shutter operator for interlocking, Operation allowed along with arrow indication and labeled as earth operation or disconnector operation. 5.9.8 For better clarity of earthing related operations shutters and ports shall be painted in yellow(TPDDL)/ Green (TPC, Mumbai) background such way that the persons should get clear indication that if operating in yellow region means he is performing earthing related operation. The details shall be as per annexture-2 of this specification for 5.9.9 The Direction of operation shall be clock wise for any close operation and anti-clock wise for any open operation of disconnector/LBS and earth switch or as per type tested design with undertaking 5.9.10 There shall be one label for SF6 gas pressure indicator and a clear message must be fixed near pressure indicator that region of safe operation and Alert message stating ' If GAS pressure not OK. Do not operate any switchgear and report to OEM(name) customer care/engineer in charge' This message should be clearly visible in front with suitable background and shall be with permeant marked. 5.9.11 For gas pressure indication a dial type manometer to be provided with will show actual pressure. Gas pressure shall have SCADA compatible contacts and wired up on TB with labeling. 5.9.12 All the other accessories and boxes shall be properly labelled with permanent marking/printing such a way that the product is self-explanatory for user. 5.9.13 The mimic plate or cover should be separate for each module/feeder of the RMU in view of safety. In case of any work to be done on mechanism of any one feeder then operation staff shall have only access to particular feeder via opening feeder mimic pate or cover plate.
5.10	**Fault**	

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	Passage Indicators	5.10.1 Fault Passage Indicators shall be installed on the Ring Main Unit. These devices shall be electronic devices with dual energy source – with self powered inbuilt battery and with provision of 24V DC aux supply. It must be connected to Single 3 phase Split Core CTs (CBCT) for O/C. These shall be provided with bright LED s / flag Indicators, which shall be clearly visible in the day time. These shall have the following resetting facilities: a. Manual reset b. Resetting after a set time duration c. Electrically reset from remote with at least 2-spare potential free contacts. d. Resetting on restoration of LV 5.10.2 The unit shall have Short Circuit adjustable to different settings with separate Current transformer. They shall be fully field-programmable and shall have at least and 5 settings for Phase fault or over current. 5.10.3 The preferred range is – O/C setting range 200-1000A. 5.10.4 The default setting shall be and 300A for overcurrent. This shall be ensured before inspection call in each RMU. 5.10.5 It shall be possible to Test these indicators at site thru “Test” push button. The Fault Passage Indicators shall also be provided with a SCADA output contact. 5.10.6 The process of fixing the FPI shall be fixed on the wall of the incomer LBS cable compartment along with pictorial view. 5.10.7 FPI connecting wires should be properly dressed and covered in insulated sleeve and tied to the side walls with help of cable ties. If sticking type arrangement is provide then it must be with good quality permanent adhesive from reputed makes like 3M and should not come out with force of 10kN. 5.10.8 These shall confirm to the following standards: IEC 60068-2-6, IEC 60068-2-9 : Environmental testing – For Vibration, solar radiations IEC 60950 : Information Technology equipment – Safety IEC 1000-2 : Electromagnetic compatibility for low-frequency conducted disturbances and signaling in public low power supply systems IEC 1000-4 : EMC – Testing & Measurement IEC 1000-6 : EMC- Immunity for Residential, Commercial and light industrial environments.
5.11	**Remote Control of the RMU:**	5.11.1 For non-motorized RMU: Future provision for motorization to be kept along with the hurting plug arrangement on each feeder of each RMU For future requirement of remote operation of the RMU line switches shall be possible using

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		motors fitted to the operating mechanism for both line switch and circuit-breaker functions as and when required. All the necessary accessories shall be supplied separately to stores based on PO placed on quotation provided in this tender. The fitting of the motors to the mechanism must not in any way impede or interfere with the manual operation of the switches. An auxiliary contact to prevent motorized operation of the mechanism while the operating handle is inserted into the operating point shall also be provided. 5.11.2 For motorized RMU- The motors to be fitted in LBS sections only. The fitting of the motors to the mechanism must not in any way impede or interfere with the manual operation of the switches. An auxiliary contact to prevent motorized operation of the mechanism while the operating handle is inserted into the operating point shall also be provided. Preferred communication protocol for FRTU shall IEC-60870-5-104. All Close-Open coils / signaling contacts shall be rated for 24 V DC. Following signaling contacts are essential for remote operation of RMU: A) Aux. contact for Line Isolator (Status) B) Aux. contact for all earthing switch (Status) C) Aux. contact for Breaker (Status) D) Aux. contact for FPI indication E) Aux. contact for Protection trip (Breaker module) F) Aux. Contact for Low Gas Pressure 2 Nos. spare relay tripping NO, NC contacts to be provided. Flag Indications on RMU when tripped should be on shunt trip. A provision for physical disconnection of motor supply (like fuse) of line isolator must be provided in RMU unit itself. (A flag is required for series and shunt coil actuation). There should be harting plug arrangement for individual Isolator as well as breaker motor connections, which will be fitted on the RMU body itself. Also the PCB of motor should be covered by anti-tracking agent. There should be relay with timer instead of only relay, which is used in the latching circuit. Suitable unlatching system to be provided to prevent mal operation of motor in case of any latched command/ non executed command at RMU (case like fuse failure etc.) The separator between terminals to be provided to avoid any tracking etc. Signal requirement for field RTU (which shall be mounted near RTU) is attached (refer Annexure-1). The bidder shall quote the cost of field RTU (FRTU) separately with all technical details for acquisition of the signal as described in Annexure-1.

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5.12	**Paint**	All paint shall be applied on clean dry surfaces under suitable atmospheric conditions by seven tank process and powder coating. The overall paint thickness shall not be less than 70 microns. The paint shall not scale off or crinkle or be removed by abrasion during normal handling. The enclosure of the RMU shall be painted with shade light Grey, i.e. RAL 7032. If any damage observed after delivery same need to be touch-up painted after delivery at site.
5.13	**SLD and configuration**	The SLD and the offered configurations cannot be changed without prior notice and approval from Tata Power-DDL. Tata Power-DDL reserve the right to accept the change or reject the same. Safety being utmost concern hence same need to be taken care in offered designs.
6.0	**NAME PLATE & MARKING: -**	All the components and operating devices of the RMU shall be provided with durable and legible nameplates containing all technical parameters. Name plates shall be suitably embossed with" PO no. with date", "PROPERTY OF Tata Power-Mumbai & "CODE NUMBER" along with the following information. A Danger plate of appropriate size shall also be provided on the enclosure. a) Manufacturer's Name b) Month and year of supply c) PO Number d) Type/Model e) Rated Voltage f) Rated current g) Service voltage h) System Frequency i) Rated Short time withstand current for 1 sec j) Rated Impulse withstand Voltage k) Degree of Protection l) Type Designation or Serial no. m) Year and month of manufacture. n) Applicable Rated values o) Mass of unit p) SF6 gas filling pressure. q) Warranty period THE SR. NO. AND YEAR OF MANUFACTURING SHALL BE PAINTED IN BLACK COLOR WITH YELLOW BACKGROUND ON SIDE. FOR TATA POWER LOGO REFER GIVEN DETAILS AT PAGE NO. 33.
7.0	**TESTS FOR RMU**	All the Routine and acceptance tests shall be carried out in accordance with the relevant IS/IEC standards. All routine/acceptance tests shall be witnessed by the purchaser/his authorized representative. All the components within the RMU enclosure shall have been tested for Routine/acceptance and Type tests as per the relevant standards. All Type tests as per latest IS / IEC shall have been carried out on the RMU as a whole as per relevant IS/IEC. Following tests shall be necessarily conducted on the equipment and its

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		components as specified in IEC 62271-200: Note- In case of any conflict on any technical particular in the specification, the stricter requirement mentioned in the relevant standard shall be valid.
7.1	TYPE TESTS	1. Lightening Impulse test 2. Power Frequency Voltage Test 3. Temperature Rise Test 4. Measurement of Circuit Resistance 5. Rated Short Time and Peak Current Withstand test for main and Earth Circuit. 6. Breaking and Making Capacity Test for Breaker & Isolating Switches. 7. Operational & Interlock Performance Test 8. Internal Arc Withstand Test. 9. Degree of Protection (IP Code verification tests) 10. Mechanical Endurance Tests for Isolator and Breaker. 11. Pressure withstand test & Leakage test on SF-6 Gas chamber 12 Dimensional and Visual Checks.
7.2	ROUTINE TESTS	Following routine tests are to be done on 100% of the lot quantity 1. Power Frequency Withstand Test. 2. Dimensional & Visual Checks 3. Operational & Interlock Tests of breaker & isolator switches 4. Measurement of Circuit Resistance 5. Sf-6 chamber pressure withstands/leakage test. 6. HV withstand test across isolator distance. 7. HV withstand test of control and auxiliary circuits. 8. Voltage Indication Tests. 9. Breaker Contact Resistance Test 10. Total Trip Time Check Test through Current Injection in primary. 11. IR Value. Below routine test has to be provided on cable Boot for cable termination: a) Visual inspection of the final finished product. b) Intactness with Bushing. c) Insulation Test. d) AC HV test. For other components, as per applicability, the RTC as per relevant IS/IEC from Original Equipment manufacturer (OEM) shall be required: 1. Cable Boots 2. Routine test report of the Relay 3. CT 4. FRTU 5. Auxillary PT
7.3	ACCEPTANCE TESTS	All the tests specified under Routine Test Clause above shall be carried out as acceptance test on random samples as per sampling plan under IEC/IS for each lot. Bidder should have all the requisite testing equipment's to carry out routine and acceptance test mentioned above including: a. Facility for primary current injection up to 1000amp.

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		b. Facility to check total trip timing of breaker along with breaker main contacts through primary current injection
8.0	**TYPE TEST CERTIFICATE**	The Bidder shall furnish the type test certificates of the 11KV RMU of same design as offered in bid for the tests as mentioned above as per the corresponding standards. All the tests shall be conducted at CPRI/ERDA or reputed International Laboratory like PHELA, KEMA IPH, etc. as per the relevant standards of IS and IEC. Type tests shall have been conducted in certified Test laboratories during the period not exceeding 5 years from the date of opening the bid. In case if type test conducted beyond 5 years then bidder to certify on letter head of parent OEM that no design change & no manufacturing plant change occurred from type tested product. 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. Bids without all type test report shall stand disqualified.
9.0	**PRE-DISPATCH INSPECTION**	Equipment shall be subject to inspection by a duly authorized representative of the TATA POWER. Inspection may be made at any stage of manufacture at the option of the purchaser and the equipment if found unsatisfactory as to workmanship or material is liable to rejection. Supplier shall grant free access to the places of manufacture to TATA POWER's representatives at all times when the work is in progress. Inspection by the TATA POWER or it's 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 Challen h) Installation and maintenance Manual soft copy for FPI, Relay, RMU i) Other Documents (as applicable)
10.0	**INSPECTION AFTER RECEIPT AT STORE**	The material received at TATA POWER Store will be inspected for acceptance and shall be liable for rejection if found different from the reports of the pre-dispatch inspection and one copy of the report shall be sent to Project Engineering department. If any deviation or anomaly observed at this stage same need to be rectified by bidder at bidders own cost at earliest.
11.0	**GUARANTEE**	Bidder shall stand guarantee towards design, materials, workmanship & quality of process

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		/ manufacturing of items under this 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 at least 48 months from the date of commissioning or 60 months from the date of last supplies made under the contract whichever is earlier, Bidder shall be liable to undertake to replace/rectify such defects at its own costs, within mutually agreed time frame, and to the entire satisfaction of the Purchaser, failing which the Purchaser will be at liberty to get it replaced/rectified at Bidder's risks and costs and recover all such expenses plus the Purchaser's own charges (@ 20% of expenses incurred), from the Bidder or from the " Security cum Performance Deposit" as the case may be. In case of GP failure, BA shall report at site within 48 hours from intimation and arrange for rectification of fault within a mutually agreed time. In case rectification at site is not possible then alternative arrangement (replacement) to be made by BA within 15 days of intimation of failure. 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.	**PACKING**	Bidder shall ensure that all equipment covered by this specification shall be prepared for rail/road transport (local equipment) and be packed in such a manner as to protect it from damage in transit. The packing should be in such manner that during storage the RMU and its components should not be damaged. No single use plastic to be used in packing material. Packing should be done with environment friendly recyclable materials.
13.0	**TENDER SAMPLE**	Not applicable. Bidders to mention offered model number or type in GTP along with GA drawing during tender for each variant.
14.0	**QUALITY CONTROL**	The bidder shall submit with the offer, 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 after finishing, bought out items and fully assembled component and equipment including drives. As part of the plan, a schedule for stage and final inspection within the parameters of the delivery schedule shall be furnished. The Purchaser's or its nominated representative engineer shall have free access to the manufacturer/sub-supplier's works to carry out inspections. To ensure proper operation of RMU the bidder shall provide onsite training of TATA POWER teams as and when required. To ensure quality of installations bidder shall provide supervision support during impartation.
15.0	**TESTING FACILITIES**	Bidder shall have adequate in house testing facilities for carrying out all routine tests & acceptance tests as per relevant International / Indian standards
16.0	**MANUFACTURING ACTIVITIES**	The successful bidder will have to submit the bar chart for various manufacturing activities clearly elaborating each stage with quantity. This bar chart shall be in line with the Quality Assurance Plan submitted with the offer. This bar chart will have to be submitted within 15 days from the release of the order.
17.0	**SPARES, ACCESSORIES**	Bidder shall provide a list of recommended spares with quantity and unit prices for 5 years of operation after commissioning.

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& SPECIAL TOOLS / GAUGES

TATA POWER may order all or any of the spare parts listed at the time of contract award and the spare parts so ordered shall be supplied as part of the definite works. The may order additional spares at any time during the contract period at the rates stated in the Contract Document.

Bidder shall give an assurance that spare parts and consumable items will continue to be available through the life of the equipment which shall be 25 years minimum. However, the TATA POWER shall be intimated with a minimum of 12 months notice in the event that the Bidder or any sub-vendor plans to discontinue manufacturing of any component used in this equipment.

Any spare apparatus, parts or tools shall be subject to the same specification, tests and conditions as similar material supplied under the Contract. They shall be strictly interchangeable and suitable for use in place of the corresponding parts supplied with the plant and must be suitably marked and numbered for identification.

Bidder has to provide quotation unit rate for below mentioned spare of RMU

SL. No.	Name of Spare Parts	Required spares with above 100 No. of RMU	Required spares with above 30 No. up to 100 No. of RMU	Required spares up to 30 No. of RMU
1	Breaker Mechanism	4 No's	3 No's	2 No's
2	Isolator Mechanism	4 No's	3 No's	2 No's
3	Trip Coil	5 No's	3 No's	2 No's
4	Relay	5 No's	3 No's	2 No's
5	CT (All types)	3 Sets (1 Set = 3 Nos.)	2 Set	1 Set
6	Bolt (For cable connection)	5 Sets (1 Set = 3 Nos.)	3 Set	2 Set
7	"L" Key (All Size)	2 Sets	1 Set	1 Set
8	Operating Handle	1 No.	1 No.	1 No.
9	Cable Bushing (If replaceable)	15 (5 Set)	9 (3 Set)	NA
10	VPIs	10 No's	5	NA
11	FPI	10 No's	5	NA
12	Push Button (ON & OFF Both)	10 (5 On & 5 Off)	6	NA
13	Manometer	5 No's	3	NA
14	Washer (S.S.)	20 No's	15	NA
15	Anti vandal Screw (All Size)	20 No's	15	NA
16	Cable Boot	5 sets	3 Sets	NA
17	Reducer M16 to M12	12	3	NA
18	M12 to M16 conducting Bolt (If M12 bushing	12	3	NA

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		supplied in past)			
		19	The nonmagnetic base plate arrangement for 3x 1Cx 630 mm cable	10	5	NA
		20	HDPE cable cleat arrangement for 3x 1Cx 630 mm cable in incomer LBS included	10	5	NA
		21	The extensibility connection kit – indoor RMU	10	10	NA
		22	The extensibility connection kit – Out door RMU	10	10	NA

18.0 DRAWINGS & DOCUMENTS

Following drawings and documents shall be prepared based on TATA POWER specifications and statutory requirements and shall be submitted with the bid:

a) Completely filled in Technical Particulars
b) Any deviation sheet or No deviation
c) General description of the equipment and all components including brochures.
d) General arrangement for RMU
e) SLD of each feeder
f) Arc path drawing of all variants offered
g) Foundation plan
h) Experience List
i) All set of Type test certificates for offered design each variant

Drawings / documents to be submitted for approval after the award of the contract are as under:

Sl. No.	Description	For Approval	For Review/ Information	Final Submission
1	General Technical Particulars (GTP)	√		√
2	General Arrangement drawings	√		√
3	Schematic Diagram of MIMIC with ON/OFF and all front labelling	√		√
4	Bill of materials	√		√
5	Arc path drawing for each variant	√	√	√
6	SLD of complete RMU and feeders	√	√	√
7	Control wiring diagram and arrangement in control cubicle	√	√	√

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		8	Cable compartment internal dimension drawing and one drawing stating standard boots arrangement and cable earthing arrangement with cable	√	√	√
		9	CT mounting arrangement drawing with details of fixing and frame movement etc.	√		√
		10	Foundation Plan/Drawing	√	√	√
		11	Installation & Maintenance Instructions and manual			√
		12	QA & QC Plan	√		√
		13	Test Certificates	√	√	√

All the documents & drawings shall be in English language.

After the receipt of the order, the successful bidder will be required to furnish all detailed drawings of components for TATA POWER approval.

Instruction Manuals: Bidder shall furnish softcopies and one hard copy manuals of RMU, FPI, Relay (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 **GENERAL TECHNICAL PARTICULARS FOR RMU**

S.N.	Description	As specified by TATA Power-DDL (Options defined in specs)	As furnished by Bidder
1.0	RMU Category	3Way - 1CB or 2 CB or LBS 4Way - 2 CB or 3 CB or LBS 5 Way - 3CB	
2.0	RMU application	Indoor or Outdoor as mentioned in tender	
3.0	Offered Model nos. and OEM type	a. 3Way (E/NE, I/D or O/D) b. 4Way (E/NE, I/D or O/D) c. 5 Way (E/NE, I/D or O/D)	
4.0	Dielectric medium	SF6	
5.0	Interrupting medium	Vacuum- for CB SF6 for LBS and earth switch	
6.0	System Frequency	50 Hz	
7.0	Rated Voltage	12 KV	
8.0	Service Voltage	11 KV	
9.0	Rated current -Line Switches	630 A	
10.0	Rated Current-CB and LBS	630 A for all type	

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		11.0	Rated Short time current withstand (3 sec)	21 KA	
		12.0	Rated Short time Making capacity	50 KA	
		13.0	Rated cable charging interrupting current of incomer load break switch	10 A	
		14.0	Rated load interrupting line current	630 A	
		15.0	Rated cable charging breaking current of breaker	25 A	
		16.0	No. of operations at rated short circuit current on line switches, earthing switches should be E2	LBS- 5 close ES- 5 close The ES in line with CB	
		17.0	Opening time of breaker (max.) Without relay time	2.5 cycle	
		18.0	Closing time of breaker (max.)	3 cycle	
		19.0	Breaker Duty Cycle	O – 3min - CO - 3min - CO	
		20.0	i. Mechanical endurance for Isolator & Earth Switch	Min 1000 Operations	
			ii. Mechanical endurance for Circuit Breaker	Min 2000 Operations	
		21.0	Electrical operations of at rated current a. LBS/Disconnector b. Earth Switch	To be provided by bidder	
		22.0	Temp rise above ambient of 50 deg.	50 Deg C. (Type Tested as per IEC and complying to requirements)	
		23.0	Min Gas pressure in bar	To be provided by bidder based on type tested design	
		24.0	SF6 Gas pressure manometer with indicating bars/scale to measure the actual gas pressure (indirect method RFS etc. not accepted)	1. Dial type Manometer to be provided for gas pressure indication 2. Contacts to be provided and wires up on the TB for SCADA communication of gas status.	
		25.0	Enclosure	The RMU metal parts shall be greater than 2mm thickness high tensile steel/CRCA. The overall paint thickness shall be not less than 70 microns.	
		26.0	Guaranteed SF6 leakage per annum	Less than 0.1% from main tank	
		27.0	Degree of protection	a. IP 67 for the tank and b. IP2X for the front cover / mimic board and c. IP 54 (Main door closed) for Outdoor RMUs. d. IP 54 for cable compartment	

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		28.0	Internal Arc rating	IAC AFL or better	
		29.0	Internal Arc test	20kA for 1 Sec.	
		30.0	Lightning Impulse withstand Voltage	75 kVp	
		31.0	Power Frequency withstand voltage	28 kVrms.	
		32.0	SF6 Tank design	Hermetically/robotically sealed unpainted stainless steel enclosure with SF6 Gas. Sealed pressure system by Laser welding so that no refilling of gas is required for 30 years. No gas work at site. Complete body shall be tamperproof to prevent access to live parts. No gaskets shall be used. No bolts shall be provided.	
		32.1	Tank material and grade of SS and welding	Should be of SS and non-corrosive, offered grade of SS to be mentioned. The welding shall be such that there shall be corrosion of welding for useful life of equipment.	
		33.0	Earth bus bars	In enclosure to prevent tampering.	
		34.0	Material & size of earth bus bar	To be provided by the bidder	
		35.0	Earthing of main CCT Cables shall be earthed with earth switch with S/C making capacity as per IEC 129. Moving contacts of earthing switch shall be visible in closed position thru transparent covers AND closing shall be possible only when Isolator is open	To be provided by bidder	
		36.0	Incomer Load Break switch: Shall be SF6 insulated with least maintenance. Shall have at least 3 positions, Open, Close & earth with natural interlocks. Fitting of motor at site shall be possible & shall have mechanical interlock. The electrical interlock of cable charge with earth switch is preferred.	To be provided by bidder	
		37.0	Circuit Breakers: a. With VCB interrupter and SF6 insulated bus with minimum maintenance and shall have at least 2 positions I.e. Open &	To be provided by bidder as per specs.	

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			Close, Manual operation & fitting of motor at site shall be possible if required. b. In view of safety each VCB shall be assisted with feeder side disconnector having 3 positions, open-disconnected, closed, and earth (having fault making capacity) and shall be constructed in such a way that natural interlocking prevents unauthorized operations.		
		38.0	Protection Relay-Without auxiliary power & shall include , electronic relay, low energy release & fast on test receptacle for protection testing	a. For TataPower-DDL, Delhi - Complying to Specification no.—ENG-HV-95 for Self power relay for RMU feeder protection b. For Tata Power, Mumbai As per clues no. 5.27	
		39.0	Make of self-powered Relay & offered model	a. For TataPower-DDL, Delhi – ABB ,Ashida, Schneider, Siemens b. For Tata Power, Mumbai- As per clues no. 5.27- ABB ,Ashida, Schneider, Siemens, C&S, Alsthom	
		40.0	Flag indication for CB Trip on fault in relay/ mechanical	To be provided by bidder	
		41.0	Testing of Cable- If doors are opened then earth switch shall be in closed position with necessary interlocks and cable test rod fixing provision in bolt head which can be fixed on terminations through boot cap/opening for testing purpose AND if doors are opened it shall not be possible to operate, Isolator, E/Switch or CB through interlocks	To be confirmed. If separate test bushing are provided, it shall be covered with suitable antitheft covers with anti vandal screws	
		42.0	Protection against theft	Design of RMU shall be tamper & arc proof. Anti vandal screws shall be provided. Cable covers shall be pad lockable. All live parts and internal parts etc. shall be covered	

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				with antitheft covers.	
		43.0	Doors	Hinged Main doors shall be provided for outdoor type RMU. The hinges for the doors need to be riveted and shall not have any access from outside. Bolted shall not be acceptable.	
		44.0	Voltage indicator box shall be fixed type-This device shall be in compliance with IEC 62271-206:2011 standard only	Capacitive dividers type which will supply low voltage to power the lamps AND 3 inlets can be used to check phase sequence or presence of voltage in cable	
		45.0	Cable cleats (full circle)	HDPE/Nylon (Fire Retardant)	
		46.0	Cable termination and bushing suitability	Heat/ Cold shrink terminations	
		46.0	Cable compartment suitability shall be	Suitable for cable sizes 1. For Tata Power-DDL, Delhi a. 11kV 3CX400 sq.mm having dia of 92mm in all compartment and b. For three way with two CB the LBS shall be suitable for 11kV 1CX630 sq.mm cable having diameter of 51mm in incomer LBS- the necessary cleat and nonmagnetic base plate cable entry arrangement and 15mm longer bolt than other compartment shall be provided. 2. For Tata Power Mumbai In the isolators compartment 11kV, 3C X 300 sq. mm and in breaker compartment 11kV, 1CX185 sq. mm / 3C X 300 Sq. mm	
		47.0	The cable compartment	All cable compartment shall be bottom entry and front opening type only	
		48.0	Size of bimetallic washer in all compartments	Must be suitable for M16 for TATA power-DDL, Delhi)/ M12 for TPC, Mumbai) bolt and bushing sizes with min. 2mm thick.	
		49.0	Height of bushing terminal from base plate	Minimum 800mm for proper termination space.	
		50.0	Fault passage indicator	One per RMU in Incomer left LBS as a part of each RMU with specified	

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				default setting. The five way RMU shall have FPI in both LBS.	
		51.0	Operating handle	To be provided by bidder as a part of RMU with each RMU and to be placed on front or on door	
		52.0	Non removable MIMIC Diagram on Front of panel	To be provided by bidder with detailed descriptions as mentioned in specs. And earth switch marking background shall be yellow for TPDDL-Delhi /Green for TPC, Mumbai background. As per annexture-2	
		53.0	Main Bus bar Material	Copper	
		53.1	Bus bar Cross Section	To be specified by bidder as per current density	
		54.0	Opening & Closing times with relay	125 ms maximum	
		55.0	Current Transformer for CB compartment	Shall be epoxy resin casted and mounted on cables. The CTs around the cables shall be supported on the sheet steel bracket and should be fixed with bolts. The mounting frame should be moveable up and down or to and fro but shall be fixed at co-axial position with base plat holes and bushing terminal bolts. a. For Tata Power-DDL, Delhi The CT settings shall be adjustable between 60 - 400/1 Amp at terminal block. CT ratio is 60-400/1A, Burden is 2.5 VA, Class - 5P10. b. For Tata Power, Mumbai 200/1 (further finalization in detailed engineering), 5P20	
		56.0	Future motorization and SCADA Compatibility	To be provided	
		57.0	Guarantee	As per specification	
		58.0	Dimension (LxWxH) (mm x mm x mm)	To be provided by bidder	
		59.0	Total weight	To be provided by bidder	
		60.0	Paint	Light Gray shade RAL 7032	
		61.0	Type test of product	To be provided by bidder as per specification	
		62.0	Availability of spares	Assurance by bidder for 25 years, list of spares as mentioned in specification to be provide along with RMU lot.	

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		63.0	VPIS auxiliary contact	The VPIS shall have auxiliary contact such that it can be configured with SCADA for remote status indication of cable charged. The auxiliary contact to be wired up in TB.	
		63.1	VPIS	In all compartments	
		64.0	Breaker operation counter	To be provided by bidder	
		65.0	LBS operation counter	To be provided by bidder	
		66.0	Moisture absorption material in SF6 tank	Bidder should provide the detail of the moisture absorption material.	
		67.0	Direction of operation (As offered) (Close - clock wise Open- counter clock wise)	a. LBS – ON/off b. ES- Open/ close c. CB disconnector- ON/off d. CB earth switch-Open/ close	
		68.0	Making of earthing operations	a. For Tata Power-DDL, Delhi All earth operation to be marked with yellow back ground and permanent in nature. b. For Tata Power, Mumbai All earth operation to be marked with green back ground and permanent in nature.	
		69.0	Auxiliary contacts (total numbers and spare numbers)	LBS Earth Switch CB CB Disconnector - CB earth switch-	
		70.0	Control cable entry provision	To be provided	
		71.0	Shunt trip coil 24V DC/ 230V AC	a. For Tata Power-DDL, Delhi 24V DC shunt trip coil to be provided and specify DC voltage rating and charger rating b. For Tata Power, Mumbai 230V AC shunt trip coil to be provided. Trip coils to be wired up on TB.	
		72.0	MCB for LT AC incomer and TB connection of all CT, Aux switches and relay wiring	To be provided	
		74.0	RMU Cable Boot/ terminal protector		
		a	Terminal protector	Insulating Boots	
		b	System voltage	12 kV	
		c	AC High voltage	28kV For 1 min	
		d	Impulse withstand voltage	75kV	

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		e	Bushing Diameter	To be provided by bidder	
		f	Bushing Types	To be mentioned by bidder	
		g	Cable cross section suitability	Bidder to provide complying to specs.	
		h	Dimensions of cable protector	Suitable for cables & bushing in specs. (offered size to be provided by bidder)	
		i	Material of the component	To be specified by bidder	
		75	Type test reports	Bidders to provide detailed list of tests conducted at lab name, conducted dates, report number along with full reports.	
		For motorized RMU			
		1	SCADA Compatibility-Remote operation of RMU shall be possible by using motors fitted to operating mechanism of isolators & CB etc.	To be provided	
		2	Harting Plug arrangement for individual isolator as well as breaker motor connections, which will be fitted on RMU body itself.	To be provided	
		3	Details of I/O	As per Annexure-IO list of this specs	
		4	System to prevent mal operation in case of latch command	Bidder to provide inbuilt system to prevent any mal operation in case of latch command at RMU in case of any fuse failure or DC fail situation	
		5	**Technical Details of motors**		
		a	Operating Voltage	24 V DC	
		b	Max. power rating	240 Watts	
		c	Max current drawn	9 Amp (±10%)	
		d	Operating time	4-8 seconds	
		e	Power Supply	There shall be provision of 230 V AC (maximum 5 Amp current) & 24 V DC	
20	**SCHEDULE OF DEVIATIONS**	**(TO BE ENCLOSED WITH TECHNICAL BID)**			

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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:

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

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

Seal of the Company:

Designation

Signature

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ANNEXURE – 1
I/O LIST -SIGNAL LIST FOR AUTOMATION

Description	Analog Inputs(AI)					Status(DI)		
Type	Amp. Loading-R ph	Amp. Loading-Y ph	Amp. Loading-B ph	Phase Voltage	Power factor	Switch close	Switch Open	Reset Element
RMU Switch *	0	0	0	0	0	1	1	
Breakers *	1	1	1	1	0	0	0	
FPI							1	1
Pressure Gauge (manometer)							1	
VPIS						1	1	

FRTU SIGNAL LIST

Description	Analog Inputs (AI)				
Type	Amp. Loading-R ph	Amp. Loading-Yph	Amp. Loading-B ph	Phase Voltage	Power factor
Switch *	0	0	0	0	0
Breakers *	1	1	1	1	1
Fault passage indicator *	0	0	0	0	0

Note: 0 indicate functionality not req. for that element, 1 indicate functionality required for that element

* Denotes the nos of switches/ Breaker s in RMU based on the type of RMU (3way, 4way, 5way).

Additional IOs

RMU switch Control Command
Earth Sw. 1 Status Input
Earth Sw. 2 Status Input
FPI Reset
FRTU Local/Remote Position
FRTU Door Open
FRTU Battery Charger Faulty
FRTU Battery Faulty
FRTU Switchgear Supply Off
FRTU Aux Supply Off
FRTU Fault
Relay operation
CB OFF status
CB ON status
CB ON/OFF Command

Initiators Vikas Koul	Checked by Ajay Potdar	Approved by - Head (Engineering) Ramesh Kharat	

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Tata power Branding Name plate -

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

Relationship between the two marks- size

The Tata and Tata Power Marks are always used in conjunction with each other, never appearing in isolation on Tata Power communication.

The height of the letter T of Tata (T-height) is the basic measure for all sizes and proportions.

The rounded measure 2T in height, is separated from the Tata lettering by a distance of 1/2T.

The T height of both, the Tata and the Tata Power Marks is to be the same, except in exceptional cases on approval from the Corporate Communications team.

Relationship between the two marks- positioning

The two marks can appear stacked, which is the preferred placement, or linear, by the side of one another.

Centre aligned - Stacked (Preferred)

.

Initiators Vikas Koul	Checked by Ajay Potdar	Approved by - Head (Engineering) Ramesh Kharat	

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Annexture-2

The reference sample MIMIC used for earthing color identifications.

a. Tata Power-DDL, Delhi

b. Tata Power, Mumbai

Initiators Vikas Koul	Checked by Ajay Potdar	Approved by - Head (Engineering) Ramesh Kharat	

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1 year OLA Procurement of 11 kV, 3W & 4W RMU

Reference: CC24VJS003

S.no.	Service code	Item description	Qty	Unit	M/s Vendor name	
					Unit rate	Total
	Supply of RMU on DAP (FOR) basis					
1	2000166762	RMU,3WAY 2 CBL,WTH BKR O/G,11KV,630A MOT	20	nos.		-
2	2000166761	RMU,4WAY 2 CBL,W/BKR O/G,11KV,630A MOTOR	15	nos.		-
3	2000089022	RMU, 3WAY, WITH ISOLATORS, 11KV, 630A	4	nos.		-
4	2000089030	RMU, 4WAY, WITH ISOLATORS, 11KV, 630A	4	nos.		-
		Sub-total				-
		GST in %				-
		Grand total				-

Vendor to fill-up only yellow coloured cell

Vendor's authorized stamp & signatory:

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!

HEALTH AND SAFETY POLICY

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

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

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

(Praveer Sinha)
CEO & Managing Director

Date: 15th June, 2018

TATA POWER

Lighting up Lives!

CORPORATE ENVIRONMENT POLICY

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

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

Date: 15th June, 2018

(Praveer Sinha)
CEO & Managing Director

TATA POWER
Lighting up Lives!

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
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- 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!

TATA CODE OF CONDUCT
2015

LEADERSHIP THAT INSPIRES

For over 100 years, the Tata group has been led by visionaries who have stayed true to the vision of the founder, Jamsetji Tata.
A vision that placed the greater good of society at par with business growth.
A vision that put into practice pioneering social initiatives that changed the way responsible business was run.
And a vision that brought into the group a strong social conscience.

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

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

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FOREWORD

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

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

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

N. Chandrasekaran
21st February, 2017

A. OUR VALUES

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

INTEGRITY

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

UNITY

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

RESPONSIBILITY

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

PIONEERING

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

EXCELLENCE

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

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

B. SCOPE AND PURPOSE OF THIS CODE

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

REMEMBER...

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

OUR CORE PRINCIPLES

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

J.R.D. Tata

Chairman, Tata Sons (1938 – 1991)

C. OUR CORE PRINCIPLES

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

REMEMBER...

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

OUR EMPLOYEES

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

J.R.D. Tata
Chairman, Tata Sons (1938 – 1991)

D. OUR EMPLOYEES

Equal opportunity employer

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

Q&A

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

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

REMEMBER...

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

Dignity and respect

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

Human rights

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

Bribery and corruption

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

REMEMBER...

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

Gifts and hospitality

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

Freedom of association

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

REMEMBER...

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

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

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

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

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

Working outside employment with us

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

Integrity of information and assets

14. Our employees shall not make any wilful omissions or material misrepresentation that would compromise the integrity of our records, internal or external communications and reports, including the financial statements.

15. Our employees and directors shall seek proper authorisation prior to disclosing company or business-related information, and such disclosures shall be made in accordance with our company's media and communication policy. This includes disclosures through any forum or media, including through social media.

16. Our employees shall ensure the integrity of personal data or information provided by them to our company. We shall safeguard the privacy of all such data or information given to us in accordance with applicable company policies or law.

17. Our employees shall respect and protect all confidential information and intellectual property of our company.

18. Our employees shall safeguard the confidentiality of all third party intellectual property and data. Our employees shall not misuse such intellectual property and data that comes into their possession and shall not share it with anyone, except in accordance with applicable company policies or law.

19. Our employees shall promptly report the loss, theft or destruction of any confidential information or intellectual property and data of our company or that of any third party.

Q&A

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

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

20. Our employees shall use all company assets, tangible and intangible, including computer and communication equipment, for the purpose for which they are provided and in order to conduct our business. Such assets shall not be misused. We shall establish processes to minimise the risk of fraud, and misappropriation or misuse of our assets.

21. We shall comply with all applicable anti-money laundering, anti-fraud and anti-corruption laws and we shall establish processes to check for and prevent any breaches of such laws.

Insider trading

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

Q&A

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

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

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

External communication is a serious matter. It must be carefully managed because information put out with reference to our company or its businesses needs to be clear, truthful and not violate any undertakings we have given to other parties. In each business there are managers nominated to authorise and make different types of statements to the outside world. These managers should be consulted about any request for information you may receive or information you think we should give out.
In using social media, in particular blogs or social networking sites, you should exercise great caution while talking about our company or the business we do. It may feel like you are chatting with friends or expressing a personal opinion but even while doing so you cannot share any confidential information of our company.

REMEMBER...

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

Prohibited drugs and substances

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

Conflicts of interest

24. Our employees and executive directors shall always act in the interest of our company and ensure that any business or personal association *including close personal relationships* which they may have, does not create a conflict of interest with their roles and duties in our company or the operations of our company. Further, our employees and executive directors shall not engage in any business, relationship or activity, which might conflict with the interest of our company or our group companies.

25. Should any actual or potential conflicts of interest arise, the concerned person must immediately report such conflicts and seek approvals as required by applicable law and company policy. The competent authority shall revert to the employee within a reasonable time as defined in our company's policy, so as to enable the concerned employee to take necessary action as advised to resolve or avoid the conflict in an expeditious manner.

26. In the case of all employees other than executive directors, the Chief Executive Officer / Managing Director shall be the competent authority, who in turn shall report such cases to the Board of Directors on a quarterly basis. In case of the Chief Executive Officer / Managing Director and executive directors, the Board of Directors of our company shall be the competent authority.

Q&A

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

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

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

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

27. Notwithstanding such or any other instance of conflict of interest that exists due to historical reasons, adequate and full disclosure by interested employees shall be made to our company's management. At the time of appointment in our company, our employees and executive directors shall make full disclosure to the competent authority, of any interest leading to an actual or potential conflict that such persons or their immediate family (including parents, siblings, spouse, partner, children) or persons with whom they enjoy close personal relationships, may have in a family business or a company or firm that is a competitor, supplier, customer or distributor of, or has other business dealings with, our company.

REMEMBER...

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

Examples of Potential Conflicts of Interest

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

(a) engages in a business, activity or relationship with anyone who is party to a transaction with our company;

(b) is in a position to derive an improper benefit, personally or for any family member or for any person in a close personal relationship, by making or influencing decisions relating to any transaction;

(c) conducts business on behalf of our company or is in a position to influence a decision with regard to our company's business with a supplier or customer where a relative of, or a person in close personal relationship with, an employee or executive director is a principal officer or representative, resulting in a personal benefit or a benefit to the relative;

(d) is in a position to influence decisions with regard to award of benefits such as increase in salary or other remuneration, posting, promotion or recruitment of a relative or a person in close personal relationship employed in our company or any of our group companies;

(e) undertakes an activity by which the interest of our company or our group companies can be compromised or defeated; or

(f) does anything by which an independent judgement of our company's or our group companies' best interest cannot be exercised.

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

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

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

(a) Directorships on the Boards of any of our group companies, joint ventures or associate companies.

(b) Memberships/positions of responsibility in educational/professional bodies, where such association will promote the interests of our company.

(c) Memberships or participation in government committees/bodies or organisations.

Q&A

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

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

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

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

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

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

OUR CUSTOMERS

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

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

E. OUR CUSTOMERS

Products and services

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

Export controls and trade sanctions

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

Fair competition

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

Dealings with customers

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

Q&A

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

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

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

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

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

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

REMEMBER...

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

OUR COMMUNITIES AND THE ENVIRONMENT

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

Jamsetji Tata

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

F. OUR COMMUNITIES AND THE ENVIRONMENT

Communities

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

The environment

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

OUR VALUE-CHAIN PARTNERS

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

J.R.D. Tata

Chairman, Tata Sons (1938 – 1991)

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

G. OUR VALUE-CHAIN PARTNERS

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

Q&A

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

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

REMEMBER...

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

OUR FINANCIAL STAKEHOLDERS

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

Ratan Tata
Chairman, Tata Sons (1991 – 2012)

H. OUR FINANCIAL STAKEHOLDERS

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

GOVERNMENTS

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

Ratan Tata
Chairman, Tata Sons (1991 – 2012)

I. GOVERNMENTS

Political non-alignment

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

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

Government engagement

2. We engage with the government and regulators in a constructive manner in order to promote good governance. We conduct our interactions with them in a manner consistent with our Code.

3. We do not impede, obstruct or improperly influence the conclusions of, or affect the integrity or availability of data or documents for any government review or investigation.

OUR GROUP COMPANIES

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

J.R.D. Tata
Chairman, Tata Sons (1938 – 1991)

J. OUR GROUP COMPANIES

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

Q&A

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

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

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

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

RAISING CONCERNS

We encourage our employees, customers, suppliers and other stakeholders to raise concerns or make disclosures when they become aware of any actual or potential violation of our Code, policies or law. We also encourage reporting of any event (actual or potential) of misconduct that is not reflective of our values and principles.

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

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

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

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

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

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

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

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

ACCOUNTABILITY

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

Every person employed by us, directly or indirectly, should expect to be held accountable for his/her behaviour. Should such behaviour violate this Code, they may be subject to action according to their employment terms and relevant company policies.

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

SPEAK UP...

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

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

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

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

NOTE

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

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

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

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

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

TATA CODE OF CONDUCT – 2015

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

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

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

Signature: _____

Date: _____

Name: _____

Department: _____

Address: _____

_____

_____

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

NOTES

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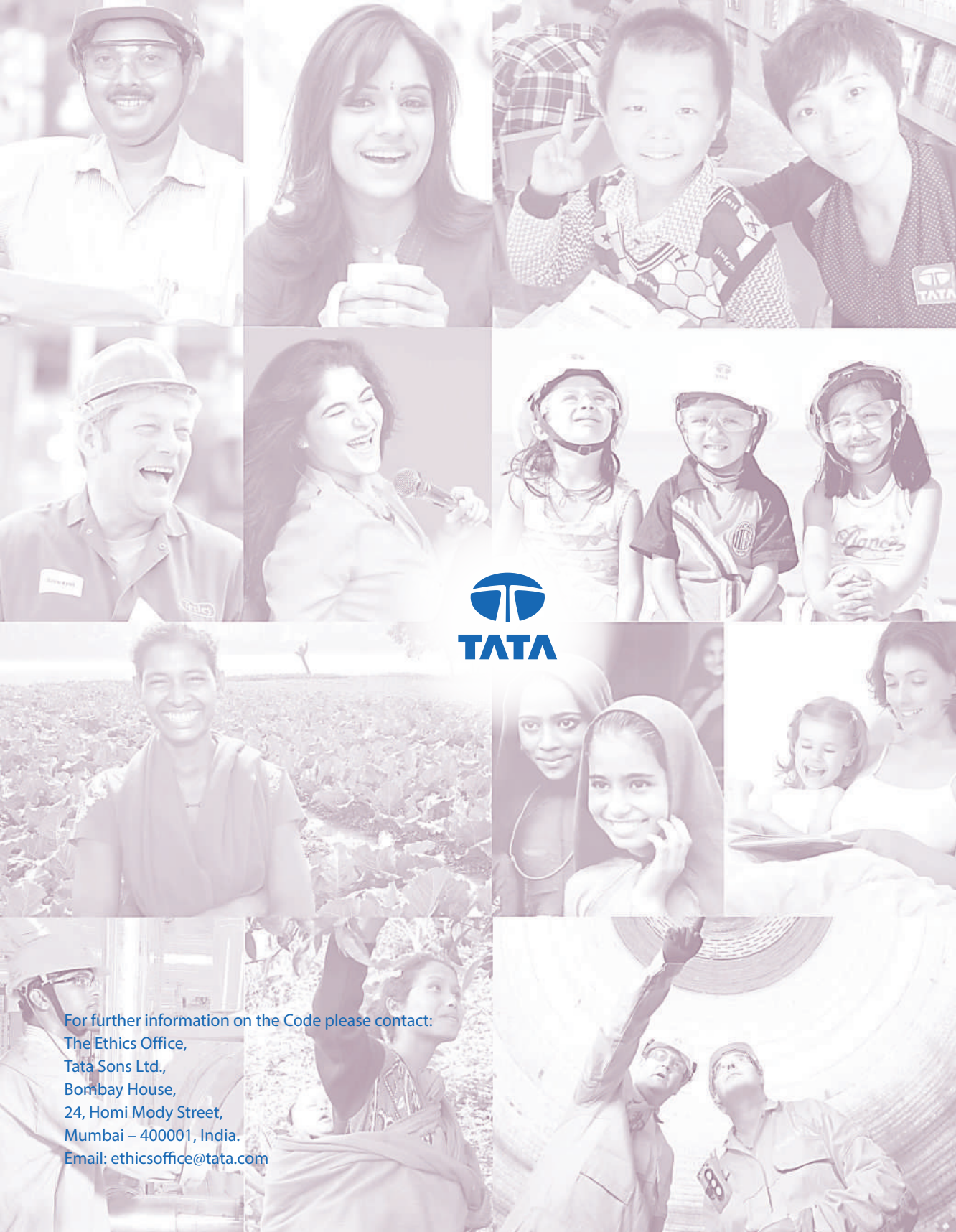

TATA

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