

The Tata Power Company Ltd		OPEN TENDER NOTIFICATION
Tender Reference: CC26NK009		Document Date: 30 th May 2025

OPEN TENDER NOTIFICATION

FOR

**Refurbishment of 48V Lithium-Ion Battery and Battery chargers – 5
Nos in Mumbai Transmission.**

Tender Enquiry No: CC26NK009

**(Please note this reference number must be quoted in all
submission pertaining to this tender)**

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

**Smart Center of Procurement Excellence,
3rd Floor, Sahar Receiving Station, Near Hotel Leela,
Sahar Airport Road, Andheri (E), Mumbai 400 059**

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Procedure for Participating in Tender

Tender Enquiry No.	Work Description	EMD (Rs.)	Tender Participation Fee	Last date and time for Payment of Tender Participation Fee*	Last date and time for bid submission
CC26NK009	Refurbishment of 48V Lithium-Ion Battery and Battery chargers – 5 Nos in Mumbai Transmission.	35,000/-	Rs. 2,000/-	05th June 2025	20th June 2025

* Interested bidders are strongly advised not to wait by above time and purchase the tender immediately to get the link for bid submission. This will enable them to communicate/raise queries against the subject tender in time.

Procedure for Participating in Tender. Following steps to be done before last date for purchase of tender,

- Interested Vendors to refer to the Section C of the tender (Prequalification criteria).
- Eligible and Interested Bidders to submit duly signed and stamped letter on Bidder's letterhead indicating
 - Tender Enquiry number
 - Name of authorized person
 - Contact number
 - e-mail id
 - Details of submission of Tender Participation Fee
- Non-Refundable Tender Participation Fee, as indicated in table above, to be submitted in the form of Direct deposit in the following bank account and submit the receipt along with a covering letter clearly indicating the Tender Reference number –

Beneficiary Name – The Tata Power Co. Ltd.

Bank Name – HDFC Bank Ltd.

Branch Name – Fort Branch, Mumbai

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

Branch Code – 60

Bank & Branch Code – 400240015

Account No – 00600110000763

Account type – CC

IFSC Code – HDFC0000060

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E-mail with necessary attachment of 1 and 2 above to be send to n.kuppusami@tatapower.com with copy to vaishali.Kachare@tatapower.com before “Last date and time for Payment of Tender Participation Fee”

Interested bidders to submit Tender Participation Fee and Authorization Letter before Last date and time as indicated above after which link from Tata Power E-Tender system (Ariba) will be shared for further communication and bid submission.

Please note all future correspondence regarding the tender, bid submission, bid submission date extension, Pre-bid query etc. will happen only through Tata Power E-Tender system (Ariba). User manual to guide the bidders to submit the bid through e-Tender system (Ariba) is also enclosed in the Section I of the Tender Document.

No e-mail or verbal correspondence will be responded. All communication will be done strictly with the bidder who have done the above steps (Payment of tender fee and submission of letter with requisite details) to participate in the Tender.

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

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

Also, all future corrigenda to the said tender, if any, will be informed on Tender section on website <https://www.tatapower.com>

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*** To be submitted in editable excel format**

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Section A: Tender Notice including Instruction to Bidders

1. Tender Details

1.1 Key Tender Specific Details

Reference Number	CC26NK009
Description	Refurbishment of 48V Lithium-Ion Battery and Battery chargers – 5 Nos in Mumbai Transmission.
Type of Tender	Firm Order
Period	Till the completion of work.
Tender Fee	Rs 2,000/-
Earnest Money Deposit (EMD)	Rs 35,000/- Rs Thirty-Five Thousand Only
Price Basis	Firm Price
Executive Handling this Tender*	Name: Mr. Nithishkumar Kuppusami Contact No.: 9344046713 E-Mail ID: n.kuppusami@tatapower.com

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

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1.2 Calendar of Events

(a)	Access to Tender Documents through Tata Power website	30 th May 2025
(b)	Date & Time of Pre-Bid Meeting (if applicable).	Shall be intimated in advance.
(c)	Last date and time for Payment of Tender Participation Fee to get e-tender link for bid submission*	By 05 th June 2025
(d)	Last Date of receipt of pre-bid queries, if any.	10 th June 2025
(e)	Last Date of Posting Consolidated replies to all the pre-bid queries as received	By 13 th June 2025
(f)	Last date and time of receipt of Bids	By 20 th June 2025

Note: - * Interested bidders are strongly advised not to wait by above time and purchase the tender immediately to get the link for bid submission. This will enable them to communicate/raise queries against the subject tender in time.

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

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

1.3 Mandatory documents required along with the Bid

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

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

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

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Checklist of Document Submission

Stage of Tendering	Document	Type of Format	Mode of submission
Before last date of Pre-Bid Query	Query / Clarification / Deviation (QCD) Format. (F1) Separate Excel sheet to be used for Technical and Commercial Pre-Bid Query	Editable Excel Format	Through message in E-tender system
Bid Submission Envelope 1 (First Part)	Earnest Money Deposit	Original Bank Guarantee	In Sealed Envelope
Bid Submission Envelope 2 (Second Part)	Documents to be uploaded in Ariba only. In case of multiple files, a zipped folder can be attached for the same (size limit of 100 MB per zipped file)		
To be submitted Under Tab 2 in Ariba	Duly filled PQR and supporting documents		
	Duly filled PQR format	Editable Excel Format	E-Tender System
	Backup documents for Technical PQR	Signed and Scanned documents	E-Tender System
To be submitted in Ariba	Duly Filled Vendor Registration Form (for unregistered vendor) and supporting documents. Registered vendor to submit letter indicating Vendor Code in Tata Power and factory/supply address to be used.		
	Duly filled Vendor Registration Form (if vendor is not registered with Tata Power)	Signed and Scanned documents	E-Tender System
	Backup document for Vendor Registration Form (if vendor is not registered with Tata Power)	Signed and Scanned documents	E-Tender System

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To be submitted in Ariba	Technical Submission and Supporting Documents		
	Duly filled Technical Submission Format	Editable Excel Format	E-Tender System
	Technical Submission as required for Technical Specifications	Signed and Scanned documents	E-Tender System
	Duly filled Technical Submission- Type test verification sheet Format	Editable Excel Format	E-Tender System
	Backup documents for Type Test verification	Signed and Scanned documents/ reports	E-Tender System
	Query / Clarification / Deviation (QCD) Format for Deviation if any	Editable Excel Format	E-Tender System
	Duly filled Unpriced Bid Format	Signed and scanned copy of document	E-Tender System
To be submitted in Ariba	Commercial Submission and supporting document		
	Letter of Undertaking (FOR VENDORS NOT REGISTERED WITH TATA POWER)	Scanned Copy of letter of undertaking duly filled, stamped and signed	E-Tender System
	E-auction Undertaking form	Scanned Copy of letter of undertaking duly filled, stamped and signed	E-Tender System
Bid Submission Envelope 3 (Third Part)	Duly filled Priced Bid Format	Duly signed and stamped scanned copy of document. To be entered in E-Tender System	E-Tender System

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1.4 Deviation from Tender

Normally, the deviations to tender terms are not admissible and the bids with deviation are liable for rejection. Hence, the bidders are advised to refrain from taking any deviations on this Tender. Still in case of any deviations, all such deviations shall be set out by the Bidders, clause by clause in the Query / Clarification / Deviation (QCD) Format. Deviations have to be mandatorily submitted in editable Excel sheet Technical and Commercial deviation have to be submitted separately.

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

1.5 Right of Acceptance/Rejection

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

1.5.2 Mandatory Documents as listed in 1.3 above

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

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

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

1.6 Qualification Criteria

Qualification Requirement expectation and document are detailed in documents in Section C

1.7 Pre-Bid Queries

Pre-Bid Queries if any has to be sent through message in E-Tender System. Pre-Bid Query has to be sent only in the Query / Clarification / Deviation (QCD) Format. Technical Pre-Bid Query and Commercial Pre-Bid Query have to be submitted in Separate Editable Excel File in Prescribed Format. Pre-Bid Queries sent in any other format or send through any other communication channel will not be accepted and answered. Pre-Bid Query have to be sent in the stipulated timeline as defined in the Tender Document. No Pre-Bid Query will be accepted after the due time and date as specified as "Last Date of receipt of pre-bid queries, if any"

1.8 Marketing Integrity

We have a fair and competitive marketplace. The rules for bidders are outlined in the General Condition of Contracts and other parts of Tender Documents. Bidders must agree to these rules prior to participating. In addition to other remedies available, Tata Power reserves the right to exclude a bidder from participating in future markets due to the bidder's violation of any of the rules or obligations contained in the General Condition of Contracts or other part of the Tender Documents. A bidder who violates the marketplace rules or engages in behavior that disrupts the fair execution of the marketplace, may result in restriction of a bidder from further participation in the marketplace for a length of time, depending upon the seriousness of the violation. Examples of violations include, but are not limited to:

- Failure to honor prices submitted to the marketplace
- Breach of terms as published in TENDER
- Submit irrelevant documents or frequently cases of missing documents as part of compliance to Qualifying, Technical or Commercial Requirements causing unnecessary delay in Tender Evaluation

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1.9 Supplier Confidentiality

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

2. Evaluation Criteria

- The bids will be evaluated technically on the compliance to tender terms and conditions.
- The bids will be evaluated commercially on the overall all-inclusive lowest cost for the complete tender BOQ / each line item as calculated in Schedule of Items. Tata Power, however, reserves right to split the order line item wise and/or quantity wise among more than one Bidder. Hence all bidders are advised to quote their most competitive rates against each line item.
- Bidder must mandatorily quote against each item of Schedule of Items. Failing to do so, Tata Power may reject the bids.

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

2.1 Price Variation Clause and Cap:

The prices shall remain firm during the entire contract period and no price variation is applicable.

3. Submission of Bid Documents

3.1 Bid Submission

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

FIRST PART: "EMD – BANK GUARANTEE" of Value detailed in 1.1 valid for 180 days from the due date of bid submission in the form of Bank Guarantee favoring 'The Tata Power Company Limited'. The EMD must be strictly in the format as mentioned in Tender Document, failing which it shall not be accepted by Tata Power and the bid as submitted shall be liable for rejection.

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

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

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

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

First Part must be submitted in Sealed Envelope.

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

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

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

Second Part must be submitted through E-Tender System Only.

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

Third part must be submitted through E-Tender System Only.

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

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

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

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

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

**EMD BID –
"Please mention Tender Reference No"**

Please mention our Tender Reference No on the Tender and drop the same in our Tender Box located at The Tata Power Company Limited (Tata Power), Corporate Contracts, Smart Center of Procurement Excellence, 3rd Floor, Sahar Receiving Station, Near Hotel Leela, Sahar Airport Road, Andheri (E), Mumbai 400 059.

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The bid shall be addressed to:

Head - Procurement
The Tata Power Company Limited (Tata Power),
Smart Center of Procurement Excellence, 3rd Floor, Sahar Receiving Station,
Near Hotel Leela, Sahar Airport Road, Andheri (E), Mumbai 400 059.

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

The Bid prepared by the Bidder, and all correspondence and documents relating to the Bid exchanged by the Bidder and Tata Power, shall be written in the English Language. Any printed literature furnished by the Bidder may be written in another Language, provided that this literature is accompanied by an English translation, in which case, for purposes of interpretation of the Bid, the English translation shall govern.

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

SIGNING OF BID DOCUMENTS:

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

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

The Bid submitted on behalf of companies registered with the Indian Companies Act, for the time being in force, shall be signed by persons duly authorized to submit the Bid on behalf of the Company and shall be accompanied by certified true copies of the resolutions, extracts of Articles of Association, special or general Power of Attorney etc. to show clearly the title, authority and designation of persons signing the Bid on behalf of the Company. Satisfactory evidence of authority of the person signing on behalf of the Bidder shall be furnished with the bid.

A bid by a person who affixes to his signature the word 'President', 'Managing Director', 'Secretary', 'Agent' or other designation without disclosing his principal will be rejected.

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

3.2 Contact Information

Communication Details: Detailed in 1.1

3.3 Bid Prices

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

The quantity breakup shown else-where other than Price Schedule is tentative. The bidder shall ascertain himself regarding material required for completeness of the entire work. Any items not indicated in the price schedule, but which are required to complete the job as per the Technical

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Specifications/ Scope of Work/ SLA mentioned in the tender, shall be deemed to be included in prices quoted.

3.4 Bid Currencies

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

3.5 Period of Validity of Bids

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

Price submitted as part of E-auction / Negotiation shall remain valid for **90 days** from date of E-auction / Negotiation.

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

3.6 Alternative Bids

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

3.7 Modifications and Withdrawal of Bids

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

3.8 Earnest Money Deposit (EMD)

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

The EMD shall be in following form:

- Bank Guarantee valid for 180 days after due date of submission with an additional claim period of 180 days from the date of expiry of BG.

The EMD shall be forfeited in case of:

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

Or

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

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

4. Bid Opening & Evaluation process

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4.1 Process to be confidential

Information relating to the examination, clarification, evaluation and comparison of Bids and recommendations for the award of a contract shall not be disclosed to Bidders or any other persons not officially concerned with such process. Any effort by a Bidder to influence Tata Powers processing of Bids or award decisions may result in the rejection of the Bidder's Bid.

4.2 Technical Bid Opening

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

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

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

4.3 Preliminary Examination of Bids/Responsiveness

Tata Power will examine the Bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the Bids are generally in order. Tata Power may ask for submission of original documents in order to verify the documents submitted in support of qualification criteria.

Prior to the detailed evaluation, Tata Power will determine the substantial responsiveness of each Bid to the Bidding Documents including production capability and acceptable quality of the Goods offered. A substantially responsive Bid is one, which conforms to all the terms and conditions of the Bidding Documents without material deviation.

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

4.4 Techno Commercial Clarifications

Bidders need to ensure that the bids submitted by them are complete in all respects. To assist in the examination, evaluation and comparison of Bids, Tata Power may, at its discretion, ask the Bidder for a clarification on its Bid for any deviations with respect to the Tata Power specifications and attempt will be made to bring all bids on a common footing. All responses to requests for clarification shall be in writing and no change in the price or substance of the Bid shall be sought, offered or permitted owing to any clarifications sought by Tata Power.

4.5 Price Bid Opening

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

Arithmetical errors will be rectified on the following basis: If there is a discrepancy between the unit price and the total price per item that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price per item will be corrected. If there is a discrepancy between the

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Total Amount and the sum of the total price per item, the sum of the total price per item shall prevail and the Total Amount will be corrected.

4.6 Reverse Auction and Price Matching Option

Tata Power reserves the right to conduct the reverse auction AND / OR Manual Negotiations for the products/ services being asked for in the tender. Only Technical Qualified Bids will be allowed to participate in e-auction. Date and time of e-auction will be intimated through E-Tender system to Authorized Person of Interested Bidder.

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

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

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

5.0 Award Decision

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

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

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

5.1 Rate Contract / Outline Agreement

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

The Tata Power Company Ltd		<i>OPEN TENDER NOTIFICATION</i>
<i>Tender Reference: CC26NK009</i>		<i>Document Date: 30th May 2025</i>

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

6.0 Order of Preference/Contradiction:

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

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

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

7.0 Ethics

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

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

8.0 General Condition of Contract and Special Condition of Contracts

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

---XXX---



Technical and Commercial Pre bid Queries Format

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Format for Commercial Pre-Bid Queries

Package Name Refurbishment of 48 V Lithium-Ion Battery and Battery chargers – 5 Nos in Mumbai Transmission.

Note : The said format to be used only for Commercial Pre-Bid Query. Any Technical Query has to be strictly in Format B1 Format for Technical Pre-Bid Query and sent separately

Pre-Bid Query has to be sent in editable Excel file format only

Pre-Bid Query has to be sent through e-mail in Tata Power E-Tender System

[illegible]



Pre-qualification Requirement and Submission Format

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FORMAT C.1**Technical Pre-Qualification Requirement and Submission Format for Li-on Battery****Tender No** CC26NK009**Package Name** Refurbishment of 48 V Lithium-Ion Battery and Battery chargers – 5 Nos in Mumbai Transmission.**Bidder :**

Note : Vendor Submission / claim without suitable backup document will not be accepted and Bid is Liable for Rejection
This format duly filled in editable Excel format has to be uploaded as Bid Submission with all relevant Backup Document

To be filled by Tata Power				To be filled up be Vendor	
Sr No	Parameter	Tata Power Requirement	Documents to be submitted by vendor to ascertain meeting of Pre-Qualification Requirement	Vendor Submission against Tata Power PQR Requirement	Documents submitted by Vendor to ascertain meeting of Pre-Qualification Requirement
1	2	3	4	5	6
1	Infrastructure	Bidder must be an OEM/Supplier of Li-ion Batteries with manufacturing facility / assembly in India.	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. In case of Channel Partner, OEM authorization letter to be furnished.		
2	Demonstration of Battery Capacity	a) It is Mandatory for Bidder to Demonstrate Load Cycle Handling Capability of the Battery at Purchaser/Bidder works prior to finalization of the order. For the demonstration all the expenses incurred shall be borne by the bidder. b) If Bidder is found unsatisfactory during the Demonstration/Testing process, then the Order stands cancelled. c) The Lithium-Ion Battery shall be Factory Tested for the provided Discharge profile and shall successfully match the Discharge Current characteristics. d) Any Modifications/ Additions in Cell type/configuration OR Cell Modules for matching the Load Discharge Characteristics is the responsibility of the Bidder (without any cost impact). e) The Test Environment characteristics i.e. Ambient Temperature etc. shall be provided to the manufacturer with the Load profile, which shall be simulated while Factory Testing of the Battery set. f) The Bidder shall demonstrate the Load Cycle handling Capability of the offered Lithium-ion battery set and provide Comprehensive reports for the same.	A Comprehensive Report shall be submitted by the Bidder to Tata Power for Approval after Factory Testing of the Battery as per the provided Load Discharge Cycle/Profile.		
3	Supply and Experience	Bidder shall have supplied two (2) quantity of Li-ion Battery of min.600 Ah capacity with 6 hours or longer in last one years and the system shall be in satisfactory service for last one year. As a special case, trial PO received / executed in last one year for reputed power utility company with min 600 Ah Capacity may be considered by the purchaser at their discretion during post bid evaluation. “In case the bidder has a previous association with Tata Power for similar products and services, the performance feedback for that bidder by Tata Power shall only be considered irrespective of performance certificates issued by any other organization. Technical performance, delivery timelines, service and support records of past executed projects in Tata Power will be considered for technical evaluation of bidder.” 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.	Supply List & Performance Certificates from the utilities / clients 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.		
4	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 5 years prior to the date of bid opening. Time period for type test can be extended by another 5 years as a special case, if there is no change in design / material of construction (MOC). 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 despatch 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 5 years but less than 10 years prior to date of bid opening has to be considered (if applicable) 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 despatch of the equipment / material, in case type test reports furnished are not for the quoted equipment / material but for the equipment / material with higher voltage class and/or different capacity, (if applicable)		
5	Installation & Commissioning for same equipment	In case the package involves installation & commissioning of the equipment / material, then the bidder shall have installed and commissioned at least two (2) quantity of Li-ion Battery of min.600 Ah capacity with 6 hours or longer and should have been in satisfactorily commercial operation for a minimum period of two years as on the date of bid opening.	Performance Certificates from the utilities / clients		
6	Commercial Capability	Average Annual turnover of the bidder for last three years shall not be less than INR 1 Crore.	Copy of audited Balance Sheet and P&L Account to be submitted in this regard.		

Note -

1) The Prequalification Criteria published along with the tender "In Section C.1 Pre-Qualification Criteria" is the total & complete pre-qualification requirement for the tender and shall prevail over any other/additional pre-qualification requirement mentioned elsewhere in the tender.

2) Tata Power reserves the right to review and approve / reject the Bidder based on Document Submission.

3) In case the bidder has a previous association with any of the Tata Group companies for similar products and services, the performance feedback for that bidder by Tata Group companies shall only be considered for evaluation, irrespective of performance certificates issued by any third organization.

4) Apart from the above PQR bidder must also qualify in Safety evaluation. Details will be shared along with tender documents.

FORMAT C.1**Technical Pre-Qualification Requirement and Submission Format for Battery Charger****Tender No** CC26NK009**Package Name** Refurbishment of 48V Lithium-Ion Battery and Battery chargers – 5 Nos in Mumbai Transmission**Bidder :****Note :** Vendor Submission / claim without suitable backup document will not be accepted and Bid is Liable for Rejection

This format duly filled in editable Excel format has to be uploaded as Bid Submission with all relevant Backup Document

To be filled by Tata Power				To be filled up be Vendor	
Sr No	Parameter	Tata Power Requirement	Documents to be submitted by vendor to ascertain meeting of Pre-Qualification Requirement	Vendor Submission against Tata Power PQR Requirement	Documents submitted by Vendor to ascertain meeting of Pre-Qualification Requirement
1	2	3	4	5	6
1	Infrastructure	Bidder must be an OEM of Battery Charger with manufacturing facility / assembly in India.	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	Bidder shall have supplied SMPS battery charger for last 5 years as on date of bid submission. Out of which atleast 10 (Ten) numbers of SMPS battery chargers shall be in successful operation for more than three (3) years as on date of bid submission. In case the bidder has a previous association with Tata Power for similar products and services, the performance feedback for that bidder by Tata Power shall only be considered irrespective of performance certificates issued by any third organization. Technical performance, delivery timelines, service and support records of past executed projects in Tata Power will be considered for technical evaluation of bidder. 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.	Supply List & Performance Certificates from the utilities / clients Self-undertaking to be submitted in this regard. TATA Power reserves the right to inspect the said manufacturing facility as a proof of compliance to this parameter.		
3	Type Test	The bidder shall submit Type test reports obtained from 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 5 years prior to the date of bid opening. Time period for type test can be extended by another 5 years as a special case, if there is no change in design / material of construction (MOC). 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 despatch 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 5 years but less than 10 years prior to date of bid opening has to be considered (if applicable) 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 despatch of the equipment / material, in case type test reports furnished are not for the quoted equipment / material but for the equipment / material with higher voltage class and/or different capacity, (if applicable)		
4	EPC Experience (if applicable)	In case the package involves installation & commissioning of the equipment / material, then the bidder shall have the following experience: a) He should have successfully completed one single order of value INR 30 Lakhs in last three years. OR b) He should have successfully completed two single orders of value INR 18 Lakhs in last three years. OR c) He should have successfully completed three single orders of value INR 15 Lakhs in last three years.	Performance Certificates from the utilities / clients		
5	Commercial Capability	Average Annual turnover of the bidder for last three years shall not be less than INR 1 Crore.	Copy of audited Balance Sheet and P&L Account to be submitted in this regard.		

Note -

1) The Prequalification Criteria published along with the tender "In Section C.1 Pre-Qualification Criteria" is the total & complete pre-qualification requirement for the tender and shall prevail over any other/additional pre-qualification requirement mentioned elsewhere in the tender.

2) Tata Power reserves the right to review and approve / reject the Bidder based on Document Submission.

3) In case the bidder has a previous association with any of the Tata Group companies for similar products and services, the performance feedback for that bidder by Tata Group companies shall only be considered for evaluation, irrespective of performance certificates issued by any third organization.

4) Apart from the above PQR bidder must also qualify in Safety evaluation. Details will be shared along with tender documents.

The Tata Power Company Ltd		<i>Contractor's Safety Code of Conduct</i>
Document No. TPSMS/GSP/CSM/015 REV 05		Date of Issue: 30/07/2020

Appendix 7: CSM-F-7 Safety Competency Form (Template)

Name of the Vendor/Bidder : -

Name of the Sub Vendor (If job is given to Sub Vendor) : -

Description of the Job : -

Request for Quotation (RFQ) No. :-

Vendor/Bidder to mandatorily provide the below safety competency related information.

1. Proposed Manpower Deployment Schedule : -

Category of Manpower Deployed	Minimum Qualification & Experience	Proposed Numbers against each category month-wise			
		Month 1	Month 2	...	Month n
Project Manager					
Site-In-Charge (Site Manager)					
Shift-in-Charge					
Safety Officers					
Supervisors					
Technicians					
a.....					
b.....					
Highly Skilled Workmen					
a.....					
b.....					
Skilled Workmen					
Semi-Skilled Workmen					
Unskilled Workmen					
Total Manpower					

Instructions to Bidder to fill:

- Bidder to provide the overall site manpower deployment schedule as above.
- Bidder to indicate (through colour code mentioned below) their direct and sub-contracted employees

Direct bidder employee

Partly Direct / Partly sub-contracted

Sub-Contracted

- Against each of the category, bidder to indicate the minimum qualification and experience of the proposed manpower.
- Rows can be added to also identify other specialised manpower e.g. specific details to be included for high risk activities operators
- Columns can be extended to the actual duration of Site activities.
- Bidder to note that if operations is in shifts, then Shift-in-charge / safety officers are required for each shift of operation.

2. List of Tools, Tackles, Machines and Equipment: -

Bidder/ Vendor to provide the list of tools, tackles, equipment **to be used during the job / project execution**. Bidder/Vendor to ensure that all the lifting tools and tackles, pressure vessels are duly certified by the competent person authorised by the Chief Inspector of Factories of the respective state prior to start of the job

The Tata Power Company Ltd		<i>Contractor's Safety Code of Conduct</i>
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Sr. No.	Description of Tools / Tackles	Capacity / Rating	Quantity	Make	Remarks
1					
2					
3					
4					
5					
6					
7					
...					

3. Safety Records:

Bidder to provide the details of fatalities and lost workday cases (LWDC), occurred in last three years (data to be provided for the last completed FY and preceding 2 years).

Description	Safety Data for Last 3 Years		
	Year 1 (Last FY)	Year 2	Year 3
	20 -	20 -	20 -
Fatalities (Nos.)			
Lost Workday Cases (Nos.)			

In case of no fatalities, LWDC during any year, the form may be filled stating NIL against the respective year. Bidders are encouraged to also submit the RCA / incident investigation reports and the learning's implemented out of the above reported incidents

4. Job Safety Plan/ Method Statement:

Bidder to provide / enclose a detailed Site/Job Safety Plan along with a Method statement detailing the execution philosophy (how the bidder intends to execute the Job/Project), identifying all key activities which are required to be performed by the contractor at Site. Bidder to also list down all high-risk activities and provide the Hazard Identification and Risk Assessment (HIRA) for all such high-risk activities involved in the site work.

(Use Method Statement template attached as annexure A and sample as attachment B)

5. Management System Certification: -

Sr.	Certification	Yes / No	If Yes, Year of Certification	If No, Target date for Certification
	ISO 9001			
	ISO 14001			
	OSHAS 18001 / ISO 45001			
	Any other (please specify.....)			

Note: Please attach certificates to support above. In case not accredited for above but applied for, application letters may be attached.

The Tata Power Company Ltd		<i>Contractor's Safety Code of Conduct</i>
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Appendix 8: CSM-F-8 PPE requirements

The Contractor shall ensure that the following PPE of Approved standards shall be available at all time and shall be used by his employees with no exception whatsoever.

1	All contractor's employees at site	Safety Florescent Jacket (orange color), Safety helmet & safety shoes with Composite or steel toe cap
2	Workers mixing asphalt, cement, lime / concrete	Safety goggle & protective Hand gloves and footwear, Nose mask.
3	Welders / Grinders	Welding screen/goggles, safety shoes, leather hand gloves, aprons, leg guard
4	Stone breaker	Protective goggle, hearing protection, anti-vibration hand gloves and Protective clothing.
5	Electricians	Rubber hand gloves & Electrical resistant shoes.
6	Workers engaged in insulation using glass wool etc.	Respiratory mask & leather Hand gloves, goggles.
	Workers engaged in coal handling plant, ash handling plant and working in high dust area.	Dust mask, Hand gloves, protective goggles.
7	Workers working at a height of 1.8 Meter or above.	Double lanyard full body harness, fall arrestor and safety net made of reinforced nylon fiber ropes firmly supported with steel structures

• PPE shall be conforming to BIS/DGMS/DIN specifications, in good condition and shall be comfortable to his employees, when used.

The Tata Power Company Ltd		<i>Contractor's Safety Code of Conduct</i>
Document No. TPSMS/GSP/CSM/015 REV 05		Date of Issue: 30/07/2020

Appendix 9: CSM- F-10 Site Safety Management Plan / Method Statement

Site Safety Plan / Method Statement (Template)

This Method Statement describes the specific safe working methods which will be used to carry out the described work. It gives details of work procedure with control measures to counter health and safety issues related to this work. The listed content of this Method Statement can be changed/modified subjected to job scope / specifications, but task specific method statement once finalized & approved, that should not be modified during work execution without permission from the approving authority.

Project/Job Name			
Scope of work: -			
Drawing References: -			
Detail of Sub contractors involved: -			
Method Statement Prepared By: - Designation: - (e.g. Site Manager)	<u>Signature</u>	<u>Date</u>	

1.0 Introduction (*Describe purpose of the work, give details of type and scope of work being carried out*);

--

2.0 Location of Work (*Give site address and precise location on site where work is to be carried out.*)

--

3.0 Safety Document /Specific Approval Required (*Details of any safety documents or specific approval i.e. Client specific approval required to undertake the work*)

--

5.0 Role & Responsibilities of Personnel/Parties Involved in activities: -Clearly define role and responsibilities of all personnel involved in activity i.e. Site management staff including subcontractors' parties- Main contractor Project/Site Manager, Sub Contractor Site Manager, Project Engineer, Safety officer, Competent Supervisory Staff)

6.0 Working/Activity Description: - It is important that all operatives should have clear idea of those operational sequences and responsible supervisor must verify their competency prior to their engagement in operation.

6.1 Pre-Working Checks

6.2 Resources (Equipment, tools including manpower) Details i.e. Equipment and Tools, specific operational equipment, test kits, lifting resources, Details of materials to be used in operation, including any reference to COSHH assessments in case of use of any chemicals, Details of the manpower allocated to the task, e.g. titles, qualifications, competences, direct manpower, contractors. Details of plant, tools and equipment to be used for the work, including the availability of relevant statutory documents, checks or inspections etc. Details of fencing, barriers, cones, chains, dangers notices, warning signs etc.

Tools required for work:

Sr.No	Tools /Equipment /Machine	UOM	Required Qty.	Remark
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

6.4 Operational Sequence of work: - Full description of the work, setting out the methodology in a sequential manner, including any reference to any identified operational restraints. Also refer here sec. 5.0 responsibilities part for every step of work sequence).

Sr.No	Activity	Details of job sequence	Risk Involved	Control Checks
1.		1.		
2.				
3				
4				
5.				

6.7 Final Checks & restoration of work area after completion of work :- Those checks to be carried out by responsible supervisor in witness of his line hierarchy by use of specific checklist of certain operational checks and once those completed satisfactory, PTW (if applicable) to be closed and isolation arrangements to be restored by removing barricades/cautionary tags.

7.0 Task Specific Hazards: - *Refer to Task Specific Risk Assessment and attach in appendix***Attachment:** - Specific Risk Assessment

In addition, please provide below control measures in risk assessment (as applicable).

Fall Protection Measures: (Where Work at height cannot be avoided)							
Control Measures for Electrical Hazards							
Others Hazard if any (please provide details)							
Hazardous Substances to be used in job : (Attach MSDS if required)							
	Yes /No	Yes /No	Yes /No	Yes /No	Yes /No	Yes /No	Yes /No

7.0 Emergency Provisions: -*Relevant operational possibility of a programme in the case of emergency situation i.e. electrical supply restoration. In addition emergency response provisions i.e. first aiders, fire fighting, and first aid arrangements, nearest onsite/offsite emergency response also to be considered during emergency planning.*

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8.0 "5S issues" / Waste Disposal/ Housekeeping and Environmental issues: -Details waste disposal processes and or housekeeping activities, Details of environmental impacts and control measures.

--

9.0 Personal Protective Equipment (PPE):- (Tick on PPE requirements for the task/Job

Required Personnel Protective Equipment:							Other:
	Safety Boots	Hard Hats	Safety Gloves	Hearing Protection	Eye Protection	Respiratory Protection	1. Hi-Viz 2. Coveralls 3.

10.0 First Aid facilities and Nearby Hospitals Details

	Name of On-Site First Aider:	
	First Aid Box Location:	
	Location of Nearest Hospital:	

11.0 Occupational Health, Fitness and COVID-19 related Preparedness:

- Please give a brief writeup / methodology of your organization planned to avoid impact of the COVID-19 pandemic at Tata Power working site.
- Please give brief details of occupational health and hygiene related interventions planned by your organisation to ensure good health and fitness of workforce at Tata Power site.

NOTE : Please sign and submit all the documents listed below for the Safety Bids in a ZIP file

Sl.No		Criteria	Minimum Requirement
1	Manpower (As per the Clause No1)	Safety Officer (1 per 500 workers)	Qualification- Officer shall possess Advance Diploma In Safety by state technical board. Experience- Minimum 1 year experience in relevant field as mentioned in the job in PR.
		Supervisor (1 per work site upto max. 50 workers)	Qualification- Supervisor shall possess ITI/ Diploma in relevant field. Experience- Minimum 2 year experience in relevant field as mentioned in the job in Retraining – Trained and certified by TPDSI or equivalent institute in relevant safety procedures. Note: On request of the contractor/Users - TPDSI should vet & certify the skilled & experienced Technician if Technical Qualification is not adequate.
		Technician (Skilled workers as electrician, rigger, fitter, welder, cable jointer, line men etc)	Experience- Minimum 2 year experience in relevant field as mentioned in the job in Retraining – Trained and certified by TPDSI or equivalent institute in relevant safety procedures.
2	Tools & Tackles	To be evaluated as per approved tool list of concerned Departments	The list of all the tools and tackles to be submitted by the contractor. Evaluation of the list will be carried out based on 1) Suitability as per the relevant job 2) Make and age of the tools from authorized agencies defined by the user. 3) Certification by the competent authority of respective state
3	PPE Requirements	To be evaluated as per approved PPEs standard and PPEs Matrix specified in CSM	
4	Job Safety Plan /Method Statement	To be evaluated as per SOP/WI/HIRA	
5	Vehicle Deployment	Weightage will be given for CNG Vehicles with endorsement of CNG Kit on RC/Electrical Vehicles	
6	Crane and Mechanized Heavy Equipment Deployment	Date of Manufacturing or running Hours	
7	Training Records	Training records to be evaluated with evidence and scoring to be done as per availability of records	
8	Accredited Bodies Certificate	ISO-9001	ISO-9001
		ISO-14001	ISO-14001
		ISO 45001	ISO 45001
9	Safety Initiatives for learnings implemented in accidents in organization and workforce (Fatal/Non Fatal)	Maximum 15 marks will be awarded for visible evidence in terms of safety initiative deployed based on learning of accident in organization and workforce in case of accident	
10	Rewards and Recognition	Maximum 5 marks will be awarded for R&R process evidence	



General Terms and Conditions - Supply

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

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

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

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

1. Price:

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

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

2. Taxes and Duties:

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

Rev. date: 25 July 2017

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 statutes, rules & regulations by the use of or sale of any article or material supplied by the Vendor. The indemnity shall include any infringement of patent, trade mark, design, copyright or other property rights whether in Country of Origin, or elsewhere resulting from the Vendor's design, manufacture, use, supply or re-supply & would also cover use or sale of any article or material supplied by the Vendor to the Purchaser under the Purchase Order. The Indemnity shall cover any claim/action taken by a third party either directly against the Purchaser or any claim/action made against the Vendor & where under the Purchaser is made liable. The

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

16 Latent Defects Liability period (if applicable):

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

17 Force Majeure:

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

18 Variation:

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

19 Termination

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

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

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

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

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

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

20 Sub letting and assignment:

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

21 Dispute Resolution:

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

22 Governing laws

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

23 Jurisdiction

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

24 Limitation of Liability

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

25 Confidentiality:

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

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

26 Consequential Damages:

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

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

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

28 Relation between parties:

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

29 Environment / ISO 14001 Certification:

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

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

30 Tata Code of Conduct

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

31 Responsible Supply Chain Management:

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

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

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

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

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

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

32 Vendor rating

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

33 Vendor Feedback:

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

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

34 Non-Waiver:

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

35 Repeat Order:

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

36 Severability

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

ESG FRAMEWORK FOR BUSINESS ASSOCIATES

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

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

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

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

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

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

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

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

Responsible Supply Chain Management:

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

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

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

The BA is expected to:

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

Waste Disposal:

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

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

Water Management:

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

Compliance to Law:

The BA shall adhere to responsible business practices and comply with the provision of all the Statutory Acts Applicable. Special attention of the BA is drawn towards the compliance of provision of the following statutes: (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

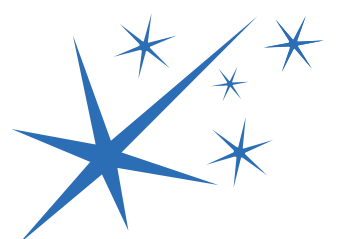
- We will uphold the values of honesty, partnership and fairness in our relationship with stakeholders
- We shall provide and maintain a clean, healthy and safe working environment for employees, customers, partners and the community
- We will strive to consistently enhance our value proposition to the 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





General Terms and Conditions - Services

CONFIDENTIAL

The Tata Power Company Limited is hereunder referred to as the "Owner" or "Company". The person, firm or company offering the services, the subject of this order is referred to as "Contractor". The subject of this order is hereinafter referred to as the "Work".

"Sub-Contractor" means any person named in the Contract as a Sub-contractor, sub-vendor, manufacturer or supplier for a part of the Works or any person to whom a part of the Works has been subcontracted and the legal successors in title to such Person, but not any assignee of such Person.

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

1. Work Order (with 'Commercial Notes' and Annexures to the Work Order referred thereon)
2. Scope of Work.
3. General Terms & Conditions - Service

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, provided however, in the event of any inconsistency or discrepancy between the aforementioned documents, the order of precedence in interpretation of the documents shall be as set out above. For the avoidance of doubt, it is clarified that the terms set forth in the Work Order (with 'Commercial Notes' and Annexures to the Work Order referred thereon) shall take precedence over the terms set out in the Scope of Work, which shall in turn take precedence of the terms set out in the General Terms & Conditions – Service.

1. Contractor's obligation:

- 1.1 Contractor warrants that it is a competent, qualified and experienced contractor, equipped, organised and financed to perform and complete the services in the operating area in an efficient and professional manner and capable of meeting all the requirements of the Contract.
- 1.2 The Contractor has the overall responsibility of executing the contract, conducting Planning, Job Scheduling, Maintenance Planning, Maintenance Job Scheduling, executing the Work and maintenance jobs as per the Scope of work & schedule.
- 1.3 Except to the extent that it may be legally or physically impossible or create a hazard to safety, the Contractor shall comply with the Owner's representative(s) instructions and directions on all matters relating to the Work.
- 1.4 Contractor shall at all times have full responsibility for control of the Equipment and for the direction and supervision of operations being carried out under the Contract.
- 1.5 In the performance of the Work, Contractor shall be and act as an independent Contractor fully responsible and accountable for the proper execution of its responsibilities, obligations and

liabilities under this Contract and for its own acts and the acts of its Sub-Contractors and the Personnel. Owner's supervision, examination or inspection of the (performance of the) Work or omission to carry out the same shall not be construed in any manner whatsoever as relieving Contractor from its responsibilities, obligations or liabilities under this Contract.

- 1.6 Contractor shall submit list of tools & tackles with details of make, year of manufacturing, valid certification to the Project Manager/ User for their approval.

Project Manager may during the execution of project inspect & verify that the tools & tackles are as per the qualification requirements approved by him and will have right to seek replacements in case of any discrepancies. The Contractor shall always comply with such directives.

- 1.7 Contractor shall engage Tata Power Skill Development Institute (TPSDI) certified labour force at the site for execution of the job. Requirement & fees for TPSDI certification shall be as per Company Policy.
- 1.8 Contractor shall take full responsibility for the protection and security of Owner's materials and equipment while such materials and equipment are temporarily stored in Contractor's facility or otherwise in Contractor's custody.
- 1.9 All notices, instructions, information, and other communications given by the Contractor to Owner under the Contract shall be given to the Order Manager/ Owner's representative, except as otherwise provided for in this Contract.
- 1.10 The Contractor shall make its own arrangements for movement of personnel and equipment, within and outside the sites / units / offices at the various locations covered by the Contract.
- 1.11 The Contractor shall acquire in its name all permits, approvals, and/or licenses from all local, state, or national government and other statutory authorities and/or public service undertakings that are necessary for the performance of the Contract.
- 1.12 Neither the Contractor nor its personnel shall during the term of this Contract, engage in any business or professional activities in India/abroad which would conflict with the activities assigned to them under this Contract.

2. Service Warranties:

Contractor warrants that all services performed for or on behalf of Owner will be performed in a competent,

workmanlike manner and shall be free from faults and defects. Said warranties shall be in addition to any warranties of additional scope given by Contractor to Owner. None of said warranties and no other implied or express warranties shall be deemed is claimed or excluded unless evidenced by a change notice or revision issued and signed by Owner's authorized representative.

3. Compliance of Local Laws:

Contractor shall be responsible and shall comply with the provision of all the Statutory Acts Applicable. Special attention of the Contractor is drawn towards the compliance of provision of the following statutes: (along with the latest amendments/additions, as applicable):

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

Site Specific requirements shall be as Annexure at I. The compliance to these Site Specific requirements shall not absolve the Contractor of its obligation to comply with the Owner's Contractor Safety Management Policy.

4. Owner's Obligation:

- 4.1 The order manager (As specified in the 'Commercial Notes') shall have the authority to represent Owner on all day-to-day matters relating to the Contract or arising from the Contract. All notices, instructions, orders, certificates, approvals, and all other communications under the Contract shall be given by the order manager, except as otherwise provided for in this Contract. The order manager may appoint the Engineer-In-Charges for different areas for monitoring the work progress, inspections and signing of bills.

- 4.2 Owner shall ensure the availability of site access, all information and/or data to be arranged/ supplied by Owner to the Contractor for execution of the Work. The terms on which the Contractor shall be allowed access to the site shall be specified by the Owner prior to commencement of the execution of the Work and thereafter shall be governed in accordance with such policies as the Owner may provide in writing to the Contractor from time to time.

5. Contractor's/ Sub-contractor's employees:

- 5.1 The Contractor shall engage appropriately qualified persons to provide the services with the prior approval of Owner. Owner may withhold such approval for any reason whatsoever.
- 5.2 The Contractor hereby represents and warrants that:
 - i) the personnel are duly qualified, and are, and will remain, sufficiently qualified, careful, skilful, diligent and efficient to provide the services to Owner; and
 - ii) the Services will be rendered carefully, skilfully, diligently and efficiently, and to the professional standard reasonably expected by Owner of a contractor qualified and experienced in providing services substantially the same as the Services.
- 5.3 The Contractor must ensure that the Contractor's personnel conduct themselves in a proper manner and comply with the procedures and all policies, regulations and directives of Owner including any occupational, health and safety policies and the relevant prevailing laws and regulations in the Country of operations and specifically in the area where Work is being executed.
- 5.4 Owner may inform the Contractor to immediately remove Contractor's personnel from the relevant premises in the event of misconduct or incompetence on the part of the Personnel. The Contractor shall at all times remain liable for all acts and/or omissions of its Personnel.
- 5.5 It is made clear that no relationship of Owner and employee is created between Owner and the Contractor's resident engineers, employees and no claim for employment of any such personnel shall be tenable or entertained.

6. Title of Property:

- 6.1 Unless otherwise provided in this order or agreed to in writing, property of every description including but not limited to all tooling, tools, equipment and material furnished or made available to Contractor, title to which is

in Owner, and any replacement thereof shall be and remain the property of Owner. Such property other than material shall not be modified without the written consent of Owner. Such property shall be plainly marked or otherwise adequately identified by Contractor as being owned by Owner and shall be safely stored separately and apart from Contractor's property.

- 6.2 Contractor shall not use such property except for performance of work hereunder or as authorized in writing by Owner. Such property while in Contractor's possession or control shall be listed in writing and kept in good condition, shall be held at Contractor's risk, and shall be kept insured by Contractor, at its expense, in an amount equal to the replacement cost with loss payable to Owner. To the extent such property is not material consumed in the performance of this order, it shall be subject to inspection and removal by Owner and Owner shall have the right of entry for such purposes without any additional liability whatsoever to Contractor. As and when directed by Owner, Contractor shall disclose the location of such property, prepare it for shipment and ship it to Owner in as good condition as originally received by Contractor, reasonable wear and tear excepted.

7. Work Completion schedule:

Contractor shall plan and execute the Work in accordance with a detailed schedule mutually agreed upon by the Parties (Owner and Contractor).

8. Contract Price and Payment:

- 8.1 The Contract Price shall be a firm & fixed Contract Value for the Work inclusive of all the taxes, levies & duties and shall remain firm till the validity of this contract.
- 8.2 Unless Specifically stated elsewhere in the contract, the Contractor is solely liable for payment of , and warrants that it will pay, or ensure the payment of all taxes imposed, assessment made in relation to the Work.
- 8.3 An amount as stated in the table below shall be retained towards Contractor's safety performance against every RA bill:

Contract Value	Retention Amount (%)
Upto Rs. 10 lakhs	2.5
Above Rs. 10 lakhs and below Rs. 50 lakhs	2
Above 50 lakhs and upto Rs. 10 Crores	1.5
Above Rs. 10 Crores	1

The above mentioned safety retention shall be over and above any other retentions/ deferred payments as may have been specifically agreed in the Contract.

- 8.4 For Contract Price Rs. 1 crores or above and Contract Completion Schedule 12 months or more, the above safety retention will be released half yearly against the Safety Performance Score (methodology for evaluation enumerated in the Safety Terms & Conditions attached as Appendix to this General Terms & Condition) which will be evaluated by the Order Manager every month. For all other contracts, the above said safety retention shall be released along with the final settlement only at the end of the contract period.
- 8.5 The Owner shall have the right to stop any work which in its opinion is not meeting the safety standards/ guidelines of the Owner and good engineering practice. The Contractor shall not be eligible for and shall not be granted any extension in Completion Schedule due to such stoppage of work by the Owner.
- 8.6 The above retention towards safety shall not absolve the Contractor of its liabilities including statutory liabilities towards safety violations, injury or death (whether by accident or otherwise). An amount between Rs. 5 to 50 lakhs as deemed appropriate by Owner's appointed Committee for incident investigation and/ or as determined by statutory authorities (whichever higher), will be payable by the Contractor in case of such severe incidents of injury leading to loss of property or partial/ permanent disablement (e.g. loss of limb/s, vision etc.) or death.
- 8.7 Notwithstanding anything else stated in the Contract, the Contractor shall be liable for termination without any notice and without recourse to Owner in case of three (3) or more severe safety violations. There shall be no termination fees/ compensation payable to Contractor for such termination.
- 8.8 In case the Contractor achieves 100% on the Safety Performance Score, the Contractor shall be awarded a discretionary bonus of 1% of invoiced value subject to a maximum of Rs. 50 lakhs towards Safety Performance.
- 8.9 Payment shall be released within 60 days of submission of error free invoice with supporting documents duly certified by the Order Manager/ Engineer-in-Charge after deducting taxes at source as prescribed under the applicable law, income – tax or other deductions under the state value added tax laws . If such payment release

day falls on a holiday of Owner, payment will be released on the next working day. Against deduction of statutory taxes, tax deduction certificates where ever applicable shall be issued as per the applicable provisions of the statute. The Order Manager may recover any amount wrongly paid in excess in any previous bills certified by him.

- 8.10 *Mode of Payment:* All payments shall be made direct to the Contractor or his authorized representative in the shape of RTGS or Electronics Transfer method, on certification of the Order Manager/Engineer-in-Charge and on compliance of contractual terms & conditions.

9. **Taxes and Duties:**

- 9.1 The Contract Price shall be inclusive of all taxes, duties, including but not limited to Customs duty, GST or any local taxes, levies imposed by State/Central/Local governments.

- 9.2 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.

- 9.3 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.

- 9.4 However the payment of tax shall be restricted to the total amount as indicated in the price schedule.

- 9.5 Any statutory variation in duties, levies or taxes if applicable and specified in this Contract till the scheduled date for completion of Work and limited to direct invoices of the Contractor shall be to the account of Owner. 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 completion of work to claim the difference.

- 9.6 The Contractor shall pass on to the Owner 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.

- 9.7 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.

- 9.8 For facilitating availment of a credit, set-off, rebate, drawback or like benefit available to the Owner, the Contractor will facilitate the Owner by providing the necessary documentary and/or procedural support. In any process of assessment or re-assessment, of taxes payable by the Owner,

- 9.9 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.

- 9.10 All formalities required under statutes, for availing any concessions under relevant tax laws shall be adhered to by the Contractor.

- 9.11 Deduction at source: Recovery at source towards income tax calculated at the rate prescribed from time to time under the Income Tax Act 1961 and other relevant sections of Income Tax Act shall be made from the bills of the Contractor and the amount so recovered shall be

deposited with the Income Tax Department. Necessary TDS certificate to this effect will be issued to the Contractor in the prescribed proforma.

- 9.12 If any other taxes / duties / cess etc are to be recovered at source as per government regulations / Legislation from time to time, the same shall be recovered from the bills payable to the Contractor. Necessary receipt to this effect will be issued to the Contractor in this regard as per the applicable legislation.

10. Contract Performance Guarantees (If applicable)

The Contractor shall within 15 days of issuance of this Order/Contract furnish an unconditional irrevocable bank guarantee duly stamped, strictly as per the prescribed format of Owner from any nationalized bank or any scheduled bank having a branch in Mumbai and approved by the Owner for a sum equivalent to 10% of the Total Contract Price valid for the Contract Period and with a claim period of not less than 6 months from the completion of Contract Period. The issuing bank should be advised to send a direct confirmation of issue of bank guarantee to Owner.

In case the Contractor fails to furnish the requisite Bank Guarantee as stipulated above, then the Owner shall have the option to cancel the Contract besides other contractual remedies.

11. Price Reduction:

- 11.1 In case the Contractor fails to deliver the service/ Complete the work as per the agreed Completion Schedule including intermediate milestones (if applicable), the Owner shall recover from Contractor, as ascertained and agreed Liquidated Damages, and not by way of penalty, a sum equivalent to 1% of the Contract Value per week of delay. The Liquidated Damages referred above may be recovered by the Owner as set off against any amounts payable by the Owner to the Contractor or in any other manner in accordance with applicable laws.

- 11.2 The overall cap on liquidated damages shall be limited to 10% of the Contract Price.

12. Insurance

- 12.1 The Contractor agrees to indemnify and protect Owner against all liability, claims or demands for injuries or damages to any person or property growing out of the performance of this order/ Contract.
- 12.2 The Contractor further agrees to furnish evidence of insurance showing that Contractor has and will maintain adequate insurance coverage during the life of this Contract/ order in the opinion of Owner, including but not

limited to comprehensive general liability insurance. Such evidence of insurance must set forth the name of the insurer, policy number, expiration date, and limits of liability. Compliance by Contractor with insurance requirements does not in any way affect Contractor's indemnification of Owner under Indemnification clause

13. Indemnification:

The Contractor shall indemnify, save harmless and defend the Owner and keep the Owner 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 including compliance to statutory laws of provisioned under clause 3, performance of the obligations hereunder, or any representation or misrepresentation made by the Contractor or by any third party in respect of death or bodily injury or in respect to loss or damage to any property with regard to the subject of this Contract.

14. Indemnity against IPR:

The equipment, system, drawings, and other materials that shall be supplied against the Contract will become the Owner's property. Without limitation of any liability of whatsoever nature, the Owner shall be indemnified and kept indemnified against any claim for infringement or breach of any of the statutes, rules & regulations by the use of or sale of any article or material supplied by the Contractor. 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 Contractor's design, manufacture, use, supply or re-supply & would also cover use or sale of any article or material supplied by the Contractor to the Owner under the Contract. The Indemnity shall cover any claim/action taken by a third party either directly against the Owner or any claim/action made against the Contractor & 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 Owner in relation to the Contract.

15. Free Issue Material:

Wherever contracts envisage supply of Free Issue Material (FIM) by the Owner to the contractor for fabrication/ use in service performance, such Free Issue Material shall be safeguarded by an insurance policy to be provided by the Contractor at his own cost for the full value of such materials and the insurance policy shall cover the following risks specifically and shall be valid for six months beyond the Contract Validity date :

RISKS TO BE COVERED: Any loss or damage to the Owner's materials due to fire, theft, riot, burglary,

strike, civil commotion, terrorist act, natural calamities etc. and any loss or damage arising out of any other causes such as other materials falling on Owner's materials.

The amount for which insurance policy is to be furnished shall be indicated in the respective Contract.

Free Issue material (FIM) will be issued to the Contractor only after receipt of the Insurance Policy from the Contractor. The contractor shall arrange collection of the FIM from the Owner's premises and safe transportation of the same to his premises at his risk and cost. Notwithstanding the insurance cover taken out by the Contractor as above, the Contractor shall indemnify the Owner and keep the Owner indemnified to the extent of the value of free issue materials to be issued till such time the entire contract is executed and proper account for the free issue materials is rendered and the left over/surplus and scrap items are returned to the Owner. The contractor shall not utilize the Owner's free issue materials for any job other than the one contracted out in this case and also not indulge in any act, commission or negligence which will cause/result in any loss/damage to the Owner and in which case, the Contractor shall be liable to the Owner to pay compensation to the full extent of damage/loss. The Contractor, shall be responsible for the safety of the free issue materials after these are received by them and all through the period during which the materials remain in their possession/control/custody. The Free issue materials on receipt at the Contractor's works shall be inspected by them for ensuring safe and correct receipt of the material. The contractor shall report the discrepancies, if any, to the Owner within 5 days from the date of receipt of the material. The contractor shall take all necessary precautions against any loss, deterioration, damage or destruction of the FIMs from whatever cause arising while the said materials remain in their possession/custody or control. The free issue materials shall be inspected periodically at regular intervals by the Contractor for ensuring safe preservation and storage, the Contractor, shall also not mix up the materials in question with any other goods and shall render true and proper account of the materials actually used and return balance remaining unused material on hand and scrap along with the final product and if it is not possible within a period of one month from the date of delivery of the final product/ completion of Service covered by this Contract. The Contractor shall also indemnify the Owner to compensate the difference in cost between the actual cost of the free issue material lost/damaged and the claim settled to the Owner by the insurance company.

16. Relation between parties:

The Contract shall be entered into on a principal-to-principal basis only. The Contract 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 Contractor 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.

17. Safety:

Contractor shall comply with all legal and statutory provisions including all rules and regulations pertaining to Safety, Health and the Environment and will be responsible for all legal liabilities arising due to any of their acts or of their personnel.

The Contractor shall comply with the Owner's Contractor Safety Policy and Safety Terms and Conditions. Any misconduct and/ or violation with respect to the Owner's Contractor Safety Policy and Safety Terms and Conditions or any other legal and statutory provisions pertaining to Safety, Health and Environment shall be dealt with as per the Safety Terms and Conditions.

Prior to commencement of any work at site Contractor shall submit an undertaking in writing to adhere to and comply with all the provisions of Owner's Contractor Safety Code of Conduct.

The Contractor shall have a valid ISO 14001/ OHSAS certification. In absence of the same, the Contractor shall obtain the same within 6 months from the date of the Effective Date of Contract.

18. Suspension of Work

Owner may instruct Contractor at any time to suspend performance of the Work or any part thereof with a notice of 7 days for whatever reason. Provided Contractor is not in default under this Contract subject to Articles 1 and 5 inclusive, the Contractor shall be paid a mutually agreed fee, if any, necessarily incurred by Contractor as a direct consequence thereof of suspension and the Project Completion Schedule may be revised accordingly.

Without prejudice to any other rights Owner may have under this Contract or at law if Contractor is in default under this Contract, Owner may instruct Contractor to suspend performance of the Work or any part thereof by giving 7 days notice till such default has been corrected to the satisfaction of Owner. Also Liquidated Damages in accordance with Clause 11 shall continue to be applicable during such period until the default is cured. The costs incurred by the Contractor for such correction shall be to the Contractor's account, and furthermore no payment shall become due to the Contractor. Any cost incurred due to non - performance of the Contractor by the Owner shall be charged to the Contractor.

19. Change Management:

Owner shall have the right at any time to order any change in the Work in accordance with the following procedure. Contractor shall furnish to Owner upon request as soon as reasonably possible but no later

than five (5) days following the request, a written statement specifying:

- (a) the increase or decrease, as the case may be, in the costs of the Work which will result from a change in the Work as requested by Owner,
- (b) any effect such change in the Work may have on any other provision of this Contract originating from either parties, and
- (c) such other details as Owner may require.

Any change in costs shall be reasonably related to the proportional change in the Work and any other costs incurred by Contractor. If Owner agrees to Contractor's statement Owner shall notify Contractor thereof in writing in the form of a change order, whereupon the change in the Work shall be incorporated in the Work and immediately implemented. In the event that the change relates to a reduction in Work, the work in question shall not be undertaken pending the issue of an appropriate Change Order.

20. 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.

21. Jurisdiction

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

22. Dispute settlement:

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.

23. Force majeure:

- 23.1 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.

- 23.2 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.

- 23.3 During the period, the obligations of the parties are suspended by force majeure; the contractor shall not be entitled to payment of any rate.

- 23.4 In the event of the force majeure conditions continuing or reasonably expected to continue for a period more than thirty (30) days, Owner shall have the option of terminating the contract by giving seven (7) days notice thereof to the contractor.

24. Sub letting and Assignment

The contractor shall not, without prior consent in writing of the Owner, 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.

25. Limitation of Liability:

Notwithstanding anything contained in the Contract, the Contractor's aggregate liability under this Contract shall be limited 100% of the Total Contract value. This shall exclude liability arising pursuant to clause 3- Compliance to Local Laws, clause 9.10, clause 14- Indemnity against IPR, clause 13- Indemnity, clause 26 – Confidentiality, liability arising due to loss of or damage to the Free Issue Material (FIM) issued by Owner to Contractor for completion of the Work and liability arising due to wilful misconduct, gross negligence, third party claims and corrupt acts attributable to the Contractor.

26. Confidentiality:

The Contractor shall use the Confidential Information of the Owner only in furtherance of this Contract and shall not transfer or otherwise disclose the Confidential Information to any third party. The Contractor 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.

27. Termination:

27.1 The Contract shall be deemed to be terminated on completion of the Contract period.

27.2 Termination of default by Contractor:
Owner may terminate the contract at any time if the Contractor fails to carry out any of his obligations under this Contract. Prior to termination, the Contractor 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 Contractor fails to bring about the improvement to the satisfaction of the Owner, then the Contract shall be terminated.

27.3 Without prejudice to the rights and remedies available to Owner, Owner may terminate the Contract or part thereof with immediate effect with written notice to the Contractor if:

27.3.1 The Contractor becomes bankrupt or goes into liquidation.

27.3.2 The Contractor makes a general assignment for the benefit of creditors.

27.3.3 A receiver is appointed for any substantial property owned by the Contractor.

27.3.4 The Contractor is in breach of any representation or warranty made to the Owner by the Contractor.

The Contractor shall not be entitled to any further payment under the Contract if the Contract is terminated. If the order is terminated under clause 27.2 and 27.3, the Contractor shall not be entitled to any further payment, except that, if Owner completes the Work and the costs of completion are less than the Contract Price, the Owner shall pay Contractor an amount properly allocable to services fully performed by Contractor prior to termination for which payment was not made to Contractor. In case, the cost of completion of Work exceeds the Contract Price, the additional cost incurred by Owner for such completion shall be paid by the Contractor.

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

27.4.1 cease all further work, except for such work as may be necessary and instructed by the Owner/ Owner's representative for the purpose of preserving and protecting Work already in progress and protect

materials, facilities and equipment on the Work Site or in transit;

27.4.2 stop all further sub-contracting or purchasing activity, and terminate Sub-contracts;

27.4.3 handover all Documents, equipment, materials and spares relating to the portion of Work already executed 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

27.4.4 handover those parts of the supplies manufactured/ work executed by the Contractor up to the date of termination.

Upon termination pursuant to clause 27.4, the Contractor shall be entitled to be paid (a) all sums properly due to the Contractor under the Contract up to the date of termination; and (b) any direct and substantiated charges already incurred or committed for cancellation of the procurement of third party goods or services which were to have been supplied by the Contractor in connection with this Contract provided that the Contractor shall use its best endeavours to minimise such charges

25.5 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.

28. 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 Contract.

29. Environment / ISO 14001 Certification:

The Contractor to confirm whether their organization is ISO 14001 certified. If not, the Contractor 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 Contractor 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 Contractor 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. Non-Exclusive Agreement

This Contract is non-exclusive and Owner reserves the right to engage other contractors to perform similar or identical work. Contractor shall accord such other contractors adequate opportunity to carry out their contracts and shall accomplish the Work in co-operation with those contractors and with Owner, in accordance with such instructions as may be issued by the Owner from time to time.

31. Severability

In the event that any of the provisions, or portions or applications thereof, of this Contract are held to be unenforceable or invalid by any court or arbitration panel of competent jurisdiction, Contractor and Owner shall negotiate an equitable adjustment to the provisions of the Contract with a view towards effecting the purpose of the Contract and the validity and enforceability of the remaining provisions, or portions or applications thereof, shall not be affected thereby.

32. Housekeeping & Removal of scrap:

The Contractor shall be responsible for keeping the areas of his work at site, neat and tidy throughout the period of his work. All excess material/ spares/ consumables taken by Contractor, as well as the scrapped items and wooden logs/ crates/ planks shall be returned, from time to time, to the Stores, and transported/ unloaded by Contractor's personnel at the place shown by Order Manager/Engineer-in charge.

The Contractor shall so arrange that all the scrap generated during the progress of his work, is separated into two categories, viz.

- i) Saleable scrap like steel, copper or other metals, etc., and,
- ii) Others, which have nil or negligible resale value, like insulation material, jute, debris, etc. (or as directed by the Order Manager/Engineer-in charge).

The saleable scrap shall be shifted to and unloaded at a central place as per directions of the Stores-in charge, while the other scraps shall be shifted to other locations as per directions from Order Manager/Engineer-in Charge, or as per terms of the order.

The Contractor shall arrange to remove the scrap on regular basis, or even on daily basis, depending upon the requirement, to keep the area around his workplace neat and tidy. In case, it is observed that the

Contractor is not carrying out regular cleaning of his areas of work, or, is not returning the excess materials/ scrap, etc., to the Stores, Owner reserves the right to arrange the same through other sources, and back-charge the Contractor the cost of doing so, along-with overheads, by deducting the amount from Contractor's bills.

Contractor's final bill will be cleared by Owner only after confirming that proper clearing of his areas of work has been completed by the Contractor, and same is certified by the Order Manager/ Engineer in-charge

33. Tata Code of Conduct

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

34. Responsible Supply Chain Management:

The Owner is committed for a cleaner environment and respect of Human rights through its Responsible Supply Chain Management policy. The Contractor is required to comply with all the environment & Human rights related laws, including emission norms, Labour and environmental regulations. The Owner 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 Contractor is required to abide by the Tata Power Corporate Environment policy, Energy Conservation and Corporate Sustainability Policy.

A copy of the Responsible Supply Chain 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>.

Contractor/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.

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 Owner or its representative(s) act as waiver of the terms hereof.

35. 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.

36. Vendor Feedback:

34.1 In this dealing Vendors feedback is important for the purchaser to improve its processes. If Contractor have to report any grievance, problem or require any clarification, information, Contractor is requested to contact purchaser at email ID:

CC_CUSTOMERFEEDBACK@tatapower.com

34.2 Contractor 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. Contractor performance with respect to the said factors will be taken into consideration for future business.

37. Non-Waiver:

Failure of Owner 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 Contractor 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 Contractor and shall not be deemed a waiver of any right of Owner to insist upon the strict performance thereof or of any of its rights or remedies as to any

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 statutes: (along with the latest amendments/additions, as applicable):

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

Social Accountability (SA 8000):

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

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

Health and Safety

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

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

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

Grievance Mechanism

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

Data Protection

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

ANNEXURE-I



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

Signature

Business Associate Name

ANNEXURE-II

CORPORATE SUSTAINABILITY POLICY

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

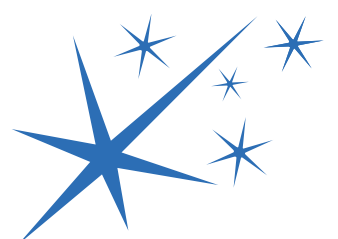
- We will uphold the values of honesty, partnership and fairness in our relationship with stakeholders
- We shall provide and maintain a clean, healthy and safe working environment for employees, customers, partners and the community
- We will strive to consistently enhance our value proposition to the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

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



(Praveer Sinha)
CEO & Managing Director

Date: 15th June, 2018



Supplier Code of Conduct

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

Do’s

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

Don’ts

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

Reporting Violations

The Supplier shall notify the Company regarding any known or suspected improper behaviour of other suppliers or employees relating to its dealings with Tata Power, by email to: cecounsellor@tatapower.com.

The same can also be raised through our 3rd party ethics helpline facility:

1. Email id: tatapower@ethics-line.com ; Website: www.tip-offs.com
2. Helpline numbers: Toll free - 0008001004382 and 0008001008277. Also accessible at normal domestic call rates within India: +91-11-71279005
3. Postal address: Deloitte Touche Tohmatsu India LLP
c/o Arjun Rajagopalan, Partner (Ethics Helpline Services)
19th Floor, 46 - Prestige Trade Tower, Palace Road,
High Grounds, Bengaluru, Karnataka – 560001

Special Terms and Conditions

Item No D.2

1. The information contained in this Tender Document or subsequently provided to Bidder, whether verbally or in documentary or any other form by or on behalf of The Tata Power Company Limited herein referred to as Tata Power, or any of its employees, is provided to Bidder on the terms and conditions set out in this Tender Document and such other terms and conditions subject to which such information is provided.
2. Tata Power also does not accept any liability of any nature whether resulting from negligence or otherwise however caused arising from reliance of any Bidder upon the statements contained in this Tender Document.
3. Tata Power, and its employees make no representation or warranty and shall have no liability to any person including any Bidder under any law, statute, rules or regulations or tort, principles of restitution or unjust enrichment or otherwise for any loss, damages, cost or expense which may arise from or be incurred or suffered on account of anything contained in this Tender Document or otherwise, including the accuracy, adequacy, correctness, reliability or completeness of the Tender Enquiry and any assessment, assumption, statement or information contained therein or deemed to form part of this Tender Document or arising in any way in this Selection Process.
4. Tata Power may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information, assessment or assumption contained in this Tender Document.
5. Though adequate care taken while issuing this Tender Document, Bidder should satisfy himself for completeness of the document in all respects. Intimation of any discrepancy should be given to Tata Power Concerned Person immediately. If no intimation received by this office within 3 days from the date of issue of the Tender Document, then Tata Power shall consider that the document received by the Bidder is complete and to the satisfaction of the Bidder in all respects.
6. Tata Power reserves the right to change any or all of the provisions of this Tender Document before date of submission. Such changes, if any, would be intimated to Authorized Person of Interested Bidder through E-Tender System only.
7. The issue of this Tender Document does not imply that Tata Power is bound to select a Bidder or to appoint the Selected Bidder, as the case may be, for the Contract and Tata Power reserves the right to reject all or any of the Proposals without assigning any reasons and or making any correspondence on this account whatsoever.
8. Bidder shall bear all costs associated with or relating to the preparation and submission of its Proposal including but not limited to preparation, copying, postage, delivery fees, expenses

associated with any demonstrations or presentations which may be required by Tata Power or any other costs incurred in connection with or relating to its Proposal. All such costs and expenses will remain with the Bidder and Tata Power shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by an Bidder in preparation or submission of the Proposal, regardless of the conduct or outcome of the Selection Process.

Any Bidder wishing to undertake site visits for familiarization with site conditions, may do so. All costs towards site visits, conference and submission of documents shall be borne by the Bidder themselves.

9. No claim shall be entertained on account of disruption of internet services being used by bidders. Bidders are advised to upload their bids well in advance to avoid last minute technical snag.
10. The decision of Tata Power Management regarding the opening of offers, evaluation and acceptance of the offer shall be final and binding on all the Bidders.
11. Tata Power reserves the right to extend the date of uploads/opening of tenders without assigning any reason thereof, and also reserves the right to distribute the work among more than one bidder.
12. Tata Power reserves the right to accept or reject any offer, and to annul the offer process and reject all offers at any time prior to award of Offer, without thereby incurring any liability to the affected Bidder or any obligation to inform the affected Bidder of the grounds for the Tata Power decision.
13. Tata Power reserves the right to invite open or limited tenders and when tenderers are called to accept a tender in whole or in part or reject any tender or all tenders without assigning any reasons for such action.
14. The authority for the acceptance of the tender will rest with the Tata Power. It shall be obligatory on the said authority to accept the most suitable bid or any other bid and no Bidder shall demand neither any explanation for the cause of rejection of his / their tender nor Tata Power undertake to assign reasons for declining to consider or reject any particular tender or tenders.
15. Local Conditions: It will be imperative on each Bidder to fully acquaint himself with all the local conditions and *factors* which would have any effect on the performance of the contract. Tata Power shall not entertain any request for clarifications from the tenderer regarding such local conditions. No request for the change of price, of time schedule of completion of work on account of any local conditions or factor shall be entertained after the offer is accepted by Tata Power.

16. The intending bidder will be deemed to have satisfied himself by actual inspection of the site and locality of the works, that all conditions liable to be encountered during the execution of the works are taken into account and that rates he enters in the tender papers are adequate and all inclusive, for the completion of works to the entire satisfaction of Tata Power.
17. Bidder who is Black listed / Banned / Debarred as on originally scheduled date of this bid opening or whose Agreement / Work order has been terminated on account of performance, or a bidder against whom there is adverse report about its performance under an existing contract or a bidders performance security has been forfeited by any company/organization for non-performance at any time shall not be eligible, within 5 (five) years of originally scheduled date of this bid opening by any State / Central Govt. / Govt. Undertaking / Public sector Undertaking in India for similar type of work, will not be eligible for participating in this tender. The Bidder should submit an affidavit on Letter Head (Format F1) as a proof in this regard.
18. The bidder should provide detailed information on any litigation or arbitration arising out of contracts completed or under execution by it over the last five years. A consistent history of awards involving litigation against the Bidder may result in rejection of Bid.
19. Conditional and incomplete tenders shall not be accepted. Bid must be in conformity with schedules / formats of this tender.
20. At any stage if it is found that bidder
- a. have submitted false document for the purpose of qualifying in the tender or non-execution of project as per contract,
 - b. Have not provided relevant details (for example litigation history etc)
- action as per Law will be taken and the pending payment, Bank Guarantee, EMD, Security amount of the bidder will be forfeited by Tata Power at any stage of execution. Also Bidder will be Blacklisted for future Tenders by Tata Power.
21. Issuance of Tender document does not construe that Bidder will be qualified for award of work.
22. Tata Power reserves the right to verify all statements, information and documents, Submitted by the Bidder in response to Tender Document. Any such verification or the lack of such verification by Tata Power to undertake such verification shall not relieve the Bidder of its obligations or liabilities hereunder nor will it affect any rights of Tata Power there under.



Special Conditions of Contract

CONFIDENTIAL

Refurbishment of 48V Lithium-Ion Battery and Battery chargers – 5 Nos in Mumbai Transmission Ref No CC26NK009	THE TATA POWER COMPANY LIMITED	SHEET 1 OF 4
	D.4 SPECIAL CONDITIONS OF CONTRACT	

Sr. No.	TOPIC	PRINCIPLES OF TERMS & CONDITIONS
1	GENERAL	The following Special Conditions of Contract (SCC) shall supplement the General Conditions of Contract (GCC). Wherever there is a conflict, the provisions herein shall prevail over those in the "General Conditions of Contract" (GCC).
2	CONTRACT PRICE AND CONTRACT STRUCTURE	The Price Bid shall remain valid for 180 days from the due date of submission of the bid. Price submitted as part of E-auction / Negotiation shall remain valid for 90 days from date of E-auction / Negotiation. - Price quoted by Bidder shall be on Firm basis without any Price Variation / Escalation. Price shall remain same & unchanged till the commissioning of said scope of work payment is disbursed. Unit rate shall be inclusive of Freight and In Transit Insurance. - Price quoted for the complete scope shall be inclusive of Lodging, Boarding, To & Fro Conveyance to site & Food arrangements. - Taxes shall be paid at actuals.
3	COMMENCEMENT / EFFECTIVE DATE (Note: It is to be noted that commencement date, effective date and notice to proceed are one and the same.)	The bidder will commence work / manufacturing of equipment on issue of Letter of Award (LOA) / Purchase Order by TATA POWER and notice to proceed by the Order Manager. No equipment shall be delivered without specific dispatch clearance from project Manager TATA POWER.
4	CONTRACT PERFORMANCE BANK GUARANTEE	This is as per General Terms & Conditions - Supply CI no 09. Successful bidder shall submit CPBG cum PBG for 10% of contract value in format specified by Tata Power within 15 days after placement of confirmed Purchase Order, valid till warranty period plus 06 months claim period.
5	TERMS OF PAYMENT	This is further to General Terms & Conditions - Supply CI no 06. I. No advance payment shall be made. II. Payment Terms shall be as follows: (A) Payment Terms for Supply Part: 80% of supply cost shall be payable against supply on pro-rata basis. Remaining 20% of supply cost shall be payable upon installation, testing and commissioning.

Refurbishment of 48V Lithium-Ion Battery and Battery chargers – 5 Nos in Mumbai Transmission Ref No CC26NK009	THE TATA POWER COMPANY LIMITED	SHEET 2 OF 4
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		Sunset Clause - In case commissioning & subsequent completion of the overall project gets delayed beyond 90 days from scheduled date due to reason attributable to Tata Power, then the respective payment will get released after completion of further 60 days credit period. (B) Payment Terms for Service Part: 100% of the Service part of the Contract price shall be paid upon installation, testing, commissioning and submission of all relevant and error free documents. (C) Payment Credit Period - 60 Days For MSME Vendors Payment Credit Period shall be 45 Days (D) Income tax and any other statutory recoveries as applicable shall be recovered from contractor monthly running bills and TDS certificate for the deductions shall be furnished. (E) All payments against supply are subject to submission of unconditional CPBG cum PBG and unconditional acceptance/signing of the PO/contract agreement. (F) Safety Retention as per Safety T&Cs
6	INSURANCE	This is further to General Terms & Conditions - Supply CI no 05, complete insurance will be in bidder's scope.
7	LIQUIDATED DAMAGES FOR DELAYS, NON – PERFORMANCE & OVERALL CAP	This is further to General Terms and Conditions Supply clause 10.0, Liquidated Damages (LD) specific to this package will be: 01% (of total order value) per week or part thereof for each week's delay, beyond the schedule date, subject to maximum of 10% of the total order value.
8	WORK COMPLETION PERIOD	Post PO placement, BA to take up delivery of material at site in close coordination with Tata Power project manager. a. Supply Part - Delivery of complete supply items within 10 weeks from the date of order placement. The above timeline includes the following: - 1 week from PO for BA to submit technical particulars, drawings & relevant technical annexures etc. 1 week for Tata Power to provide acceptance / confirmation along with manufacturing clearance. 8 weeks from the PO for Inspection of equipment.

Refurbishment of 48V Lithium-Ion Battery and Battery chargers – 5 Nos in Mumbai Transmission Ref No CC26NK009	THE TATA POWER COMPANY LIMITED	SHEET 3 OF 4
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		b. Service Part - Services for Installation, Testing & Commissioning - 2 weeks from the date of delivery of material at site.
9	WARRANTY PERIOD	This is further to Warranty period mentioned in the General Conditions of Contracts-Supply and General conditions of Contract-Services. The Warranty period for the equipment as part of this package shall be 60 Months from the date of delivery. The Performance Bank Guarantee shall be submitted accordingly by the bidder.
10	Total Compliance to TCOC, safety Terms & Conditions and International Safety standards	Tata Power Contractor Safety Terms and Conditions is enclosed as Annexure to the GCC. Supplier shall have to abide fully without any deviation.
11	BID SUBMISSION (In Ariba)	As mentioned in Tender Notice
12	Reverse Auction	Tata Power reserves the right to conduct the reverse auction for the products / services being asked for in the tender. Only Technical Qualified Bids will be allowed to participate in e-auction. Date and time of e-auction will be intimated through E-Tender system to Authorized Person of Interested Bidder. Tata Power reserves the right to go for Reverse Auction (RA) for price negotiation and discover the most competitive price on ARIBA portal, Tata Power's official e-tendering platform. This will be decided after techno-commercial evaluation of the bids. Bidders need to give their acceptance with the offer for participation in RA. Non-acceptance to participate in RA may result in non-consideration of their bids, in case Tata Power decides to go for RA. Only those bidders who are techno-commercially qualified shall be eligible to participate further in RA process. However, the original H1 bidder (whose price bid is the highest post techno-commercial evaluation) shall not be allowed to participate in further RA process provided minimum three techno-commercially qualified bids are available.

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13	TPSDI Training	To improve work safety and to ensure that all work force deployed at owner premises have the right orientation / induction and skills training before they undertake any work, the bidder shall accordingly plan and enrol his and sub-contractors work force to the respective skills / crafts training (Levels L1/L2/L3) offered by TPSDI. This is further to General Conditions of Contract Clause 3.54.23. In order to improve work safety and to ensure that all work force deployed at owner premises have the right orientation / induction and skills training before they undertake any work, the bidder shall accordingly plan and enrol his and sub-contractors work force to the respective skills / crafts training (Levels L1/L2/L3) offered by TPSDI. In addition to all prevailing safety practices bidder to take special note of following: 1. TPSDI training is mandatory. Each employee must undergo L1 training for 3 days. Depending on competency certain workmen will need L2 training which is for 2 days and L3 training which is for 3 days. 2. As per safety standards at Tata Power, Hydra is banned and Farhana or regular crane is accepted along with all statutory approvals i.e., Form 11 for tools and tackles, Driver Licence, PUC, Insurance etc. 3. Electric chippers are not allowed in wet / waterlogged areas 4. Electric Submersible Pump Operation is not allowed when people are in the pit.
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The Tata Power Company Ltd		<i>Appendix 2 to CSCC Safety Terms and Conditions</i>
Document No. TPSMS/GSR/STC/009 REV 06		Date of Issue: 01/04/2024

Appendix 2:

Safety Terms and Conditions

Reason for Change	Date of Last Revision	Prepared By	Reviewed By	Approved by
Periodic Revision and Inclusion of Procedures and formats from BASCC.	<u>1 Aug 2023</u> <u>(Rev 5)</u>	All Discom and CFT members	Corporate Safety Team	 Suresh H Khetwani (Chief safety and Environment)

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1.0 Objective:

The Objective of Safety Terms and Conditions is to apprise the Business Associates about various expectations from the BA to implement Tata Power Health & Safety Management System without fail.

2.0 Scope:

This procedure applies to all operating and project sites of The Tata Power Company Ltd and Group companies including new businesses like Electric Vehicle charging, Home Automation, Microgrid, Roof top solar etc. This Code of Conduct also applies to all operating and project sites of four Odisha Discoms and New business based on mutually agreed timeline for implementation.

3.0 Safety Organization & Responsibilities

3.1 Business Associate Site Management and Supervision

Each Business Associate will be responsible for fulfilling all statutory and safety requirements as per the laws of the land and not limited to Factory Act, Electricity Act, Electricity Rules and Regulations, Shop and Establishment Act etc.

Each Business Associate shall provide at least one competent full-time safety supervisor for workforce of every 50 workers or less than that. When workforce ranges to 500, the Business Associate must provide at least one qualified safety officer (This may be subjected to change as per applicable act). Thus, for work force of 500 workers there will be one qualified safety officer and 10 safety supervisors. For every 500 additions in workforce, the Business Associate must add 1 safety officer and 10 safety supervisors. The Order Manager or Safety Department of the Tata Power Division /Discoms will review and approve the appointment of all safety officers and supervisors. The safety supervisors/officers will work with the guidance from Tata Power Division /Discoms Safety Department and align themselves with Tata power Division/Discom safety requirements.

For O&M related AMC activities, minimum one qualified safety officer to be deployed for each Division of the Discoms.

(For any specific & specialized work, site safety supervisor will be decided by SCG)(R6)

Qualified safety officer means he or she has completed PDIS or ADIS from a recognized institute.

Site Safety Officer/Safety Supervisor / Safety Coordinator shall be interviewed by the Order Manager/ Safety head of the Tata Power Division/Discom and then gate passes shall be issued if the interview is successful.

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Site Manager of Business Associate /Sub Vendor is responsible, and will be held accountable, for the safety of their own workforce as well as that of sub-Business Associate s. He should also ensure that all equipment, materials, tools, and procedures remain in safety compliance at job site.

Responsibility of Site manager includes, but not limited to:

- 3.1.1 Holding officer/supervisors accountable for safety and actively promote safe work performance.
- 3.1.2 Participate in and cooperate with all safety program requirements to be implemented to meet Tata Power Division /Discoms safety objectives
- 3.1.3 Ensure timely reporting of safety incidents, near misses, unsafe acts, and conditions.
- 3.1.4 Identify the training needs of BA employees and maintain all safety training documents.
- 3.1.5 Provide Safety Performance Report at an agreed frequency.
- 3.1.6 Stopping of unsafe work (Acts and/or Conditions) immediately. Work to start only after corrective actions are implemented.
- 3.1.7 Ensure and participate in daily toolbox talk for all the jobs.
- 3.1.8 Ensure that only tested and certified tools and equipment are issued to the workers and being used at the site.

3.2 Business Associate Supervisors and General Staff.

Business Associate s' site supervisors and general staff members in charge of job site functions such as field engineering, warehousing, purchasing, costing, and scheduling etc. are responsible for the safe performance of the work of those they supervise. They must set an example for their fellow employees by being familiar with applicable sections of the Site Safety program and ensuring that all site activities are performed with SAFETY as the primary objective.

Each site supervisor is responsible and will be held accountable for identifying, analyzing, and eliminating or controlling all hazards through implementation of an aggressive, pro-active Health, Safety and Environmental Program. Each supervisor will proactively participate in the Safety program by observing, correcting, and recording unsafe acts and conditions at plant / sites.

The BA's supervisor is the link between Tata Power Management and the BA (including his employees). (R6)

- He coordinates the work of his company's employee on site and is responsible & accountable for the safety of BA workforce. He will collaborate with site safety supervisor (SSS). BA's supervisor shall review the Safety requirements with his employees prior to the beginning of each job. Documentation of this review shall be forwarded by him to the Order Manager.(R6)

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- Assigning jobs to his workers, inspection of tools, equipment & PPEs , reporting of incidents & near-misses, housekeeping of work area and carrying out Safety Audits.(R6)
- Deployment of all applicable Safety standards & procedure as mention in Safety Term& Condition CSMF2 during execution of the jobs.(R6)
- Ensuring job specific training prior to execution of the job.(R6)
- Conducting Tool - box meeting and compliance of SOP & statutory requirements at work place, correction of all unsafe conditions and acts.(R6)
- BA'S Supervisor will deeply involve in making JSA through participation of work force.(R6)
- BA's Supervisor will invite all BA employees for participation & engagement daily ensuring 100% in either observation reporting, TBT, Mass Meeting and discussion for Risk Assessment & implementation of control measure.(R6)

3.3 BA Site Safety Supervisor (SSS)(R6):

- 3.3.1 SSS will carry out daily safety audit and inspections of tools, tackles, equipment and PPEs. They will identify and help in correcting the unsafe acts and unsafe conditions created while executing job t site with the help of BA's supervisors (R6).
- 3.3.2 SSS will ensure his participations in TBT and Mass Meetings regularly. They will also ensure reporting of all incidents & near-misses and participate in incident investigation (R6).
- 3.3.3 SSS will help in risk assessment of activities while developing SOP for the job (R6).
- 3.3.4 SSS will deeply involve in making JSA through participation of work force.(R6)
- 3.3.5 SSS will assist for participation & engagement of 100% BA employees daily in either observation reporting, TBT, Mass Meeting and discussion for Risk Assessment & implementation of control measure.(R6)

3.4 Business Associate Workforce

- 3.4.1 Business Associate shall provide adequate quality and quantity of manpower as mutually agreed. Generally, for each 10-15 workforce one supervisor is suggested. For all high risk jobs there shall be one Business Associates supervisor shall be deployed.(R6).
- 3.4.2 All the Business Associate employees shall attend "SHE L0(Other than new business and Odisha Discom)/L1 Foundation Course in Safety". Depending on the critical procedure in job employees shall also be required to attend "SHE L2 course of critical/high risk operations". All Supervisors shall be required to attend "SHE L3 Supervisory Training". All the above trainings will be conducted by TPSDI/Skill development

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institute of Disco, or other equivalent institute approved by Tata Power.

- 3.4.3 Business Associate employees shall be required to attend any other additional training if suggested by Order manager or Site Safety Head. The cost of such additional training shall be borne by the Vendor.
- 3.4.4 Business Associate / Vendor shall mobilize their manpower well in advance to complete the training through TPSDI/Sill development Institute.
- 3.4.5 The Vendor / BA shall arrange or bear the conveyance and food expenses incurred during training of BA employees in Odisha Discom.
- 3.4.6 The validity of the training L1, L2 and L3 is 3 years. There will be competency assessment as Revalidation test in every three months for Tata Power Division and six months for Odisha Discom till one year from implementation of BASCC. Those who fail in the competency assessment shall undergo training again.
- 3.4.7 Supervisors/Welder/Electricians/Line man /Fitters /Radiographers/Riggers engaged by the Business Associate shall have valid competency certificates issued by authorized agency/Institute.
- 3.4.8 Business Associate workforce must make safety a part of their job by following safety rules and regulations and by using all safeguards and safety equipment. They must take an active part in the Safety programs for the Site.
- 3.4.9 Every member of the workforce is expected to report for work without influence of any Drug/Alcohol. Failure to comply with this requirement shall result in immediate termination of employees under the influence of drug and alcohol plus show cause notice/penalty to the vendor.
- 3.4.10 All employees shall report hazardous conditions, practices and behaviours in their work areas and correct wherever possible.
- 3.4.11 Workforce is responsible for active participation in safety and health programs, suggestion systems, trainings and reporting of unsafe act/practices, Unsafe conditions incidents and injuries to their supervisors.

3.5 Business Associate (Vendor) /sub-Vendor

- 3.5.1 Vendors/Business Associate shall always comply with and ensure that their workforce comply with all site safety rules and regulations. Specifically, with applicable provisions of the Site Safety Management Plan and all statutory safety rules and regulations.
- 3.5.2 After receiving the work order/ purchase order vendor/Business Associate /bidder shall not appoint Sub-Business Associate without safety assessment of the sub-Business Associate through safety concurrence group Under Business Associate Safety Code of Conduct. Penalty of 5% of contract value will be applicable to the Business Associate if sub-Vendor is appointed without the permission of SCG and without evaluation through BASCC process.

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- 3.5.3 For engaging any sub-Vendor, the Prime Vendor as well as the sub-Vendor should be individually registered with Tata Power. Sub-contracting or hiring of others, by the BA to perform the services is subjected to specific, prior approval by the CA/OM. Such approval shall depend upon compliance with the following minimum requirements (R6):-
- i. Sub-vendors identified by the Prime vendor will be subject to the same Safety Potential Evaluation Criteria as the Prime vendor for all Medium-risk/High-risk job where supervision will be done by the sub- vendors. In such cases, vendors must have a Star-rating of 4 or above, for becoming a sub- vendor(R6).
 - ii. The SCG team shall evaluate the Safety and technical competency of the sub-contractors for High risk job(R6)
 - iii. The Departmental Head will have the authority to approve any sub-contracting process based on requirement as submitted by the Prime Vendor (See CSM F-14 Sub-Vendor Engagement Request Form).
 - iv. No Safety potential evaluation shall be conducted for sub-letting of Low risk work(R6).
 - v. The Prime vendor shall be fully liable and responsible to Tata Power for the acts, errors, and omissions of its sub-vendors and shall be relieved neither of any obligation to Tata Power under the contract, nor of any other legal requirements(R6).
 - vi. The Prime vendor shall use only sub-vendors of demonstrated experience and reliability regarding the services to be provided(R6).
 - vii. The Sub-vendor shall agree in writing to be bound by all obligations of the Prime vendor set forth in the Contract.(R6)
 - viii. Safety performance evaluation shall be done for both prime vendor & sub-vendor.(R6)

Types of Sub-contracts and Associated Requirements (R6):

- I. Sub - Vendor working with his own supervision:- Sub-vendors must achieve a minimum Star-rating of 3 for performing High risk jobs under Tata Power supervision or under the Principal/Main Vendor (Prime Vendor).(R6)
- II. Sub-vendor working under Prime vendor's supervision (as supplier of manpower):- Manpower-supply contracts have to be supervised by the Prime vendor and the Prime vendor's Star- rating has to be taken into consideration. Vendors supplying manpower need not qualify in the Star-rating assessment.(R6)
- III. 3. Only one level of sub-contracting is allowed, and the use of any sub-vendors must be authorised by Tata Power before any contract is finalised. Sub-vendors shall be subject to the same registration and selection/screening processes, as well as the same Safety performance requirements as those required of all Tata Power vendor's. Sub- vendor details are to be attached to the main contract during the RFQ stage. The process of sub-contracting is to be approved by the Chief / Head of the department (BASCC - Appendix#14).(R6)

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4.0 Procedure (R6).

4.1 Registration of Business Associates (Vendors):

For Vendor Registration, Contract Department will issue following documents for evaluation of Business Associate's safety capability.

- 1) **CSM F2 Safety Terms and Conditions (R6):** The document **CSM F2 Safety Terms and Conditions** provides the information about Tata Power-Division /Odisha Discom safety System to the Business Associate
- 2) **CSM F3 Safety Category Qualification Form(R6):** Business Associate will submit the **CSM F3 Safety Category Qualification Form** with all relevant details and documents to Vendor Registration Initiator, which will in turn forward it to Safety Concurrence Group (SCG) for evaluation.

CSM F3 (R6): - Safety Category Qualification form

1. "Safety Category Qualification Form" is part of vendor registration form. It needs to be filled by the Business Associate at the time of Registration and should be submitted to Requester / Order Manager with all relevant documents.
2. The same will be evaluated by Safety Concurrence Group of the Division (SCG).
3. Information provided by Business Associate will be verified during site visit.

Safety Category Qualification Form

Please consider my application for

Category A Vendor: Vendor eligible to carry out Very High- and High-risk O&M/Project jobs

Category B Vendor: Vendors eligible to carry out technical jobs, classified as Medium /~~low~~ risk

Category C Vendor: Vendors eligible for to carry out low or very low risk administrative and office job

Category D vendor: All Consultants, Medical Practitioners or vendors taking job from Tata Power and working from their own premises.

Name of the Vendor:			
Sr. No	Safety Information	Yes / No	Remarks
1	Certified for i. ISO 45001, ii. ISO: 14001 iii. ISO: 9001	i. Y/ N ii. Y/ N iii. Y/ N	If Yes, Attach copy of the certification. If No, mention plan to get the certification.

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Name of the Vendor:							
	(ISO certificates to be issued from reputed accreditation agencies specified by Tata Power)						
2	Safety Statistics for current and Last Three (3) Years - LTIFR - LTISR	Yes/No		Current Year	Year 1(Last FY)	Year 2	Year 3
			LTIFR				
			LTISR				
3	Any Compensation paid due to accidents during current and last three years?	Yes/No		Amount (INR)	Manhour		
			Current Year				
			Y1 (Last FY)				
			Y2				
			Y3				
4	Any prosecution against you by statutory bodies/clients during last three years due to statutory violations, criminal negligence towards safety and dereliction of duty of care towards your employees? Is any case still pending against you?	Yes/No	If yes, give details. If no, give an undertaking that no case is pending against you and you have not been prosecuted by statutory bodies or clients.				
5	Do you have Safety Policy? Safety Principles? And Lifesaving Rules?	Yes/No	If yes, attach copy of the documents available.				
6	Do you have Safety training process?	Yes/No	If yes, attach safety training process and average training manhour of your employees for the last three years.				

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Name of the Vendor:			
7	Do you have a system for recording, reporting, and investigating all incidents or near misses?	Yes / No	If yes, show the incident statistics of last three years and implementation of CAPA.
8	Do you have a disciplinary action program against your employees for violation towards safety rules and procedures?	Yes/No	If yes, show the records of disciplinary action taken the last three years.
9	Do you have a reward and recognition scheme for your employees who show exemplary safe behavior and contribute to overall safety improvement at site?	Yes/No	If yes, show the records of Reward and Recognition given during the last three years.
10	Do you engage in safety promotional activities?	Yes/No	If Yes, Show the proof of engagement in safety promotional activities.
11	Have you been recognized or awarded or rewarded by government bodies of clients for showing excellence in safety management in your jobs during last three years?	Yes / No	If Yes, Show proof.
12	Do you provide adequate quality of PPEs to your workmen?	Yes/No	If yes, please provide details of PPE Matrix and if required, samples for inspection.
13	Do you have Safety organization structure e.g., Safety Officers and Safety Committees?	Yes/No	If yes, attach copy of the safety organization structure, details of safety committees and safety professionals.
14	Name and address of sites where work is in progress or worked earlier	Yes/No	Site details to be attached for inspection by Tata Power-Division /DISCOM Officials.

Note: If you respond NO to any of the above questions, you can mention your plan to get the required documents.

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I hereby confirm that the information provided above are true. I give my consent to be penalized as deemed fit in case any information given above are found to be false.

I will abide the general safety guidelines mentioned in the purchase order / work order and will ensure to prepare and follow site specific safe operating practices in consultation with the site-in-charge and safety professional. I will abide by penalty scheme in case of non-compliance.

Signature :

Name and Designation :

Stamp of Organization :

- 3) **CSM F4 Safety Potential Evaluation Criteria** : The SCG will evaluate the details submitted by the Business Associate based on a predetermined criteria **CSM F4 Safety Potential Evaluation Criteria along with Star Rating(R6)** for Vendor Registration and will determine the category (Category A/B/C/D) for which the Business Associate will be registered. As mentioned in the above criteria, a site visit may also be organized by SCG prior to registration under Category A and B. In case, the Business Associate does not qualify the safety criteria, the Business Associate will not be registered. However, he may apply afresh for registration after 6 months.

CSM F4 - Safety Potential Evaluation Criteria for Vendor Registration (For Information to BA-Not to submit by BA) R6

At the time of vendor registration, vendor will be registered under 4 categories

- 1) **Category A**- Vendors eligible to carry out High risk Jobs
- 2) **Category B**- Vendors eligible to carry out technical jobs that are Medium/~~low~~-risk
- 3) **Category C**- Vendors eligible to carry out administrative and office jobs
- 4) **Category D**- Outsourced Jobs / Consultants /Medical Practitioners / Suppliers etc

For vendors to be registered under **Category A/B**, a safety potential evaluation will be carried out based on following parameters. (Actual **score is safety capability score**)

Star rating criteria score: 5 Star- 90 to 100, 4 Star- 80 to 90, 3 Star- 70 to 80(R6)

Sr No	Description	Weight age (%)	Actual Score
1	Does the service provider have a valid 45001 Certification?	10	
2	<u>Performance Measure: Lead Indicator</u> <u>(Ref to Safety Performance evaluation report CSM F11 (A)</u> <u>Lead indicator score)(R6)</u>	<u>40</u>	

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3	<u>Performance Measure: Lag Indicator</u> <u>(Ref to Safety Performance evaluation report CSM F11 (B) Lag indicator score)(R6)</u>	20	
4	Has there been any prosecution / conviction for any Contravention regarding safety and Health provision under the factories Act/Electricity Act / BOCW Act and Rules framed there under? If yes Give Zero otherwise 5 Marks.	5	
5	Check the Safety orientation & training process of Service provider- Records of Safety training provided to safety officer/supervisor /workmen during last 1 year as percentage (%) of total employed by service provider ✓ Safety Officer: >80% of employees: 5 Marks, 50 to 79% of employee: 2.5 Marks and <50%: Zero. ✓ Safety supervisor: >80% of employees: 5 Marks, 50 to 79% of employee: 2.5 Marks and <50%: Zero. ✓ Workmen: >80% of employees: 10 Marks, 50 to 79% of employee: 5 Marks and <50%: Zero	20	
6	Check the organizational structure for safety professionals & engineers / supervisors. ✓ Check Availability of number of Safety Supervisor from government recognized institute as per workforce strength. 1 in 50 employees than 5 Marks <u>otherwise Zero.</u> (R6)	5	
	Total	100	

Evaluation Criteria for Category C

Sr no	Description	Weight age (%)	Actual Score
1	Does the Business Associate have a valid ISO 9001 certification?	40	
2	Check the Safety statistics of Service provider (If available than 10 otherwise Zero)	10	
3	Check the trend LTIFR/LTISR for last 3 years (If less than 0.2 than give 20 Marks if between 0.2 to 0.3 than give 10 marks and otherwise Zero	20	
4	Has there been any prosecution / conviction for any Contravention regarding safety and Health provision under the factories Act/Electricity Act / BOCW Act and Rules framed there under? If yes Give Zero otherwise 10 Marks.	10	
5	Check the Safety orientation & training process of Service provider- Records of Safety training provided to safety officer/supervisor /workmen during last 1 year as percentage (%) of total employed by service provider ✓ Safety Officer: >80% of employees: 5 Marks, 50 to 79% of employee:	20	

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	2.5 Marks and <50%: Zero. ✓ Safety supervisor: >80% of employees: 5 Marks, 50 to 79% of employee: 2.5 Marks and <50%: Zero. Workmen: >80% of employees: 10 Marks, 50 to 79% of employee: 5 Marks and <50%: Zero		
	Total	100	

Evaluation Criteria for Category D

Category D does not require any evaluation as it is for outsourced job outside the Tata Power company premise.

For vendor to be registered for any category, vendor's safety capability score should be $\geq 70\%$.

4.1.1 Star Rating(R6):

SCG will evaluate Star Rating as per following -

- Initially potential Star Rating based on **CSM F4 Safety Potential Evaluation Criteria**
- After 6 month actual star rating assessment to be carried out based on **CSM F4 Safety Potential Evaluation Criteria** and safety performance evaluation.
- Odisha Discom & New Business Star Rating process will be applicable only 1 year after implementation of it.
- Based on Safety capability score Vendors rating will be evaluated (For 3 star rated vendors - within 12 months from previous assessment date and for 4 & 5 Star rated vendors – within 24 months from previous assessment and Re-assessment within three months from previous assessment date when a vendor is unable to achieve Star rating 3)
- Category A - Vendor must require [Safety Star Rating 4](#) and above.
- Category B - Vendor must require [Safety Star Rating 3](#)

Star Rating will be evaluated by Third Party from FY 26

4.2 Contract Preparation(R6).

Safety bid Evaluation will be done only for medium and high risk (R6). The RFQ will be attached with **CSM F2 Safety Terms and Conditions which includes following Documents**

- 1) CSM F6 Safety Competency Assessment Form
- 2) CSM F8 PPE requirements
- 3) CSM F9 Site Safety Management Plan Job Specific Safety Requirement (Educational and Professional Qualification, Skill & Experience Manpower, Tools,

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and Tackles, e.g., man lifter, use of drone, use & availability of rescue kit, Work Methodology etc.)

Safety bid evaluation will not be done for category C and D.

BA shall submit duly filled **CSM F6 Safety Competency Form** along with the bid. SCG will evaluate the document as per the **CSM F7 Safety bid evaluation criteria**. **Site Safety Management Plan CSM F9**, defining the complete procedure of executing the job at site will be signed by the Business Associate and SCG after mutual agreement. BA will attach a copy of Site Safety Management Plan along with PO to the successful bidder. Please refer **CSM F5 Process Flow Chart for issuing RFQ and PO** significant health and safety risk associated with it.

CSM F6 - Safety Competency Assessment Form (Template)

Name of the Vendor/Bidder:

Name of the Sub Vendor (If job is given to Sub Vendor):

Description of the Job:

Request for Quotation (RFQ) No.:

Vendor/Bidder to mandatorily provide the below safety competency related information:

1. Proposed Manpower Deployment Schedule : -

Type of manpower	Qualification	Experience	Month 1	Month 2	Month 3	
Project /AMC Manager()						
Site In Charge						
Safety Manager						
Safety Officer						
Supervisors						
Technicians						
High Skilled workmen						
Skilled workmen						
Semiskilled workmen						
Lineman						
Helpers						
Drivers						
Unskilled						

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<u>Others()</u>						
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Instruction to Bidders:

- Indicate the overall site manpower deployment schedule as above
- Indicate direct or subcontracted employees by using color code given below:

Direct Bidder Employee – Green

Partly Direct / partly Subcontracted – Yellow

- 4.1.1 Subcontracted – Red** If subBusiness Associate detail is not available at stage of Bid evaluation, then this can be agreed with Order manager or Engineer in charge before deployment Ensure that all sub-Business Associate s follow the Tata Power Safety Procedure and agreed CSM F9 Site Safety Management Plan.

- Against each category, indicate minimum educational qualification and work experience
- Add rows to include other specialized manpower, if any.
- Extend columns to cover the entire duration of the proposed contract.
- If the operation is in shifts, then indicate shift in charge and / or safety officers required for each shift operation.

2. List of Tools, Tackles, Machines and Equipment: -

Bidder/ Vendor to provide the list of tools, tackles, equipment **to be used during the job / project execution**. Bidder/Vendor to ensure that all the lifting tools and tackles, pressure vessels are duly certified by the competent person authorised by the Chief Inspector of Factories of the respective state prior to start of the job

Sr. No	Description of Tools / Tackles	Capacity / Rating	Quantity	Make	Year of manufacture	Remarks
1						
2						
3						
4						
5						
.....						

3. Safety Records:

Bidder to provide the details of fatalities and lost workday cases (LWDC), occurred in last three years (data to be provided for the last completed FY and preceding 2 years).

Description	Safety Data for current and Last 3 Years			
	Current Year	Year 1 (Last FY)	Year 2	Year 3
		20__ - __	20__ - __	20__ - __
Fatalities (Nos.)				

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Lost Workday Cases (Nos.)				
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In case of no fatalities, LWDC during any year, the form may be filled stating NIL against the respective year. Bidders are encouraged to also submit the RCA / incident investigation reports and the learning's implemented out of the above reported incidents

4. **Job Safety Plan/ Method Statement:**

Bidder to provide / enclose a detailed Site/Job Safety Plan along with a Method statement detailing the execution philosophy (how the bidder intends to execute the Job/Project), identifying all key activities which are required to be performed by the Business Associate at Site. Bidder to also list down all high-risk activities and provide the Hazard Identification and Risk Assessment (HIRA) for all such high-risk activities involved in the site work.

(Use Method Statement template attached as Appendix 9)

5. **PPE Requirement -**

Division/DISCOM Requirement	Bidders Response
The Bidder/Vendor shall ensure that all PPE of Approved standards as per CSM F8 – PPE Requirements shall be always available and shall be used by his employees with no exception whatsoever. Bidders to also ensure Standard PPE matrix of Tata Power to be followed for all activities.	
10% Buffer stock of PPEs to be provided by bidders at each circle to meet any contingency	
Bidder will ensure that sample PPEs to be submitted/approved by Safety Department along with EIC at the time of submission of Safety bids for evaluation In case bidder manpower found using substandard or any PPEs which are not approved by the Tata Power-Division /DISCOM representative, then Tata Power-Division /DISCOM will provide the same to manpower deployed at the cost of bidders.	

6. **Vehicle Deployment:** Bidders to provide details of all vehicles deployed during execution of work-()

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S. No.	Vehicle No.	Vehicle Type	Location	EV/CNG/Diesel/Petrol	Year	Whether CNG endorsed on RC

7. **Crane Deployment**-(): Bidders to provide details of crane to be deployed during the execution of work as and when required. Bidders to provide approved new gen crane ACE Model SX150, ACE FX150 and Escorts Model TRX 1550.

Sl No	Crane No	Location	Year

8. **Training Records**-(): Bidders to provide training records of employees deployed for the execution of work during last one year. These training includes OHS (Occupational Health and Safety) Training, Training on SOP/Work Procedures and Medical Emergency trainings imparted at their own facility, cost, and expenses. Bidders to provide the following details:

Tata Power-Division /DISCOM Requirement	Bidders Response
Training records of employees at their own facility, cost, and expenses for last one year	
Training facility available with Bidders	
Future road map for enhancing the competency of workforce	

9. **Rewards and Recognition**-(): Bidders to provide the details of process deployed in their organization for sharing and resolution of safety concerns raised by their employees. Also, bidders to provide the details of Rewards and Recognition process in their organization for safety to encourage the morale of their workforce.

10. **Management System Certification: -**

Sr.No	Certification	Yes / No	If Yes, Year of Certification	If No, Target date for Certification
1	ISO 9001			

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2	ISO 14001			
3	ISO 45001			
4	Any other (Specify....)			
Note: Please attach certificates to support above. In case not accredited for above but applied for, application letters may be attached.				

CSM F7 Safety bid evaluation criteria. If any specific condition related to Contract is required to be conveyed to the Business Associate, Site safety team will attach the same as Annexure for specific conditions of job and submit it to contract team along with safety bid evaluation form. Commercial bid of Business Associate will be considered for evaluation by contract team only if Business Associate is qualified in safety bid. Site Safety Management Plan, defining the complete procedure of executing the job at site will be signed by the Business Associate and SCG after mutual agreement. Contract shall attach a copy of Site Safety Management Plan along with PO to the successful bidder.

CSM F7 - Safety Bid Evaluation Criteria (For Information to BA-Not to submit by BA) (R6)

Safety Bid Evaluation will be based on following parameters.

Evaluation Criteria

S. No.	Description	Max Marks	Criteria for evaluation
1.	Qualification and Experience of manpower	15	As per Clause No. 1 <u>CSM F6 (R6)</u>
2.	Tools and Tackles to be provided by bidder	15	To be evaluated as per approved tool list of concerned departments.
3	PPE Requirements	5	To be evaluated as per approved PPEs standard and PPE Matrix specified in <u>CSM F8.(R6)</u>
4	Job Safety Plan/ Method	15	To be evaluated as per as per SOP/WI/HIRA
5	Vehicle Deployment	5	<u>Weightage will be given for CNG/Electrical Vehicles with endorsement of CNG kit on RC (R6)</u>
6	Crane and Mechanized heavy equipment Deployment	15	<u>Date of manufacturing or running hours or stipulated in laws.(R6)</u>
7	Training Records	5	Training records to be evaluated with evidence and scoring to be done as per availability of records
8	Certificate Accreditation	5	ISO 9001-2.5 Marks ISO 45001- 2.5 Marks ISO14001- 2.5 Marks. Total Max 5 Marks for all Three

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9	Safety Initiative for learnings implemented in accidents in organization and work force (Fatal / Non-Fatal)	15	Maximum 15 marks will be awarded for visible evidence in terms of safety initiative deployed based on learning of accident in organization and workforce in case of accident
10	Rewards and Recognition Process	5	Maximum 5 marks will be awarded for R&R process evidence
Total		100	

Safety Records (Lag Parameter)-

1.	Fatal Accident	(-) 10 Marks for each case with max of 15 marks	For any fatality in Tata power /Other company in Current and last three years 10 marks will be deducted with maximum up to 15 marks. For new entrant BA, these marks will be deducted for Past safety records. If and BA found hiding such facts, then contract will be terminated immediately during the execution stage.
2	LWDC (Non-fatal)	(-) 5 Marks for each case with max of 10 marks	For each LWDC (Non-Fatal) case in Tata power /Other company in Current and last years, 5 marks will be deducted with maximum up to 10 marks. For new entrant BA, these marks will be deducted for past safety records. If and BA found hiding such facts, then contract will be terminated immediately during the execution stage.

Final Qualifying Criteria

S. No.	Description	Max Marks	Criteria for evaluation
1.	Qualified Bidders	More than 70 marks	Marks Obtained. 60 Marks for New business-like Odisha Discom for one year from CSCC implementation date.

		Minimum Requirement	Weight age (%)	Score Obtained
Manpower	Safety Officer (1 per 500)	Qualification - Safety Officer shall possess recognized degree in any branch of engineering with practical experience in similar industries of Min 2 years and Advance Diploma In Industrial	5	

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	workers) or as per requirement	Safety by State technical board. (Each state government prescribes the qualification of safety officer.). Require knowledge of Local language. Experience- Minimum 2-year experience in relevant field as mentioned in the job in PR.		
	Safety Supervisor (1 per work site up to max. 50 workers) <u>(For any specific & specialized work, site safety supervisor will be decided by SCG)(R6)</u>	Qualification- Supervisor shall possess ITI/ Diploma in relevant field. PDIS is desirable, but not mandatory. Require knowledge of Local language. Experience- Minimum 5-year experience in relevant field as mentioned in the job in PR. Training – Trained and certified by Tata power Skill development Institute or equivalent institute in relevant safety procedures. Note: On request of the Business Associate /Users -TPDSI should vet & certify the skilled & experienced Technician if Technical Qualification is not adequate.	5	
	Qualified Technician (Skilled workers as electrician, rigger, fitter, welder, cable jointer, line men etc.)	Experience- Minimum 2-year experience (or experience prescribed by state government) in relevant field as mentioned in the job in PR. Training – Trained and certified by TPSDI or equivalent institute in relevant safety procedures.	5	
Tools & Tackles	Equipment / Machines/ Tools & Tackles (lifting and shifting tools)	The list of Equipment /Machines / Tools and tackles to be used for job to be submitted by the Business Associate . Evaluation of the list will be carried out based on 1) Suitability as per the relevant job	15	

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		2) Make and age of the tools from authorized agencies defined by the user.		
		3) Certification by the competent authority of respective state.		

CSM F8 - PPE requirements

The Business Associate shall ensure that the following PPE of Approved standards shall be always available and shall be used by his employees with no exception whatsoever. • PPE shall be conforming to BIS/DGMS/DIN specifications, in good condition and shall be comfortable to his employees, when used. This is indicative. For better clarification refer PPE procedure- ***TPSMS/GSP/PPE/023***. as per safety terms and condition Appendix 3 CFM 3 in detail.

PPE Requirement

1	All Business Associate 's employees at site	Safety Florescent Jacket (orange color), Safety helmet & safety shoes with composite or steel toe cap
2	Workers mixing asphalt, cement, lime / concrete	Safety goggle & protective Hand gloves and footwear, Nose mask.
3	Welders / Grinders/Gas cutters	Welding screen/goggles, safety shoes, leather hand gloves, aprons, leg guard
4	Stone breaker	Protective goggle, hearing protection, anti-vibration hand gloves and Protective clothing.
5	Electricians / Linemen	Rubber hand gloves <i>with correct voltage rating and expiry date normally one year from Manufacturing date-()</i> & Electrical resistant shoes, Safety helmet with induction strip to alert about presence of voltage for those linemen who climb the poles or work on electrical equipment
6	Workers working at a height of 1.8 Meter or above.	Double lanyard full body harness, fall arrestor and safety net made of reinforced nylon fiber ropes firmly supported with steel structures, Work positioning attachment

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PPE Type and Testing Frequency

Sl. No.	Name of PPE	IS / EN Standard	Testing Frequency	Remarks
01	Leather Safety Shoes (Color – Black) with PU toe cap.	IS:15298 (Part-2)	Monthly and visual check every day for any crack or damage in the leather or sole.	
02	HDPE Safety helmet with chin strap and ratchet type for adjustment for non-Electrical work	IS:2925-1984	Monthly and visual check every day for any crack in shell.	
03	Full body harness (Safety belt)	EN 361	Monthly and visual check every day of the bends and the harness.	
04	Electrical Safety Gloves	EN: 60903 CE marked	Weekly and visual check for any crack and blow test before every work.	Manufactured not beyond 12 months.
05	Full face visor with safety helmet	EN: 166 CE marked (Visor)	Monthly and visual check every day for any crack in shell.	Clear acrylic visor attached with safety helmet.
06	Fireproof jacket for chest protection		Monthly and visual check every day.	
07	Safety helmet with induction Strip for linemen and working for electrical work- Class E	EN 397/2012	Monthly and visual check everyday	Induction Strip alerts presence of voltage
08	Shorting clamps, crocodile clamps, Discharge Rod and Neon tester		Monthly and visual check everyday	For discharging the residual voltage and test before touch

Pictorial View of PPEs for reference purpose

Sl. No.	Name of PPE	IS / EN Standard	Picture

01	Leather Safety Shoes (Color – Black) with PU toe cap.	IS:15298(Part-2) and with test report of electrical resistance.	
02	HDPE Safety helmet with chin strap and ratchet type for adjustment for Nonelectrical work and electrical work	IS:2925-1984/ EN 397/2012	
03	Full body harness (Safety belt) The straps at shoulder and thigh shall have full pad for comfort. The back shall be so designed that harness straps do not tangle with each other.	EN 361:2002 EN 358 : 2000 IS: 3521:1991/2002	
04	Electrical Safety Gloves – Composite type Soft electrical gloves as per size of individual.	EN: 60903 CE marked	
05	Full face visor with safety helmet	EN: 166 CE marked (Visor)	
06	Fireproof jacket for chest protection		

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08	Reflective jacket to each workman	As per Tata Power standard	
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These pictures are indicative. Actual product may vary.

Note:

1. Any other Personal Protection Equipment required beyond above list will be according to BIS or EN Standards.
2. All Personal Protection Equipment will be checked by the engineer in-charge or SAFETY group of company.
3. Safety Representative of the BA must maintain the record of the availability, condition and checking of the PPEs.
4. All tools required as per the contract must be according to respective IS / EN standards.
5. Company may revise or add the above list of PPE and their specifications as and when feel necessary. The information about new specifications /models will be circulated by the Engineer In-charge (EIC), which shall adhere by the business associated in the shortest possible time. The EIC shall issue a memo / instruction to BA with timeline for implementation. Any delay will be treated as non- compliance / safety violations.

CSM F9 - Site Safety Management Plan / Method Statement

Site Safety Plan / Method Statement (Template)

This Method Statement describes the specific safe working methods which will be used to carry out the described work. It gives details of work procedure with control measures to counter health and safety issues related to this work. The listed content of this Method Statement can be changed/modified subjected to job scope / specifications, but task specific method statement once finalized & approved, that should not be modified during work execution without permission from the approving authority.

Project/Job Name	
Scope of work: -	
Drawing References: -	

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Detail of Sub Business Associate s involved: -		
Method Statement Prepared By: - Designation: - (e.g., Site Manager)	<u>Signature</u>	<u>Date</u>

1.0 Introduction (*Describe purpose of the work, give details of type and scope of work being carried out*)

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2.0 Location of Work (*Give site address and precise location on site where work is to be carried out*)

--

3.0 Safety Document /Specific Approval Required (*Details of any safety documents or specific approval i.e., Client specific approval required to undertake the work*)

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5.0 Role & Responsibilities of Personnel/Parties Involved in activities: *Clearly define roles and responsibilities of all personnel involved in activity i.e., Site management staff including sub-Business Associate s' staff, Project Manager/Site Manager of principal Business Associate , Sub Business Associate Site Manager, Project Engineer, Safety officer, Competent Supervisory Staff etc.)*

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6.0 Working/Activity Description: - *It is important that all operatives should have clear idea of those operational sequences and responsible supervisor must verify their competency prior to their engagement in operation.*

6.1 Pre-Working Checks

6.2 Resources (Equipment, tools including manpower) Details *i.e., Equipment and Tools, specific operational equipment, test kits, lifting resources, Details of materials to be used in operation, including any reference to COSHH assessments in case of use of any chemicals, Details of the manpower allocated to the task, e.g., titles, qualifications, competences, direct manpower, Business Associates. Details of plant, tools, and equipment to be used for the work, including the availability of relevant statutory documents, checks or inspections etc. Details of fencing, barriers, cones, chains, dangers notices, warning signs etc.*

Tools required for work:

Sr.No	Tools /Equipment /Machine	UOM	Required Qty.	Remark
1				
2				
3				
4				
5				
6				

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7				
8				
9				
10				

6.4 Operational Sequence of work: - Full description of the work, setting out the methodology in a sequential manner, including any reference to any identified operational restraints. Also refer here sec. 5.0 responsibilities part for every step of work sequence).

S. No	Activity	Details of job sequence	Risk Involved	Control Checks
1.				
2.				
3				
4				
5.				

6.7 Final Checks & restoration of work area after completion of work: Those checks to be carried out by responsible supervisor in witness of his line hierarchy by use of specific checklist of certain operational checks and once those completed satisfactory, PTW (if applicable) to be closed and isolation arrangements to be restored by removing barricades/cautionary tags.

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7.0 Task Specific Hazards: - Refer to Task Specific Risk Assessment and attach in appendix

Attachment: - Specific Risk Assessment

In addition, please provide below control measures in risk assessment (as applicable).

Fall Protection Measures: (Where Work at height cannot be avoided)	
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Control Measures for Electrical Hazards							
Others Hazard if any (please provide details)							
Hazardous Substances to be used in job: (Attach MSDS if required)	 Acute Toxic	 Health Hazard	 Corrosive	 Dangerous For the environment	 Oxidising	 Highly flammable	 Explosives
	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N

7.0 Emergency Provisions: *Relevant operational possibility of a programme in the case of emergency situation i.e. electrical supply restoration. In addition, emergency response provisions i.e., first aiders, firefighting, and first aid arrangements, nearest onsite/offsite emergency response also to be considered during emergency planning.*

8.0 "5S issues" / Waste Disposal/ Housekeeping and Environmental issues: *Details waste disposal processes and or housekeeping activities, Details of environmental impacts and control measures.*

--

9.0 Personal Protective Equipment (PPE): *Tick on PPE requirements for the task/Job*

Safety Helmet / Hard Hats		Safety Shoe / Safety Boots	
Gum Boot		Double Lanyard Safety Harness with work positioning attachment	
Electrical Hand gloves		Other hand gloves	
Eye protection		Respiratory protection	
Ear Protection		Electrical Arc flash suit	
Chemical resistant suit		Reflective Jackets	
Any Other		Any Other	

10.0 First Aid facilities and Nearby Hospitals Details

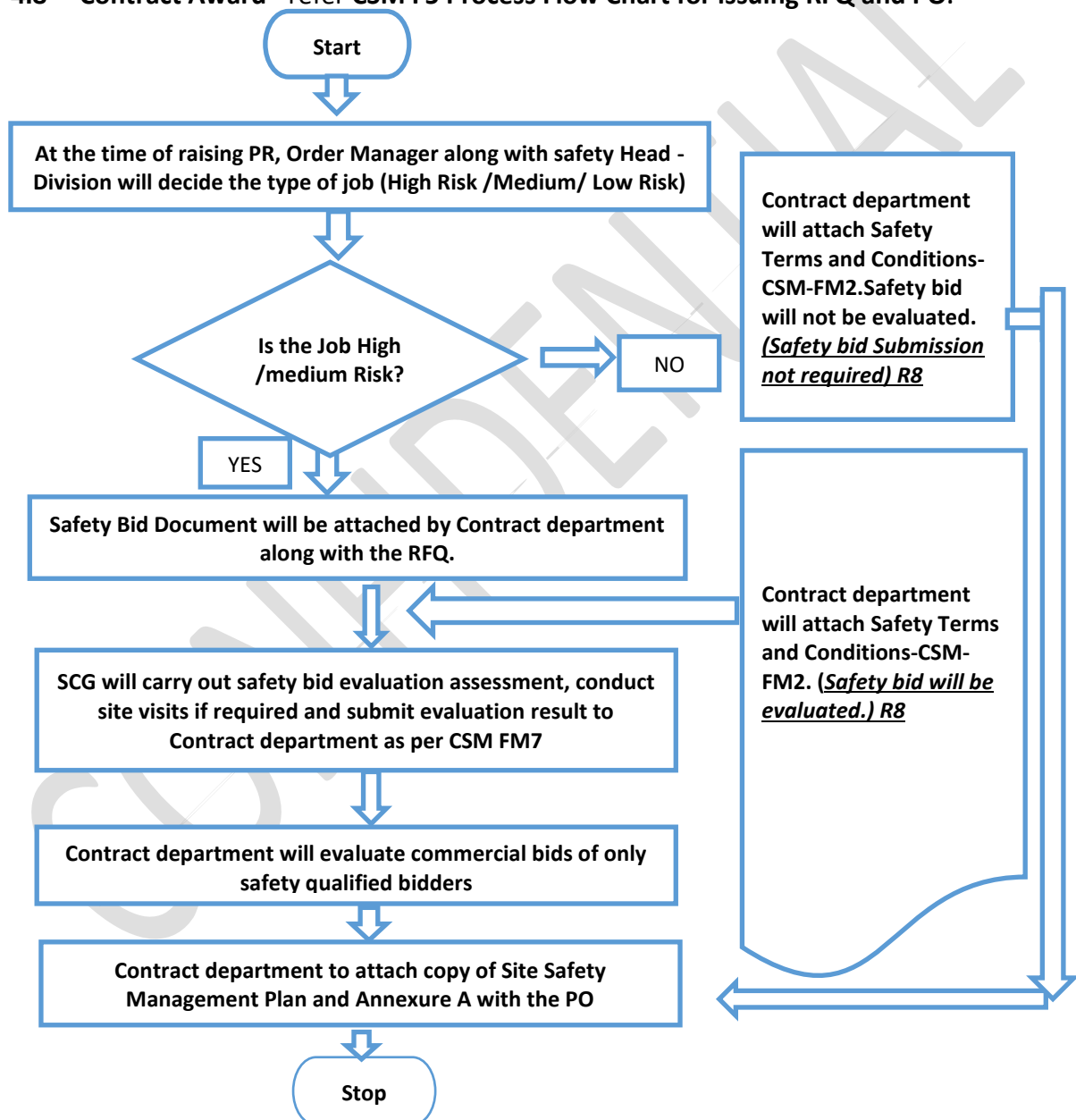
- Name of On Site First Aider
- First Aid Box Location
- Location of nearest hospital

11.0 Occupational Health, Fitness and COVID-19 related Preparedness:

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- Please give a brief writeup / methodology of your organization's plan to avoid impact of the COVID-19 pandemic at Tata Power working site.
- Please give brief details of occupational health and hygiene related interventions planned by your organisation to ensure good health and fitness of workforce at Tata Power site.

4.3 Contract Award - refer CSM F5 Process Flow Chart for issuing RFQ and PO.



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4.4 Capability Building: Safety Training and capability building of workforce is a major component of safety management program. All training required must be provided and documented as specified by Tata Power and Indian Regulations. Tata Power Division /Discoms Safety department will audit Business Associates training and related documentation to assure its adequacy.

4.4.1 Before issuing gate pass:

For Odisha Discom/New Business: All Tata Power Business Associate and sub Business Associate workforce is required to attend Site Safety Orientation Training to receive a Safety Training Card, which is required to obtain a Gate Pass to the site, prior to entry. This Safety Orientation Course will be for duration of minimum half day. The information provided during the orientation will include, but is not limited to Job rules, personal safety, and conduct, Hazard's reporting, reporting of injuries, Emergency procedures, Safety Activities and Program including disciplinary measure and incentives, Critical safety procedure relevant to the job

For Tata Power Divisions: All Tata Power Business Associate and sub Business Associate workforce is required to attend L1 Training to receive a Safety Training Card, which is required to obtain a Gate Pass to the site, prior to entry.

4.4.2 Before start of actual work:

- Appropriate practical training such as SHE L1, L2& L3 (As per Competency Skill Matrix Annexure - 15 of BASCC) is given to ensure that a jobholder, either supervisor or worker, is competent to do his/her job safely. The skill training is provided through TPSDI, and other agencies authorized by Tata Power followed by Post Assessment on the list of 15 critical Safety procedures mentioned under safety procedures. Duration of course is as specified by Division/Discom
- Business Associate shall ensure that concerned workmen are provided with adequate training before he/she is allowed to execute the work. An evaluation test will be conducted after the completion of the training. Those employees who meet the minimum required competency will be provided with Certificate (Card), which will be valid for 3 years, post which the workmen have to reappear for assessment.
- *BA Employee who Fail in assessment to be removed from work.(R6)*
- *BA Employee who achieved Bronze card can work for assisting Silver and Gold.(R6)*
- *BA Employee who achieved Silver card can Work under competent supervisors.(R6)*
- *BA Employee who achieved Gold card can Work independently.(R6)*
- *BA Supervisor who achieved Bronze card can be treated as Learner & can only supervise low Risk Job.(R6)*
- *BA Supervisor who achieved Silver can not take permit, Tata Power employee will take permit in such cases.(R6)*
- *BA Supervisor who achieved Gold card can take permit & supervise work.(R6)*
- *BA Safety Supervisor who achieved Bronze card can be treated as Learner.(R6)*
- If the workman is not able to qualify the assessment, he/she will be given 3 additional attempts to clear in 3-month time failing which he/she will not be allowed to work in the Division /Discoms.

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- After expiry of Certificate or Training /Competency Card again one day recertification of L1, L2 and L3 skill training will be provided.
- Quarterly /Half yearly(For Odisha and New business) Revalidation Test - “SHE L1 Revalidation test” will be conducted for the Business Associate 's employees to revalidate their safety awareness and knowledge.
- Order Manager and Safety In charge of the Division/Site /Plant will conduct a Competency Assessment of all workforces, going to be deployed at site / plant for high-Risk job.
- The Contactor shall bear the conveyance and food expenses of his staff for attending training sessions and capability building sessions in new business-like Odisha Discom.
- The Contactor shall bear the entire cost of L1/L2/L3, the costs towards training, salaries/wages, boarding and lodging of his staff for attending training sessions and capability building sessions. These trainings are offered on nominal chargeable basis payable by Business Associate and rates shall be decided by TPSDI from time to time in case of training through TPSDI. Generally, L0 is of one day, L1 is for 2 days for each critical procedure and L3 is for one day. Around Rs 700+GST is approx. cost /Day/Candidate.
- Competency assessment of all critical workforce to be carried out for all who has taken L2 training.

4.4.3 Recognition to the Prior Learning in Safety

If “Order Manager” recommends and “Head of the Safety Department of Discom” is satisfied with the safety knowledge and competency of the employee of Business Associate , a test may be conducted by Tata power Skill development Institute/ other recognized institute to assess the prior learning in safety. If employees of the Business Associate s pass in such test, he will be exempted from appearing in SHE L1 training. This assessment is on nominal chargeable basis and rates are decided by TPSDI from time to time.

4.5 Managing Work:

Order Manger shall -

- 1) Comprehensively assess and ensure field Safety implementation against Contract requirements and the Safety Management Plan.
- 2) Maintain a follow up process that drives continuous improvement in Safety practices and avoids repetition of common errors.
- 3) Order Manager and BA should aim at optimizing Safety performance of the Contract by working in a collaborative manner during the execution of the work. This can be achieved by:
 - Ensure that potential safety hazards are identified and controlled before any contracted work starts. Hazard identification should be conducted using multi-disciplinary teams which includes members from competent safety professional/execution team/competent BA supervisor & workforce to understand and identify project-specific safety hazards.

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- Monthly inspection and replacement of damaged Personal Protective equipment -PPE & Critical Equipment, lifting Tools & Tackles and hand tools used at site.
- **PTW** - PTW procedure must be adhere and implement at site.
- Reviewing the Safety Management Plan (**CSM F9– Site Safety Management Plan**) before each stage of work begins.
- **TBT & Mass Meeting**: Every day Tool box talks to be conducted based on JSA/SOP with maximum participation of BA Workforce & Safety points to be shared by BA employee & line manager and 100% participation of BA employee & workmen in to mass meeting/communication.
- **BA Self safety audit**: BA Safety Supervisor will carry out daily safety audit and inspections of tools, tackles, equipment and PPEs. They will identify and help in correcting the unsafe acts and unsafe conditions created while executing job at site with the help of BA's supervisors.
- All respective **Critical safety Rules & Procedures and General safety Rules & Procedures** to be use and implement at site during job.
- **"Suraksha Samwad"** also known as Safety Interaction is a proactive safety initiative. In this program, leadership engages with BA workmen and employees in a scheduled 30-minute session to discuss and observe safety practices in the workplace.
- **Reporting safety observations by BA employee**: This involves the active participation of the workforce in identifying and reporting safety observations, which can help prevent accidents and improve safety performance.
- **Felt Leadership for Business Associates Proprietor /Co-ordinators**: This program aims to develop leadership skills within the Business Associates Proprietor/Co-ordinators. It encourages individuals to take ownership of their work and fosters a culture of responsibility and accountability.
- **Behavior based safety program (Jivan Ki Aur)**: It aims to create regular awareness among all ground staff. It seeks to sensitize them, establish relationships, foster teamwork, enhance communication, motivate and empower everyone, promote good health, and enable a happy and safe life. The program will cover various activities such as morning meetings, home visits, personal meetings, group meetings, short training sessions, games, and other forms of engagement.

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4.6 Periodic Evaluation:

1. During the time of job execution, regular site inspection will be carried out by the Tata Power-Division /DISCOM officials **mainly Line manager (R6)** to evaluate monthly safety performance of the Business Associate as per **CSM F11 Safety Performance Evaluation Report (R6)** and monthly score will be maintained by the Order Manager. Violations will be dealt as per **CSM F12 Safety Violation Penalty Criteria**. Please refer **CSM F10 Process Flow Chart for Safety Performance Evaluation**. Percentage of retention amount is usually mentioned in safety terms and conditions.
2. The evaluation criteria include Lead Indicators such as percentage of workers trained in TPSDI, inspection of critical equipment. Lag indicators such as Fatalities, LWDC and man-days lost.
3. In case of job stoppage due to safety violations / unsafe observations at the site, no time extension from PO completion date shall be given to the Business Associate, if such delays are attributable to Business Associate.
4. In case of fatality, limb loss or loss of property, vendor must pay for liability, legal, statutory, and additional mutually agreed settlement charges imposed by the appointed committee by Division Chief/CEO. This charge is over and above the retention amount. The committee will finalize penalty amount based on factors such as advice by statutory authorities, contract value and impact of accident etc.
5. Order Manager, Head of Business and functional Chief have the authority to terminate the contract as per **CSM F12 Safety Violation Penalty Criteria** Through contract department.
6. Site contract team will arrange Quarterly meeting with Order Manager to take feedback for Safety performance of Business Associates In-turn Site Leadership and Site Contract team will give feedback of safety performance so as to take Corrective actions (R6).
7. **CSM F11 Safety Performance Evaluation Report (R8) to be used to evaluate Star Rating of Business Associate for lead & Lag Indicator.**

4.6.1 Safety performance retention: A certain percentage of the bill value will be retained against every running bill as safety performance retention. The amount will be released with the last invoice or every six-month based on Safety Performance Score of Business Associate s. The retention amount will be calculated based on contract value as below.

Risk Category	Contract Value	Retention Amount (%)
Very high/High risk job/ Medium Risk jobs	Up to 10 Lakhs	2.5
Very high/High risk job/ Medium Risk jobs	10 – 50 Lakhs	2
Low/Very Low Risk jobs	10 – 50 Lakhs	1
Very high/High risk job	0.5 to 10 Cr	2
Medium Risk jobs	0.5 to 10 Cr	1.5

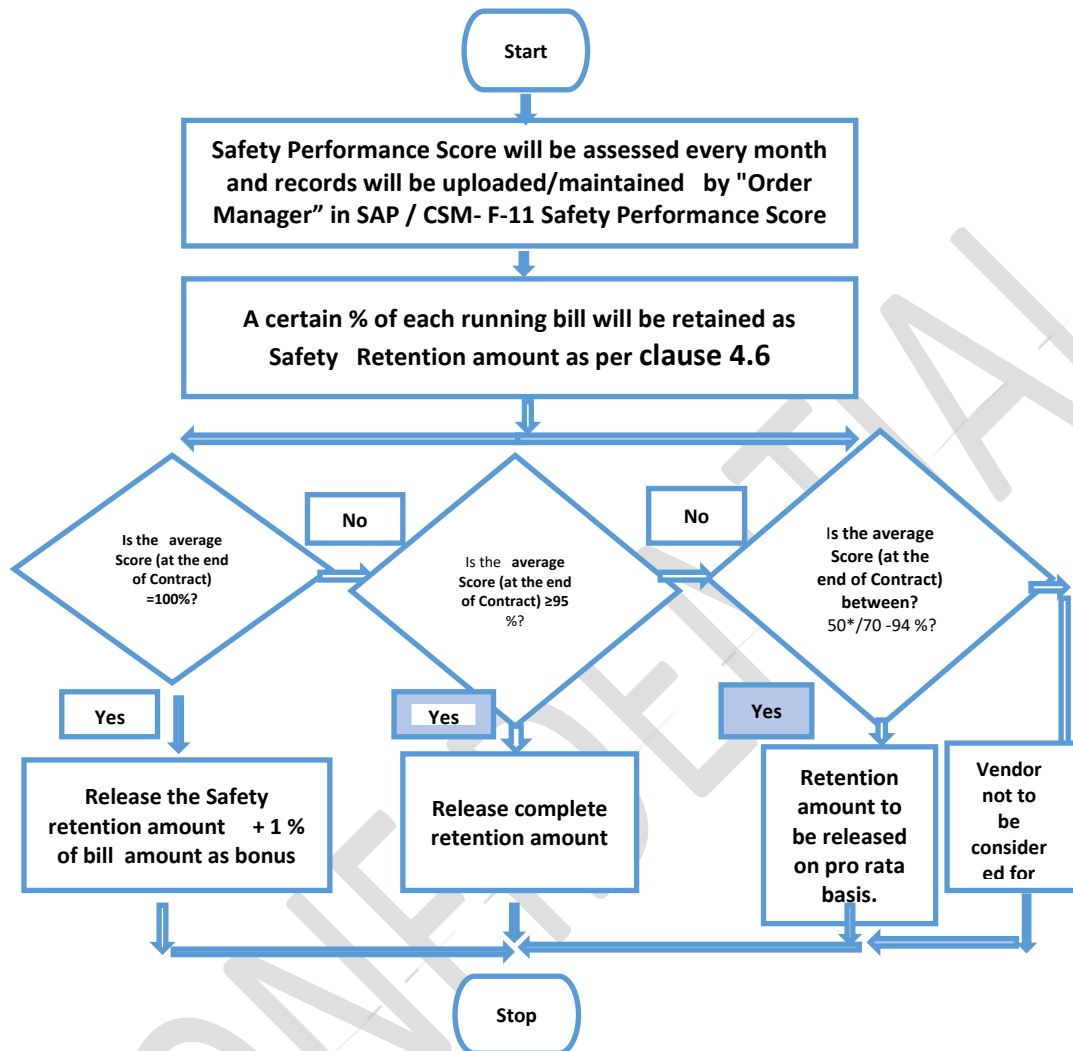
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Low/Very Low Risk jobs	0.5 to 10 Cr	1
Very high/High risk job	>10 Cr	1.5
Medium Risk jobs	>10 Cr	1

1. The safety retention amount will not be applicable if there is clause of Contract Performance Bank Guarantee (CPBG) and safety performance of Business Associate is as per desired criteria.
2. If safety performance of Business Associate is not as per desired criteria (as per Appendix 10 – CSM F10 – Process Flow Chart for Safety Performance Evaluation and Appendix 11: CSM F11 - Safety Performance Evaluation Criteria-then safety retention percentage as mentioned in table above will be deducted from running bill.
3. Bidder to give understanding that if there are any deductions required to be made for safety non-performance as per the Safety Performance Score, then Tata Power shall recover any such deductions against safety non-performance directly from the monthly bills / final settlement or it shall be within its right to recover such sum from accounts payable or the CPBG or the retention of the Business Associate available with Tata Power for the said contract between the Business Associate and Tata Power.
4. The retention amount against non-safety performance saved and Penalty will go to a separate Safety Improvement Fund.
5. For the contract value of more than Rs 1 Cr or contract duration more than 12 months, the retention amount shall be released half yearly based on safety performance. For all remaining contracts, the retention amount will be released with the final bill.
6. Safety performance bonus 1% (limiting to 50 lakhs) of the invoice value will be considered at the end of the job if the contractual safety performance score is 100%

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CSM F10 – Process Flow Chart for Safety Performance Evaluation



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CSM F11 - Safety Performance Evaluation Criteria (R6)

Safety Performance Evaluation Report- CSM F11

BA field safety audit (Safety Performance Evaluation for BA).

Division		Function					
Name of BA		Month					
Nature of Work		PO					
	A. Lead Indicators		100 (for star rating score will dividend scale of 2.5)				0
	-	UOM	Target				Actual score for the month
1	% of employees certified in Skill development institute/ authorized agency/Card issued.	% Workforce covered	100%	51% to 99%	50%	<50%	
	Score		10	Pro-rata	5	0	
2	Business Associate Safety Field Audit score	Severity score	2 to 3	3 to 4	>4		
	Score		10	5	0		
3	Monthly inspection and replacement of damaged Personal Protective equipment -PPE by contractor(Safety shoes, Induction helmet, full body safety harness with work positioning lanyard, rubber insulated gloves, reflective jacket etc.as per Job requirement)	% of total workforce	100%	99% to 50%	<50%		
	Score		10	5	0		
4	Monthly inspection and replacement of damaged Critical Equipment, lifting Tools & Tackles and hand tools used at site by BA (Neon Tester, Discharge rod,	% Total T&T	100%	99% to 50%	<50%		

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	ladders Vehicle, Tools & tackles carried out and defective equipment replaced as required.						
	Score		10	7	0		
5	Unsafe Conditions/Acts (Potential Hazards), near miss(Close calls), minor injury(First aid cases and MTC) cases reported	Observation / Nos of workforce	0.50	0.25	<0.25		
	Score		10	7	0		
6	Monthly R&R for workforce along with Tata power reparative monthly	% of total workforce	10%	5%	0		
	Score		10	5	0		
7	Nos of workforce covered under program under Jivan Ki Aur/Ghar se Ghar tak/Surkhshit Pariwar ki aur	% of total workforce	10%	5%-10%			
	Score		10	0			
8	Safe (designated way) Disposal of Waste generated, Records of waste (Hazardous Waste – Oily cotton waste – E-waste etc.) generation. No effluents to drain/discharges to ground		YES	NO			
	Score		10	0			
9	<u>Daily Toolbox talk and Weekly Mass communications covering 100 % workforce and records maintained or not(R6).</u>	% of total workforce	100%	50-100 %			
	Score		10	5			
10	<u>Check for housekeeping at site(R6)</u>	At least 3S.	YES	NO			
	Score		10	0			

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	B. <u>Lag Indicators</u>		50 (for star rating score will dividend scale of 2.5)				0
			Target				
1	Number of Fatalities		0	>0			
Score	Score		30	0			
2	No of LWDC - Reportable		0	>0			
Score	Score		10 / 20*	0			
3	Major Fire		0	>0			
Score	Score		10 / 0*	0			
	Total score		150				0
	* Odisha					%	0

CSM F12 - Safety Violation Penalty Criteria

Major Violations and Escalation matrix-

Consequence of safety violation observed not related to incidents or accidents		Violations				
Sl. No.	<u>Safety Violation</u>	1st	2nd	3rd	4th	<u>Subsequent violation</u>
1	Working without required PPE such as Helmet/gloves/safety shoes/Safety harness etc.	A	B	C	D	Will Attract the same penalty as 4th violation
2	Working without proper tools and tackles	A	B	C	D	
3	Poor or bad condition of Crane/Hydra/Vehicle and/or Incompetent driver and/or helper).	B	C	D	E	Termination of Contract and blacklisting after repetition of violations (3 to 4 times as the case may be)
4	Improper Working at Height	B	C	D	E	
5	Untrained /unauthorized workman engaged in high-risk jobs	B	C	D	E	
6	Violation of SOP or WI or LOTO	C	D	E		
7	Working without PTW or LC / Without authorization / Without creating Safe Zone	C	D	E		

Legend	Action to be Taken	Responsibility	Penalty (INR)	Repeat Violations
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A	Levy of Penalty	Order manager / EIC	5000	The no. of repeat violations shall be calculated cumulative during the FY and deduction will be done from the monthly bills.(R6)
B	Memo to BA and Levy of Penalty	Order manager / EIC	10000	
C	Memo to BA and Levy of Penalty	Order manager / EIC	25000	
D	Memo to BA and Levy of Penalty	Order Manager / EIC	50000	
E	Memo to BA, Levy of Penalty, Termination of Contract, Blacklist	Order Manager / EIC	100000	

Other Violations and Penalty

Penalty shall be imposed on the Business Associate s under the following circumstances for breaching the contractual agreements. The list is not exhaustive, but indicative.

Sl. No	Description of Violation	Severity	Penalty (INR)
1.	Unhygienic/Bad condition of PPE	2	500
2.	Unsafe Act/Condition of Severity 4	4	4000
3.	Unsafe Act/Condition of Severity 5	5	5000
4.	No Earthing of Electrical equipment	5	5000
5.	Working without efficient supervision	4	4000
6.	Non-reporting of incidents	3	3000
7.	Starting the job without Toolbox Talk	4	4000
8.	Electric cable tied with metal wire / Use of damaged electrical cable / Use of two core cable	3	3000
9.	Rubber mat not available in front of electrical panels.	3	3000
10.	Inserting naked wire into the socket instead of a plug	5	5000
11.	Inflammable materials stored inside PSS/FCC/Distribution Room	5	5000
12.	Water accumulation found near electrical panels / equipment	5	5000
13.	Grinding wheel/ Coupling/ Piling winch/other rotating parts without guard	4	4000
14.	Inadequate illumination of working area	3	3000

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15	Bringing inside PSS/FCC or any other work area any chemicals without approval.	5	5000
16	Loose materials in work area which can fall down or fly during a storm	5	5000
17	Misusing emergency facilities like fire hydrant line/ hose box/ spray system/ eye wash etc.	3	3000
18	Entering restricted areas like switch yard, hazardous material storage room etc. without authorization	3	3000
19	Not using 24 V lamp inside confined spaces	3	3000
20	Bypassing/overriding safety interlocks	5	5000
21	Working besides road without proper barricading and monitoring of traffic	5	5000
22	Smoking in prohibited area (Closed Go-downs, Storage of flammable material, Storage of Gas cylinders, PSS , Offices etc.)	3	3000
23	Improper stacking of materials in Storage Yard	4	4000
24	Sleeping at workplace	3	3000
25	First aid box not available / in locked condition	2	2000
26	Appointment of subBusiness Associate without his Safety Bid Evaluation and/or without the permission of engineer in charge or Order manager.	5	5% of order value
27	Bad Housekeeping with respect to TPSMS/GSP/GHK/022 1st Instant 2nd instant 3rd instant 4th instant - Subsequent instants	2	1000 2000 5000 10000 10000
28	Violations related to vehicles with respect to TPSMS/CSP/RSP/015 . - Parking without wheel choke - Parking in undesignated area - Heavy vehicle without helper or co-driver - Seat belt not available / not used - Driver without license - Heavy vehicles without reverse horn - Using mobile phone while driving - Lights/mirrors not working /broken	3	1000 per each violation

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28	Violation in Gas cutting and Gas cylinder handling • Cylinder valve without guard • No flashback arrester • Leaky DA/Oxygen hose • Cylinders not kept in secured manner • Cylinder trolley not available • Cylinders are transported by manual rolling	5	2000 per each violation
29	Violations in Lifting Operations w.r.t. to TPSMS/CSP/HEMS/005 • Hook latch missing • Load raised or swung over people or occupied areas of building • Persons standing within the swing area of the crane • No barricading of crane working area • Use of damaged lifting tools and tackles • Lifting tools and tackles not tested / Test certificate expired • Crane operator without proper license • Angular loading • Lifting / shifting heavy material without guide rope • Using mobile phone during loading and unloading jobs	5	2000 per each violation
30	Violation in Scaffolding work w.r.t. to TPSMS/CSP/SCAF/007 • Unstable scaffolding/nonstandard Scaffolding in use • Handrails/mid rails/toe guards missing • Safety harness not anchored on fixed structure • Opening found in working platform	5	2000 per violation
31	Violation in Excavation Work w.r.t. to TPSMS/CSP/EXS/002 • Loose material falling into excavated pit • Water logging in excavated pits / trenches • Inadequate or no barricading • Undercut / cave in found on sides of excavated pits	4	2000 per violation
32	Caution boards, danger signs (luminescent /red) along with emergency contact number are not found displayed.	3	3000
34	Spillage of hazardous material/chemicals during transportation	4	4000

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Penalty for Incidents / Accidents-()

Consequence of incident / Accident		Incident / Accident				Action Required
Sr.No.	Type of Injury	1st	2nd	3rd	4th	
1	Major Injury (Bone injury or burn or hospitalization >48 hrs.) Non-fatal	F	F	G	G	Intolerable
2	Major Injury (Bone injury or burn or hospitalization >48 hrs.) Non-Fatal (Two or more non-Fatal in one event)	G	G	H		
3	Single fatality	G	H			
4	Multiple fatalities (Two or more fatalities in one event). Anywhere in Tata power.	H				

Legend	Action to be taken	Responsibility	Penalty (INR)	The no. of violations shall be calculated cumulative during FY and deduction will be done just after Consequence of incident / Accident(R6)
F	Memo to BA and Levy of Penalty	Order Manager/Engineer in charge	200000	
G	Memo to BA and Levy of Penalty	Order Manager/Engineer in charge	500000	
H	Memo to BA, Levy of Penalty, Termination of Contract and Blacklisting the BA	Order Manager/Engineer in charge	1000000	

5.0 Tools and Tackles

5.1 Tools & Tackles used to carry out the job shall be checked and inspected by Order Manager and safety Officer.

5.2 Vendor must submit a valid Certificate from Competent person under the Factories Act 1948 and State Factories Rule for all Lifting Tools and Tackles (like Hoist, D

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Shackles, chain Block, wire ropes etc.).

5.3 All Electrical Hand Tools must be tested for leakage of current by a person /agency authorized by Tata Power Division /Discoms. Electrical power must be taken through RCCB of 30mA. Electrical hand tools should not have cord more than 3 meters in length. If power source is at > 3 meters, extension boards with RCCB of 30 mA and ON/OFF switch, shall be used.

5.4 Removal or inclusion of tools any new tool /tackles / machinery / equipment at site should only be done with concurrence of the order Manager / Head Safety.

6.0 Site Safety Rules and Procedures:

The work in the safest possible manner can only happen when it has been carefully planned and all applicable procedures are followed. The Tata Power Safety Procedures are derived from Tata Power best practices and the applicable Government acts regulations. In each case, the most stringent regulation is used. All safety rules and procedures developed from time to time shall be mandatorily followed by the vendor and his employees while working at Site.

7.0 Critical safety Rules and Procedures:

Following is the list of Tata Power's critical Safety Rules and Procedures. Business Associate shall refer to approved Rules and Procedures for detailed requirements and ensure conformance

7.1 Lock Out and Tag Out Procedure.

This procedure is intended to be used for the protection of Personnel while servicing or performing maintenance on distribution network/ equipment / pipeline / vessel / process systems. This is a general procedure that shall be used as the minimum requirements for isolation of equipment, pipelines, machines, system from all possible sources of hazardous energy and / or material such as Steam, Hot Water, Compressed Air, any other process fluid / chemical energy /Mechanical energy or Electrical energy. For complete procedure kindly refer Procedure Document No. **TPSMS/CSP/LOTO/001**

7.2 Excavation Safety (Shoring and Sloping) Procedure

This procedure is developed to cover the safe practices required for shoring and sloping in excavation and trenching jobs. This procedure is developed to establish mandatory requirements for practices to protect personnel, property and equipment from hazards associated with above activities. For complete procedure kindly refer Procedure Document No **TPSMS/CSP/EXS/002**

7.3 Confined Space Entry Procedure:

This procedure outlines the steps required to perform the confined space entry and to protect personnel from the hazards of entering and conducting operations in confined spaces. For complete procedure kindly refer Procedure Document No – **TPSMS/CSP/CSE/003**.

7.4 Working at Height Procedure:

This procedure describes the rules and procedures to protect employees from the hazards of working at heights. This procedure is developed to cover the safe practices

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required for Working at Heights. This procedure is developed to establish mandatory requirements for practices to protect personnel from hazards associated in this area. For complete procedure kindly refer Procedure Document No – TPSMS/CSP/WAH/004.

7.5 Heavy Equipment Movement Safety Procedure.

Heavy equipment lifting and movement is an activity involving loading, unloading, storage and movement from one place to another including lifting and erection or repairing of equipment with cranes or hoists. Material, machinery and equipment handling operations are being carried out by large capacity cranes and hoists, which make the job safer and faster. This procedure addresses the hazards and precautions associated with such equipment and their use. For complete procedure kindly refer Procedure Document No –TPSMS/CSP/HEMS/005.

7.6 Mobile Crane Safety Procedure.

Mobile cranes are responsible for many incidents, injuries. Falling loads from mobile cranes pose a severe hazard to operators and nearby workers and property. Many types of cranes, hoists, and rigging devices are used for lifting and moving materials. To maintain safe, appropriate standards must be adhered to and only qualified and licensed individuals shall operate these devices. For complete procedure kindly refer Procedure Document No –TPSMS/CSP/MCS/006.

7.7 Scaffold Safety Procedure.

This procedure is developed to provide information on the safe erection, use, dismantling and maintenance of access scaffolding in the workplace. It is developed to establish mandatory requirements for practices to protect personnel from hazards associated with erection, use and dismantling of scaffolds. For complete procedure kindly refer Procedure Document No –TPSMS/CSP/SCAF/007.

7.8 Permit to Work Procedure.

Given the inherent hazards of the power generation and distribution industry, a significant number of TATA POWER operations and installations are critical. Work Permit (WP) System is an essential element in controlling the workplace risks in an effective manner. For complete procedure kindly refer Procedure Document No – TPSMS/CSP/PTW/008.

7.9 Job Safety Analysis (JSA) Procedure.

This objective of this procedure is to have a task-based risk assessment process in place that identifies, evaluates and controls the risks associated with work activities, and as a result, prevents those involved in the task or those potentially affected by the task, from being harmed. For complete procedure kindly refer Procedure Document No- TPSMS/CSP/JSA/009 REV 01.

7.10 Electrical Safety Procedure.

The objective of these standards is to specify minimum mandatory requirements and advisory guidance for identifying and controlling hazards to ensure 'Zero Harm' regarding operation maintenance and testing of electrical equipment. For complete procedure kindly refer Procedure Document No- TPSMS/CSP/ELEC/010

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7.11 Fire Safety Management Procedure.

Objective of This standard is to specify the minimum mandatory requirements and advisory guidelines to ensure prevention of fire related incidents and managing / controlling their impacts if they do occur. For complete procedure kindly refer Procedure Document No - TPSMS/CSP/ELEC/011

7.12 Hazard Identification & Risk Assessment (HIRA) Procedure:

Objective of this procedure is to define guidelines for Hazard identification, Risk assessment and determination of controls. For complete procedure kindly refer Procedure Document No - TPSMS/CSP/HIRA/012.

7.13 Management Of Change (MOC) Procedure:

The objective of this document is to establish the procedures necessary to ensure that HSE risks are managed to an acceptable level in Tata Power Management of Change (MOC) process. For complete procedure kindly refer Procedure Document No - TPSMS/CSP/MOC/013.

7.14 Pre-Start-up Safety Review (PSSR) Procedure.

Objective of this procedure is to provide guidelines for safe initial startup of a new facility or restart of a modified facility. The PSSR process verifies that the new/modified facility meets the original design and operating parameters. The intent is to prevent incidents caused by inadequate, incomplete, unauthorized design, construction, installation, and/or commissioning. For complete procedure kindly refer Procedure Document No - TPSMS/CSP/MOC/014.

7.15 Road Safety procedure:

To provide Safety Rules for road travel management and safe usage of all types of vehicles viz. passenger/ commercial, owned/ hired by company, driven by employees or Business Associate s. For complete procedure kindly refer Procedure Document No - TPSMS/CSP/RSP/015.

8.0 General safety Rules and Procedure:

8.1 Lift (Elevator) Safety Procedure:

To provide safe operating procedure for taking control of lift car before entering and existing the pit of OTIS make elevators. For complete procedure kindly refer Procedure Document No – TPSMS/GSP/LIFT/001,

8.2 Working on conveyor belt Procedure:

This procedure is developed to cover the safe practices required for Working on live equipment and to protect personnel from hazards associated with it. For complete procedure kindly refer Procedure Document No – TPSMS/GSP/CONV/003

8.3 Batteries Handling & Disposal

To provide procedure for recycling and / or safe disposal of used / waste batteries in compliance with all legislation. For complete procedure kindly refer Procedure Document No – TPSMS/GSP/HAZM/003

8.4 Material Handling and Storage Procedure:

The purpose of this document is to provide procedures to assist the safe handling

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of materials (manual handling and mechanical handling). For complete procedure kindly refer Procedure Document No – **TPSMS/GSP/MATL/004**.

8.5 Office Safety Procedure:

The objective is to provide a safe working environment to those working in office premise, who may be exposed to emergency situations and other chronic / cumulative risks that may arise due to various reasons of unsafe act, unsafe condition, fire and or pandemic crisis like COVID-19 etc. For complete procedure kindly refer Procedure Document No - **TPSMS/GSP/OFS/006**

8.6 Earth Leakage Circuit Breaker (ELCB) Testing Procedure:

The objective of this procedure is to define the minimum requirements for testing of Earth Leakage Circuit Breaker (ELCB). For complete procedure kindly refer Procedure Document No - **TPSMS/GSP/ELCB/008**.

8.7 Occupational Health & Safety Legal Compliance Procedure:

Objective of this procedure is provide guidelines for compliance of Occupational Health & Safety (OH&S) legal requirements and all ratified protocols and agreements are incorporated in Tata Power Safety Management System (SMS). For complete procedure kindly refer Procedure Document No - **TPSMS/GSP/LEGL/009**.

8.8 Incident Reporting & Investigation Procedure:

Objective of this procedure is to outline the process for reporting, recording and investigating an incident, recommending corrective and preventive actions and to communicate the lessons learned to prevent recurrence of similar incidents. For complete procedure kindly refer Procedure Document No - **TPSMS/GSP/IRI/011**.

8.9 Business Associate Safety Management Procedure.

The purpose of this document is to engage with Business Associate s in a way to create safe work environment for everyone working for Tata Power. For complete procedure kindly refer Procedure Document No – **TPSMS/GSP/CSM/015**.

8.10 Tree Trimming Procedure:

The objective of this procedure is to define guidelines and minimum requirements for Tree trimming. For complete procedure kindly refer Procedure Document No – **TPSMS/GSP/TTRM/017**

8.11 Safe Lone Working Procedure:

Objective of this procedure is to lay down guidelines for reduction and safe managing of any additional risk arising from lone working. For complete procedure kindly refer Procedure Document No – **TPSMS/GSP/LONE/019**.

8.12 Good Housekeeping(5S) Procedure:

Objective of this procedure is to explain the meaning, importance and provide guidelines for implementation of Good Housekeeping(5S) at workplaces across organization. For complete procedure kindly refer Procedure Document No – **TPSMS/GSP/GHK/022**.

8.13 Personal Protective Equipment:

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This procedure describes the basic requirements, applicability, minimum specifications of Personal Protective Equipment (PPE). For complete procedure kindly refer Procedure Document No – **TPSMS/GSP/PPE/023**.

8.14 Process Safety Management Procedure:

The objective of this document is to provide a standardized & uniform guideline to implement Process Safety Management in Tata Power, its JVs, and subsidiaries to prevent or minimize the consequences of releases of toxic, flammable, pressurized or uncontrolled chemicals/Steam/Water or any other material which may result in toxic, fire, explosion, burn or flood like situation. For complete procedure kindly refer Procedure Document No – **TPSMS/GSP/PSM/024**

The above procedures will be updated time to time and the updated version of the procedures as well as any additional critical procedure will be available on official website of Tata Power (www.tatapower.com) for your reference.

9.0 Pre-Employment and Periodic Medical check-up:

Business Associate shall arrange to conduct a pre-employment and periodic medical check-up for its entire workforce by Tata Power medical officer or Tata Power authorized medical officer. The Business Associate shall be able to produce the certificate prior to the employment. The Business Associate shall also organize to conduct periodical medical checkup (six monthly) for the following category of employees:

- Drivers (Check for Vision & Hearing)
- HEM Equipment Operators (Check for Vision & Hearing)
- Workforce working at Height (Check for Vision, Hearing, Vertigo & Height Phobia)
- Workforce Handling the hazardous substances - Coal, ash and chemicals (Chest X-ray and Lung Function T)
- Workforce in high Noise area (> 90 Decibel), Check for Hearing
- Workforce handling radiography equipment for conducting NDT.
- Workforce, working in specific areas requiring specific medical attention should conduct the medical tests test as laid down in the respective Site Safety Management Plan.

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10.0 Other Conditions:

10.1 The manpower/vehicles/Tools & Tackles/Equipment provided shall be as per mutually

Sr. No	Type of Audit	Frequency
1	Tool Bag and PPE audit	Weekly
2	First Aid Box Maintenance Record	Fortnightly
3	Fire Extinguisher Record(Applicable for the BA involved in major construction works and have storage of flammable material at worksite)	Monthly
4	Safety Talk Register	Weekly
5	Site Safety Audit	Daily

agreed SLA.

10.2 No Supervision No work policy should strictly be followed.

10.3 Test Before Touch must be ensured every time a job is being carried out in electrical network.

10.4 HIRA /JSA as per the job scope must be prepared in detail and submitted along with Site Safety Plan by the successful bidder.

10.5 Personal protective equipment (PPE) must always be checked before use to ensure that they are in good condition and clean. Replace them if necessary.

10.6 All relevant PPE shall be provided by the vendor while working at the site.

10.7 Housekeeping shall be maintained all the time while execution of work. All the unwanted material shall be removed from the site at the end of the day's work. Old/damaged parts if taken out of the system shall be kept at identified place and it shall be shifted to scrap yard or disposed of as per instruction of order manager.

10.8 Site Safety Plan shall be prepared by successful bidder along with order manager. Appendix 1 to be filled by successful bidder and submitted to Tata Power safety in-charge, before mobilization of team at site and start of the work.

10.9 The Owner or Proprietor of BA must visit worksite at least once in a month and meet Order Manager every month. In case of incidents, the Owner or Proprietor of BA is required to attend Time Out Meetings to understand the gaps that contributed to the incident.

11.0 Schedule of Safety Audits by BA Safety Staff

Safety Undertaking of BA by way of Affidavit

I _____ s/o _____ R/o _____ (AUTHORIZED REPRESENTATIVE/PARTNER/DIRECTOR/PROPRIETOR) of M/S _____ (name of company/firm) having its office at (Complete address of Company), authorized vide power of attorney dated -----/Board resolution dated----/letter of authority dated----, hereinafter referred to as **Business Associate [or Business Associate (BA)]** which expression shall, unless it be repugnant to or inconsistent with the meaning or context thereof, be deemed to include its heirs, executors, administrators, and assigns do hereby affirm and undertake as under :

The Tata Power Company Ltd		<i>Appendix 2 to CSCC Safety Terms and Conditions</i>
Document No. TPSMS/GSR/STC/009 REV 06		Date of Issue: 01/04/2024

1. The present undertaking shall remain in force from the date of execution of contract and shall be valid till the date of termination of the said contract by either party. The undertaking is binding on me (Business Associate) as well as my sub-Business Associate and its employees, representatives etc.
2. That I (the Business Associate) will be responsible and liable to comply and abide by all the safety rules, instructions and regulations as may be specified and laid down by the Discom to achieve its goal of Zero for on-site incidences.
3. That the Business Associate shall be fully responsible for ensuring occupational health and safety of its employees, representatives, agents as well as of its subBusiness Associate 's employees, at all times during the discharge of their respective obligations under the contract including any methods adopted for performance of their tasks / work.
4. That Business Associate shall ensure ,at its own expense to arrange for and procure, implement all requisite accident prevention tools, first aid boxes, personal protective equipment, fire extinguisher, safety training, Material Safety Data Sheet, pre-employment medical test, etc. for operations & activities including as & when so specified by Discom specifically. , failing which Discom shall be entitled, but not obliged, to provide the same and recover the actual cost thereof from the Business Associate 's payments.
5. That the Business Associate shall engage adequate and competent Safety – Supervisor / Engineer / Manager / Skilled persons at site as per the Para 5 (Qualification and experience of safety personnel) and Annexure 3 of Contract Safety Management.
6. That the Business Associate shall engage the competent Site – Supervisor with each group of workers for safe and correct workmanship, proper co-ordination of material and site work as per contract.
7. That the Business Associate shall immediately replace supervisor in case it is found to be not up to the level of skill and experience required, but any such replacement shall be only with the prior concurrence of the Discom representative.
8. That the Business Associate and its sub Business Associate s shall abide by all the safety guidelines as per Safety Manual, Contract Safety Management and other guidelines issued from time to time by Discom during the contract period.

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9. That in case the Business Associate and/or any of its Sub Business Associate fail to ensure the compliance as required in terms of this undertaking the Business Associate shall keep and hold Discom / its directors / officers / employees indemnified against any / all losses / damage / expense / liability / fines / compensation / claims / action / prosecutions or the like which might be suffered by Discom or to which Discom might get exposed to as a result of any breach /wilful negligence /deliberate default on the part of the Business Associate /Sub Business Associate in complying with the same. Business Associate shall also furnish any press release, clarification etc. if sought by Discom for any near miss or safety violations, accidents, which are attributable to fault of Business Associate .

DEPONENT

VERIFICATION

Verified aton this _Day of _____ 20__ that the contents of the above affidavit are true and correct and nothing material has been concealed therefrom.

12.0 General Safety Conditions for various contracts Specific to Odisha Discom

12.1 Safety Conditions for maintenance of STS (Sub Transmission System) Network.

A BA awarded a major contract work of maintenance of sub – transmission network in area of a power system will be required to fulfil the following conditions:

- Availability of Discharge Rods - Minimum 6 Nos. in each maintenance vehicle, fit for purpose and in good conditions and defective rods are removed from service.
- Availability of Neon tester - Minimum one Neon Tester in each Maintenance Vehicle, in good and working condition and defective or non-standard neon testers are removed from service.
- Electrical hand Gloves - Minimum two sets of 33 KV and two sets of 11 KV in maintenance vehicles.
- The BA linemen must be having required ELBO certification for the voltage level involved.
- BA shall provide Safety Policy, Safety Objectives, Organogram showing structure and responsibility of Safety management of his company and shall document the work practices and procedures in terms of Safety Management.
- BA shall comply with all statutory requirements like applicable acts, regulations, codes of practice, OHSAS Standards, Labour laws, etc.
- The BA shall participate in Safety promotional activities like celebration of Lineman day on 4th March, National Fire Service Day on 14th April and Theme based safety campaigns undertaken by the Discoms every month.
- BA shall abide by Safety manuals and guidelines of Discom issued from time to time.

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- BA shall ensure safety training and induction program for the employees. The BA employees must carry safety training card / competency card to the worksite and produce the card on demand.
- All BA employees must be given valid ID card issued by BA cell of Discom who will check statutory compliances before issuing ID cards.
- BA shall not employ a new workman without training and issue of ID card.
- BA shall conduct safety audits & inspections as per Discom procedures.
- BA shall provide proper PPEs as per CSM F-8 ensure periodic inspection of PPE, Tools and tackles to ensure their serviceability.
- BA shall ensure the adherence to standard operating procedures or guidelines laid down by the Discoms.
- BA shall ensure that no job shall be carried out without efficient supervision.
- BA shall ensure reporting of any unsafe act, unsafe conditions, near miss, incident, or accident to engineer in-charge and SAFETY team of the Discom.
- BA shall provide safety performance and Safety MIS to engineer in-charge and Discom SAFETY group periodically. Based on any non-confirmation to the safety procedures and guidelines, BA is liable to be negatively marked for his performance and suitable penalty will be imposed.
- BA safety staff shall work as per the guidance of the Discom safety department and functionally report Safety Head of Discom. Any leaves by safety staff of the BA shall have to be approved by Discom Safety Department.
- BA shall ensure to depute Safety Staff for managing safety in worksites. In case the BA has been awarded work in more than one area power system, then the following safety structure will be adopted.
- Safety manager and Safety engineer must be having PDIS or ADIS.



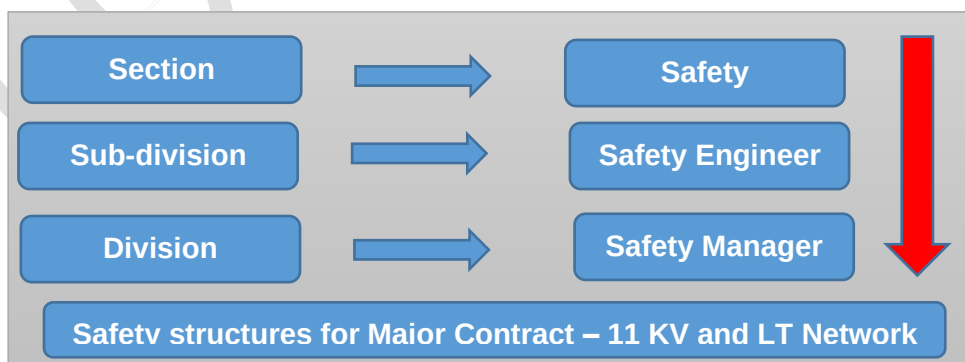
12.2 Safety Conditions for maintenance of 11 KV and LT Network.

A BA awarded a major contract work of maintenance of 11 KV and LT Network in area of a power system will be required to fulfil the following conditions:

- Availability of Discharge Rods - Minimum 6 Nos. in each PSS/FCC and maintenance vehicle, fit for purpose and in good conditions and defective rods are removed from service.
- Availability of Neon tester - Minimum one Neon Tester in each PSS/FCC/ Maintenance Vehicle, in good and working condition and defective or non-standard neon testers are removed from service.
- Electrical hand Gloves - Minimum two sets of 33 KV and two sets of 11 KV in each PSS/Maintenance vehicles and two sets of LT hand gloves at each FCC.
- The BA linemen must be having required ELBO certification for the voltage level involved.

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- BA shall provide Safety Policy, Safety Objectives, Organogram showing structure and responsibility of Safety management of his company and shall document the work practices and procedures in terms of Safety Management.
- BA shall comply with all statutory requirements like applicable acts, regulations, codes of practice, OHSAS Standards, Labour laws, etc.
- BA shall abide by Safety manuals and guidelines of Discom issued from time to time.
- BA shall ensure safety training and induction program for the employees. The BA employees must carry safety training card / competency card to the worksite and produce the card on demand.
- All BA employees must be given valid ID card issued by BA cell of Discom who will check statutory compliances before issuing ID cards.
- BA shall not engage new workman without training and issue of ID card.
- PSS operator shall not be involved in maintenance activities.
- BA shall conduct safety audits & inspections as per Discom procedures.
- BA shall provide proper PPEs as per CSM F-8 ensure periodic inspection of PPE, Tools and tackles to ensure their serviceability.
- The BA shall participate in Safety promotional activities like celebration of Lineman day on 4th March, National Fire Service Day on 14th April and Theme based safety campaigns undertaken by the Discoms every month.
- BA to ensure that all LT complaints are routed through Call Centre and recorded in FCC. Rectification of fault shall be done only after call centre logging and with the knowledge of BA supervisor.
- No one will work alone or unsafely under public pressure or otherwise.
- BA shall ensure the adherence to standard operating procedures or guidelines laid down by the Discoms.
- BA shall ensure that no job shall be carried out without efficient supervision.
- BA shall ensure reporting of any unsafe act, unsafe conditions, near miss, incident, or accident to engineer in-charge and SAFETY team of the Discom.
- BA shall provide safety performance and Safety MIS to engineer in-charge and Discom SAFETY group periodically. Based on any non-confirmation to the safety procedures and guidelines, BA is liable to be negatively marked for his performance and suitable penalty will be imposed.
- BA safety staff shall work as per the guidance of the Discom safety department and functionally report Safety Head of Discom. Any leaves by safety staff of the BA shall have to approved by Discom Safety Department.
- BA shall ensure to depute Safety Staff - One safety supervisor per section, One safety engineer per sub-division and one safety manager per Division Safety manager and Safety engineer must be having PDIS or ADIS.



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12.3 Safety Conditions for the major contract work in Civil Projects:

A BA awarded a major contract work of / in civil project will be required to fulfil the following safety conditions:

- BA shall provide Safety Policy, Safety Objectives, Organogram showing structure and responsibility of Safety management of his company and shall document the work practices and procedures in terms of Safety Management.
- BA shall comply with all statutory requirements like applicable acts, regulations, codes of practice, OHSAS Standards, Labour laws, etc.
- BA shall abide by Safety manuals and guidelines of Discom issued from time to time.
- BA shall ensure safety training and induction program for the employees. The BA employees must carry safety training card / competency card to the worksite and produce the card on demand.
- All BA employees must be given valid ID card issued by BA cell of Discom who will check statutory compliances before issuing ID cards.
- BA shall not employ a new workman without training and issue of ID card.
- BA shall conduct safety audits & inspections as per Discom procedures.
- BA shall provide proper PPEs as per CSM F-8 ensure periodic inspection of PPE, Tools and tackles to ensure their serviceability.
- BA shall ensure the adherence to standard operating procedures or guidelines laid down by the Discoms.
- BA shall ensure that no job shall be carried out without efficient supervision.
- BA shall ensure reporting of any unsafe act, unsafe conditions, near miss, incident, or accident to engineer in-charge and SAFETY team of the Discom.
- The BA shall participate in Safety promotional activities like celebration of Lineman day on 4th March, National Fire Service Day on 14th April and Theme based safety campaigns undertaken by the Discoms every month.
- BA shall provide safety performance and Safety MIS to engineer in-charge and Discom SAFETY group periodically. Based on any non-confirmation to the safety procedures and guidelines, BA is liable to be negatively marked for his performance and suitable penalty will be imposed.
- BA safety staff shall work as per the guidance of the Discom safety department and functionally report Safety Head of Discom. Any leaves by safety staff of the BA shall have to approved by Discom Safety Department.
- BA shall refer Construction Safety Manual of the Discom for details.
- BA shall ensure to depute a Safety Supervisor (for workforce up to 100 at site) / a safety engineer (for workforce up to 250 at site) / safety manager (for more than two safety engineers) for managing safety at the project site. In case the BA has been awarded more than one major contracts, then the following safety structure will be adopted.
- Safety Engineers and Safety Managers must be having PDIS or ADIS.



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12.4 Safety Conditions for the major contract work in Commercial Department like - MMG, RRG, EAG, etc.:

A BA awarded a major contract work in meter management group & energy auditing group will be required to fulfil the following safety conditions:

- BA shall provide Safety Policy, Safety Objectives, Organogram showing structure and responsibility of Safety management of his company and shall document the work practices and procedures in terms of Safety Management.
- BA shall comply with all statutory requirements like applicable acts, regulations, codes of practice, OHSAS Standards, Labour laws, etc.
- BA shall abide by Safety manuals and guidelines of Discom issued from time to time.
- BA shall ensure safety training and induction program for the employees. The BA employees must carry safety training card / competency card to the worksite and produce the card on demand.
- All BA employees must be given valid ID card issued by BA cell of Discom who will check statutory compliances before issuing ID cards.
- BA shall not employ a new workman without training and issue of ID card.
- BA shall conduct safety audits & inspections as per Discom procedures.
- The BA shall participate in Safety promotional activities like celebration of Lineman day on 4th March, National Fire Service Day on 14th April and Theme based safety campaigns undertaken by the Discoms every month.
- BA shall provide proper PPEs as per CSM F-8 ensure periodic inspection of PPE, Tools and tackles to ensure their serviceability.
- BA shall ensure the adherence to standard operating procedures or guidelines laid down by the Discoms.
- BA shall ensure that no job shall be carried out without efficient supervision.
- BA shall ensure reporting of any unsafe act, unsafe conditions, near miss, incident, or accident to engineer in-charge and SAFETY team of the Discom.
- BA shall provide safety performance and Safety MIS to engineer in-charge and Discom SAFETY group periodically. Based on any non-confirmation to the safety procedures and guidelines, BA is liable to be negatively marked for his performance and suitable penalty will be imposed.
- BA safety staff shall work as per the guidance of the Discom safety department and functionally report Safety Head of Discom. Any leaves by safety staff of the BA shall have to approved by Discom Safety Department.
- BA shall ensure to depute a Safety Supervisor for managing safety at worksite.
- The BA for the RRG work shall depute one Safety supervisor.

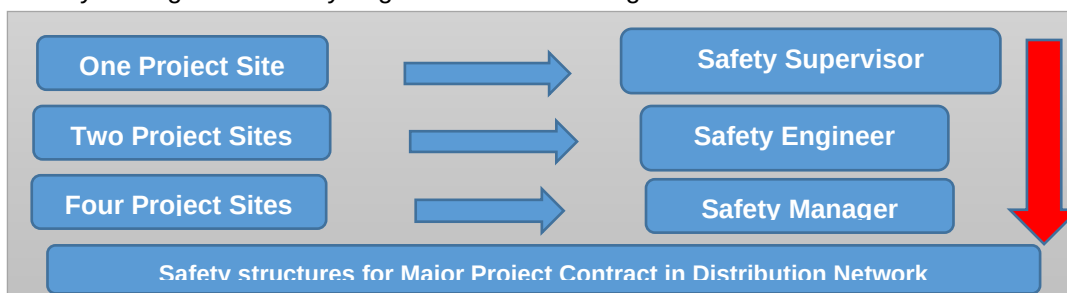


12.5 Safety Conditions for Major Projects in Distribution Network

A BA awarded a major Projects in Distribution Network shall be required to fulfil the following conditions:

The Tata Power Company Ltd		<i>Appendix 2 to CSCC Safety Terms and Conditions</i>
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- Availability of Discharge Rods - Minimum 6 Nos. for each project site, fit for purpose and in good conditions and defective rods are removed from service.
- Availability of Neon tester - Minimum one Neon Tester in each project site, in good and working condition and defective or non-standard neon testers are removed from service.
- Electrical hand Gloves - Minimum one sets of 33 KV, 11 KV and LT in each project site.
- The BA linemen must be having required ELBO certification for the voltage level involved.
- BA shall provide Safety Policy, Safety Objectives, Organogram showing structure and responsibility of Safety management of his company and shall document the work practices and procedures in terms of Safety Management.
- BA shall comply with all statutory requirements like applicable acts, regulations, codes of practice, OHSAS Standards, Labour laws, etc.
- BA shall abide by Safety manuals and guidelines of Discom issued from time to time.
- BA shall ensure safety training and induction program for the employees. The BA employees must carry safety training card / competency card to the worksite and produce the card on demand.
- The BA shall participate in Safety promotional activities like celebration of Lineman day on 4th March, National Fire Service Day on 14th April and Theme based safety campaigns undertaken by the Discoms every month.
- All BA employees must be given valid ID card issued by BA cell of Discom who will check statutory compliances before issuing ID cards.
- BA shall not employ a new workman without training and issue of ID card.
- BA shall conduct safety audits & inspections as per Discom procedures.
- BA shall provide proper PPEs as per CSM F-8 ensure periodic inspection of PPE, Tools and tackles to ensure their serviceability.
- BA shall ensure the adherence to standard operating procedures or guidelines laid down by the Discoms.
- BA shall ensure that no job shall be carried out without efficient supervision.
- BA shall ensure reporting of any unsafe act, unsafe conditions, near miss, incident, or accident to engineer in-charge and SAFETY team of the Discom.
- BA shall provide safety performance and Safety MIS to engineer in-charge and Discom SAFETY group periodically. Based on any non-confirmation to the safety procedures and guidelines, BA is liable to be negatively marked for his performance and suitable penalty will be imposed.
- The BA shall participate in Safety promotional activities like celebration of Lineman day on 4th March, National Fire Service Day on 14th April and Theme based safety campaigns undertaken by the Discoms every month.
- BA safety staff shall work as per the guidance of the Discom safety department and functionally report Safety Head of Discom. Any leaves by safety staff of the BA shall have to approved by Discom Safety Department.
- BA shall ensure to depute Safety Staff for managing safety in worksites. One safety supervisor per project site or 100 persons, one safety engineer for 2 project sites of 250 persons, and one safety manager for four project sites or 500 persons.
- Safety manager and Safety engineer must be having PDIS or ADIS.





Price Bid Format

CONFIDENTIAL

Price bid format**Package Name : Refurbishment of 48V Lithium-Ion Battery and Battery chargers – 5 Nos in Mumbai Transmission****Bidder Name :**

SUPPLY PART									
Sr. No.	Description	Qty.Set /Nos	UoM	GST	Basic Price	Total Basic Price	Applicable Taxes	All Incl Price	HSN Code
1	Design, Engineering, Manufacturing, Inspection, Supply, Transport, Unloading at site, Storage, Erection, Testing, Commissioning of Battery and Charger of the following along with Mandatory Spares as per Technical Specification.								
At Borivali									
1.1	48V, Lithium Ion LFP type, 200 Ah along with BMS , stand, accessories etc (Including Mandatory spares)	1	Nos			-	-	-	
1.2	48V, 45A SMPS Type Battery Charger (including Mandatory Spares)	1	Nos			-	-	-	
At Versova									
1.3	48V, Lithium Ion LFP type, 200 Ah along with BMS , stand, accessories etc (Including Mandatory spares)	1	Nos			-	-	-	
1.4	48V, 40A SMPS Type Battery Charger.(Including Mandatory spares)	1	Nos			-	-	-	
At Mankhurd									
1.5	48V, Lithium Ion LFP type, 200 Ah along with BMS , stand, accessories etc (Including Mandatory spares)	1	Nos			-	-	-	
1.6	48V, 40A SMPS Type Battery Charger.(Including Mandatory spares)	1	Nos			-	-	-	
At Davdi									
1.7	48V, Lithium Ion LFP type, 200 Ah along with BMS , stand, accessories etc (Including Mandatory spares)	1	Nos			-	-	-	
1.8	48V, 40A SMPS Type Battery Charger.(Including Mandatory spares)	1	Nos			-	-	-	
At Dharavi									
1.9	48V, Lithium Ion LFP type, 300Ah along with BMS , stand, accessories etc (Including Mandatory spares)	1	Nos			-	-	-	
1.10	48V, 45A SMPS Type Battery Charger.(Including Mandatory spares)	1	Nos			-	-	-	
Total Supply Part						-	-	-	

SERVICES PART									
Sr. No.	Description	Qty.Set /Nos	UoM	GST	Basic Price	Total Basic Price	Applicable Taxes	All Incl Price	HSN Code
1	Services for Installation, testing and commissioning of Battery sets with BMS and Chargers mentioned in supply portion @Borivali	1	LS			-	-	-	
2	Services for Installation, testing and commissioning of Battery sets with BMS and Chargers mentioned in supply portion @Versova	1	LS			-	-	-	
3	Services for Installation, testing and commissioning of Battery sets with BMS and Chargers mentioned in supply portion @Mankhurd	1	LS			-	-	-	
4	Services for Installation, testing and commissioning of Battery sets with BMS and Chargers mentioned in supply portion @Davdi	1	LS			-	-	-	
5	Services for Installation, testing and commissioning of Battery sets with BMS and Chargers mentioned in supply portion @Dharavi	1	LS			-	-	-	
Total Service Part						-	-	-	

Note : Bidder to mention respective GST % for each line item.

Total Basic Value of Supply + Service	-
Total Taxes of Supply + Service	-
Total All incl price of Supply + Service	-



Technical Specifications

CONFIDENTIAL

Document No: TE/SP/0001/FY26 Rev: A Date: 07-05-2025	PROJECT SPECIFICATION	Section-A Page 1 of 27
	Refurbishment of 48 V Battery and Battery chargers at - Borivali, Versova, Mankhurd, Davdi and Dharavi.	

Refurbishment of 48 V Battery and Battery chargers at - Borivali, Versova, Mankhurd, Davdi and Dharavi.

Document Title: Supply, Installation and commissioning of 48 V Li-ion Battery and Battery chargers at - Borivali, Versova, Mankhurd, Davdi and Dharavi.

Document No: TE/SP/0001/FY26

TATA POWER

The Tata Power Company Limited

Engineering (T&D), The Tata Power Company Limited, Dharavi Receiving station, Near Shalimar Industrial Estate,
Matunga, Mumbai 400 019, Maharashtra, India.

Registered Office Bombay House 24 Homi Mody Street Mumbai 400 001

Revision	Date	Description	Approvals		
			Prepared By	Checked By	Approved By
A	07-05-2025	Final Document	AN	AVJ	SKV
			<i>AN</i>	<i>AVJ</i>	<i>SKV</i> 080525

Document No: TE/SP/0001/FY26 Rev: A Date: 07-05-2025	PROJECT SPECIFICATION	Section-A Page 2 of 27
	Refurbishment of 48 V Battery and Battery chargers at - Borivali, Versova, Mankhurd, Davdi and Dharavi.	

CHECK LIST FOR DOCUMENTS TO BE SUBMITTED ALONG WITH THE BID

S No	Document Name	Submitted by Bidder Yes / No
1	Signed copy of bid document as a token of acceptance	
2	Dully filled in schedules, listed in section 'C'. i.e. Schedule C1 to C9 – Attached	
3	Qualifying Requirement – Attached as Annexure 4 and 5.	
4	Quality Assurance Plan (QAP), Manufacturing Quality Plan (MQP), Field Quality Plan (FQP) as applicable.	
5	General Arrangement Drawings for equipment offered	
6	Filled up Data Sheets in Format – Attached as Annexure 6	
7	Type Test Reports as applicable.	

Name of Bidder:**Signature & Stamp:****Date:**

Document No: TE/SP/0001/FY26 Rev: A Date: 07-05-2025	PROJECT SPECIFICATION Refurbishment of 48 V Battery and Battery chargers at - Borivali, Versova, Mankhurd, Davdi and Dharavi.	Section-A Page 3 of 27
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A4	<u>TERMINAL POINTS</u>
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	Refurbishment of 48 V Battery and Battery chargers at - Borivali, Versova, Mankhurd, Davdi and Dharavi.	

C	SCHEDULES
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C2	<u>Time Schedule for the project</u>
C3	<u>Schedule Of Deviations From Technical Specifications</u>
C4	<u>Schedule Of Deviations from General & Special conditions of contract</u>
C5	<u>Schedule of Drawings/ Document submission</u>
C6	<u>Schedule Of Mandatory Spares</u>
C7	<u>Schedule of special erection, maintenance tools & tackles</u>
C8	<u>Schedule of places of tests & inspection</u>
C9	<u>Schedule Of Recommended Spares</u>
D	<u>DRAWINGS AND DOCUMENTS</u>
D1	<u>TENDER PURPOSE</u>
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Document No: TE/SP/0001/FY26 Rev: A Date: 07-05-2025	PROJECT SPECIFICATION	Section-A Page 5 of 27
	Refurbishment of 48 V Battery and Battery chargers at - Borivali, Versova, Mankhurd, Davdi and Dharavi.	

A1 INTENT OF SPECIFICATION

Tata power has planned to procure 48V Lithium-ion Batteries and SMPS Based chargers as mentioned in the scope of work at Borivali, Versova, Mankhurd, Davdi and Dharavi RSS.

This specification covers the Design, Engineering, Manufacturing, Supply, Transport, delivery to site, Supervision services to site for erection, testing and commissioning of Battery and chargers.

The specification has two main Sections A & B. The Section A is giving the requirements specific to the station while Section-B has the standard specifications for the equipment. Bidder shall consider the scope combining both the sections. Nothing in this specification shall be construed to relieve the Bidder of this responsibility.

A2 PROJECT INFORMATION

1.0	Owner	The Tata Power Company Limited, Dharavi Receiving Station, Near Shalimar Industrial Estate, Matunga, Mumbai 400 019, Maharashtra, India
2.0	Consultant	Nil
3.0	Location of the plant	Mumbai, Maharashtra.
4.0	Nearest Rail head	Site is connected by rail
5.0	Transport	Access roads are available for movement of materials to site. The stations are accessible by air/road/rail. Movement of heavy materials would be through

Document No: TE/SP/0001/FY26 Rev: A Date: 07-05-2025	PROJECT SPECIFICATION	Section-A Page 6 of 27
Refurbishment of 48 V Battery and Battery chargers at - Borivali, Versova, Mankhurd, Davdi and Dharavi.		

existing roads/rail up to respective receiving stations

6.0 Plant Elevation Not above 1000m over mean sea level

7.0 Climatic conditions

7.1 Temperatures:

(a) Maximum dry bulb temperature 36.7⁰ C

(b) Minimum dry bulb temperature 18.3⁰ C

(c) Design temperature for electrical equipment / devices 50⁰C

(d) Design humidity 95%

7.2 Relative humidity

(a) Maximum during monsoon 100%

(b) Minimum during December to January 22%

8.0 Rainfall Annual average rainfall is about 2500 to 3100 mm (most of which occurs during the monsoon season from June to September)

9.0 Wind data

Calculations for wind effect shall be in accordance with IS: 875 (Part-3) taking into account the following:

(i) Basic wind speed = 44 m/sec

(ii) Factor K1, K2, K3 = as per IS 875 Part-3

(iii) Category of terrain = as per IS 875

10.0 Seismic conditions The proposed site is located in seismic zone III as per the Indian Standard IS 1893 and importance factor of 1.75.

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11.0 Air Quality

Atmosphere polluted with industrial gases and wastes because of proximity to petroleum refineries and fertilizer complex.

12.0 Sea water temperature

(a) Maximum	36.7 ⁰ C
(b) Minimum	22.8 ⁰ C
(c) Average	29.8 ⁰ C

13.0 Auxiliary Power Supply:

(a)	AC Power Supply System for Station Auxiliaries	415V AC, 3-phase, 4-wire solidly grounded system
(b)	AC Power Supply System for Lighting fixtures and space Heaters	240V, 1 phase, 2 wire, 50Hz AC supply with neutral lead grounded derived from (a)
(c)	Uninterrupted Power Supply	240 V, 1-phase, 50 Hz, 2-wire, AC supply
(d)	Construction Power Supply	415V, 3 phase, 4 wire, 50Hz AC supply solidly grounded
(e)	DC Supply	48 V DC, 2 wire DC supply.
(f)	The above voltages may vary as follows: All devices shall be suitable for continuous operation over the entire range of voltage and frequency indicated below without any change in their performance. AC supply Voltage variation $\pm 10\%$ Frequency variation $\pm 5\%$ Combined voltage & frequency variation 10%	

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A3 SCOPE OF WORK

The scope for this project covers:

- 1) General scope of work as per Section-B Standard Specs for Battery and charger (48V) and Standard Specs for SMPS type charger Document attached.
- 2) All Cabling between Charger and Battery shall be in Scope of the Bidder.
- 3) Design, Engineering, Manufacturing, Preparation of drawings, Inspection, testing at works, Performance testing, Supply, Transport; delivery to site, unloading, connection between cells, site testing and commissioning of Lithium Ion (LFP) Battery and Chargers for Borivali, Versova, Mankhurd, Davdi and Dharavi as per below Table.

Sr No	Location	Battery Ah	Qty	Battery Charger Rating	Qty
1	Borivali	200Ah	1	45A	1
2	Versova	200Ah	1	40A	1
3	Mankhurd	200Ah	1	40A	1
4	Davdi	200Ah	1	40A	1
5	Dharavi	300Ah	1	45A	1

- 4) For Battery Charger refer Annexure-3- Specs for SMPS type Battery Charger.
- 5) Connection between cells including all clamps and connectors shall be in bidder scope.
- 6) Adherence to General requirements of Quality Assurance & Inspection.
- 7) Submission of type test report which is not more than 5 years old.
- 8) Packing, shipment, delivery to the respective mentioned Locations. It is not the intent of this specification to specify completely herein, all details of design & construction

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of the above-mentioned battery cells and its accessories. However, the equipment shall conform in all respects to high standards of engineering, design & workmanship.

- 9) Complete installation, site testing and commissioning of the system shall be in the scope of the supplier. All required material and other associated accessories implicit or explicit in the specification for successful commissioning of the system is in the vendor's scope.

During testing, as per relevant standard the capacity test on randomly selected cells shall be performed.

A4 TERMINAL POINTS

1. Charger AC Input MCCB.
2. Charger DC Output MCCB

A5 EXCLUSIONS

Supply and Laying of the Following Cables:

1. Input Cables from ACDB to Charger MCCB.
2. Output Cables from Charger DC MCCB to DCDB.

A6 CODES AND STANDARDS

Please refer Following Annexures:-

- Annexure 2 - Standard Specs for Lithium-Ion Batteries.
Annexure 3 - Standard Specs for SMPS type Battery Charger.

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Refurbishment of 48 V Battery and Battery chargers at - Borivali, Versova, Mankhurd, Davdi and Dharavi.		

A7 BIDDER'S QUALIFICATION REQUIREMENTS

Please refer Following Annexures: -

Annexure 4- Standard PQR for Lithium-Ion Battery.

Annexure-5- Standard PQR for SMPS Battery Charger.

A8 PROJECT SCHEDULE / MILESTONES

Bidder shall submit with the bid, a detailed Project Schedule covering the following based on the milestones tabulated below:

- a. Start of 'Engineering'
- b. Completion of 'Engineering'
- c. Commencement of 'Manufacturing'/Manufacturing process
- d. Commencement of Supply
- e. Commencement of Supervision of erection, testing and commissioning

Sr. No.	Milestone	Target
1	PO Placement	Zero Date
2	MDL & Project Detailed Project Execution Schedule submission & approval	Within 1 weeks from PO
3	Drawing submission & approval	Within 1 weeks from PO
4	Inspection of equipment	Within 8 weeks from PO
5	Delivery of equipment	Within 10 week from PO
6	Completion of commissioning	Within 12 weeks from PO

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A9 SUBMISSIONS BY BIDDERS

Bidder shall submit the following information along with the Technical Bid:

- 1) Dully filled in schedules, listed in section 'C'.
- 2) Confirmation to Standard Quality Plan
- 3) General Arrangement Drawings for Battery and Charger offered.
- 4) Filled up Data Sheets, in PDF with company stamp & authorized signature
- 5) All the Type Test Reports as per SQP in last 5 years from date of bid submission
- 6) Manufacturing & Delivery schedule

Bidder shall submit following information after award of contract

- i. General Arrangement Drawings for equipment offered
- ii. Filled up Data Sheets (GTP)
- iii. Manufacturing Quality Plan & Field Quality Plan
- iv. O& M manual including handling & commissioning guideline

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	Refurbishment of 48 V Battery and Battery chargers at - Borivali, Versova, Mankhurd, Davdi and Dharavi.	

A10 DETAILED TECHNICAL SPECIFICATIONS*

A10.1 MECHANICAL

Not Applicable

A10.2 CIVIL AND ARCHITECTURAL

Not Applicable

A10.3 CONTROL, INSTRUMENTATION AND AUTOMATION

Not Applicable

A10.4 ELECTRICAL

Please refer Following Annexures:-

Annexure 2 - Standard Specs for Lithium-Ion Batteries.

Annexure 3 - Standard Specs for SMPS type Battery Charger.

A11 LAYOUT REQUIREMENTS

- 1) Please refer section B – Standard Specifications for Battery Sets
- 2) Standard clearance shall be maintained.
- 3) Battery stands shall be suitable to accommodate in available space.
- 4) Battery racks shall be such that the maintainability of cells is easy

A12 QUALITY REQUIREMENTS

Please refer Following Annexures: -

Annexure 2 - Standard Specs for Lithium-Ion Batteries.

Annexure 3 - Standard Specs for SMPS type Battery Charger.

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A13 PERFORMANCE REQUIREMENTS**A13.1 TEST PROCEDURE**

Please refer Following Annexures: -

Annexure 2 - Standard Specs for Lithium-Ion Batteries.

Annexure 3 - Standard Specs for SMPS type Battery Charger.

A13.2 PERFORMANCE GUARRANTEEE PARAMETERS AND LD CLAUSES FOR NON PERFORMANCE

Please refer Following Annexures: -

Annexure 2 - Standard Specs for Lithium-Ion Batteries.

Annexure 3 - Standard Specs for SMPS type Battery Charger.

A14 MAINTAINANCE REQUIREMENTS

Please refer Following Annexures: -

Annexure 2 - Standard Specs for Lithium-Ion Batteries.

Annexure 3 - Standard Specs for SMPS type Battery Charger.

A15 TOOLS AND TACKLES FOR ERECTION AND COMMISSIONING

Please refer Following Annexures: -

Annexure 2 - Standard Specs for Lithium-Ion Batteries.

Annexure 3 - Standard Specs for SMPS type Battery Charger.

A16 SPARES

Bidder needs to include competitive price for Mandatory Spare parts against the list and schedules provided in Section B standard specification of battery.

Bidder shall include list of spares with quantities as recommended by him required for three years trouble free operation of equipment.

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B1 – DATA SHEETS

Please refer attached Datasheet Format B3– as per Section B Annexure - I.

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B2 –STANDARD SPECIFICATIONS

Please refer attached Annexures:

Annexure 2– Standard Specs for Lithium-Ion Batteries.
Annexure-3- Standard Specs for SMPS type Battery Charger.

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B3- SCHEDULE OF MANDATORY SPARES

List of required mandatory spares specified in Section-A.

Sr. No.	Equipment tag no.	Description of spare	Material of construction	Part no	Quantity included per unit of equipment	Remarks

Seal of the Company

Signature

Designation

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C1 - SCHEDULE OF QUANTITIES AND PRICES

Please refer Attached BOQ Annexure 1

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Signature

Designation

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C2- PROJECT TIME SCHEDULE

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Signature

Designation

Note: The bidder shall indicate schedule of milestones and also attach/furnish a detailed bar chart identifying customer inputs.

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C3- SCHEDULE OF DEVIATIONS FROM TECHNICAL SPECIFICATIONS

All deviations from this specification, shall be set out by the Bidders, indicating clause no and page in this schedule. Unless ***specifically*** mentioned in this schedule, the tender shall be deemed to conform to the purchaser's specifications:

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

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

Seal of the Company

Signature

Designation

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C4- SCHEDULE OF DEVIATIONS FROM GENERAL & SPECIAL CONDITIONS OF CONTRACT

All deviations from this specification, shall be set out by the Bidders, indicating clause no and page in this schedule. Unless ***specifically*** mentioned in this schedule, the tender shall be deemed to conform to the purchaser's specifications:

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

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

Seal of the Company

Signature

Designation

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C5- SCHEDULE OF DRAWINGS & DOCUMENT SUBMISSION

As part of the proposal, the BIDDER shall furnish the schedule of drawing/document submission

Sr. No.	Title of Drawing/Document	Target Date of submission	For Information/Review/Approval	Remarks
1.0				
1.1				
1.2				
2.0				
2.1				
2.2				
3.0				
3.1				
3.2				
4.0				
4.1				
4.2				
5.0				
5.1				
5.2				

Seal of the Company

Signature

Designation

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C6- SCHEDULE OF MANDATORY SPARES

As part of the proposal, the BIDDER shall indicate below the list of recommended spares for three years of trouble free operation of the equipment/system offered by him.

Sr. No.	Equipment tag no.	Description of spare	Material of construction	Part no	Quantity recommended per unit of equipment	Unit price	Total price	Delivery period from date of LOI	Remarks

Seal of the Company

Signature

Designation

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C7 - SCHEDULE OF SPECIAL ERECTION/MAINTENANCE TOOLS & TACKLES

As part of the proposal, the BIDDER shall indicate below, the list of erection/maintenance tools & tackles offered by him.

Sr. No.	Description of spare	Quantity recommended per unit of equipment	Unit price	Total price	Delivery period from date of LOI	Remarks

Seal of the Company

Signature

Designation

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C8 - SCHEDULE OF PLACES OF MANUFACTURE, TESTS AND INSPECTION

For major equipment / systems, the Bidder shall indicate the name of the Manufacturer / SUBCONTRACTOR and place of test and inspection.

ITEM OF EQUIPMENT	Manufacturer / SUBCONTRACTOR	PLACE OF TESTING & INSPECTION

Seal of the Company

Signature

Designation

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C9- SCHEDULE OF RECOMMENDED SPARES

As part of the proposal, the BIDDER shall indicate below the list of recommended spares for three years of trouble free operation of the equipment/system offered by him.

Sr. No.	Equipment tag no.	Description of spare	Material of construction	Part no	Quantity recommended per unit of equipment	Unit price	Total price	Delivery period from date of LOI	Remarks

Seal of the Company

Signature

Designation

Document No: TE/SP/0001/FY26 Rev: A Date: 07-05-2025	PROJECT SPECIFICATION	Section-A Page 26 of 27
	Refurbishment of 48 V Battery and Battery chargers at - Borivali, Versova, Mankhurd, Davdi and Dharavi.	

D- DRAWINGS AND DOCUMENTS

D1 TENDER PURPOSE

D2 AFTER AWARD OF CONTRACT

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	Refurbishment of 48 V Battery and Battery chargers at - Borivali, Versova, Mankhurd, Davdi and Dharavi.	

E - ANNEXURES

Annexure 1- BOQ for Li-ion Battery and Chargers.

Annexure 2- Standard Specs for Lithium-Ion Batteries.

Annexure 3- Standard Specs for SMPS type Battery Charger.

Annexure 4- Standard PQR for Lithium-Ion Battery.

Annexure-5- Standard PQR for SMPS Battery Charger.

Annexure 6- Standard format Data sheet B1 for battery system.

Annexure-1

Annexure-1			
BILL OF QUANTITY			
SITC	Lithium Ion Battery and Charger		
	SUPPLY		
Sr. No.	Description	Qty.Set /Nos	Price quoted by bidder in INR
1	Design, Engineering, Manufacturing, Inspection, Supply, Transport, Unloading at site, Storage, Erection, Testing, Commissioning of Battery and Charger of the following along with Spares as per Technical Specification.		
1.1	48V, Lithium Ion LFP type, 200 Ah along with BMS , stand, accessories etc @Borivali	1	
1.2	48V, 45A SMPS Type Battery Charger. @Borivali	1	
1.3	48V, Lithium Ion LFP type, 200 Ah along with BMS , stand, accessories etc @Versova	1	
1.4	48V, 40A SMPS Type Battery Charger. @Versova	1	
1.5	48V, Lithium Ion LFP type, 200 Ah along with BMS , stand, accessories etc @Mankhurd	1	
1.6	48V, 40A SMPS Type Battery Charger. @Mankhurd	1	
1.7	48V, Lithium Ion LFP type, 200 Ah along with BMS , stand, accessories etc @Davdi	1	
1.8	48V, 40A SMPS Type Battery Charger. @Davdi	1	
1.9	48V, Lithium Ion LFP type, 300Ah along with BMS , stand, accessories etc @Dharavi	1	
1.10	48V, 45A SMPS Type Battery Charger. @Dharavi	1	
2	SERVICES		
2.1	Services for Installation, testing and commissioning of Battery sets with BMS and Chargers mentioned in supply portion @Borivali	LS	
2.1	Services for Installation, testing and commissioning of Battery sets with BMS and Chargers mentioned in supply portion @Versova	LS	
2.1	Services for Installation, testing and commissioning of Battery sets with BMS and Chargers mentioned in supply portion @Mankhurd	LS	
2.1	Services for Installation, testing and commissioning of Battery sets with BMS and Chargers mentioned in supply portion @Davdi	LS	
2.1	Services for Installation, testing and commissioning of Battery sets with BMS and Chargers mentioned in supply portion @Dharavi	LS	

Annexure-2

The Tata Power Company Ltd.

Engineering (T&D)

TE/ELEC/STD-SPEC/0059 Rev: A Date: 03-03-2025	STANDARD SPECIFICATION	Section B
	Standard specification for Li-ion battery for EHV substation	

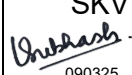
STANDARD SPECIFICATION FOR LITHIUM ION BATTERY

Document Title: Standard technical specification for Lithium Ion Battery.

Document number: TE/ELEC/STD-SPEC/0059

TATA POWER

The Tata Power Company Limited
Engineering (T&D), The Tata Power Company Limited, Antop Hill Receiving Station, Samadhan Road
Antop Hill Mumbai-400037 Maharashtra, India.
Registered Office Bombay House 24 Homi Mody Street Mumbai 400 001

Rev No.	Date	Revision History	Prepared By	Checked By	Approved By
A	03-03-2025	Standard specification for Li-ion Battery.	AN 	AVJ 	SKV  090325

TE/ELEC/STD-SPEC/0059 Rev: A Date: 03-03-2025	STANDARD SPECIFICATION	Section B
	Standard specification for Li-ion battery for EHV substation	

CONTENTS:

Sr. No.	Description	Page no.
1	Introduction	2
2	Qualifying Requirements	2
3	System Description and Scope	2
4	Codes & Standards	3
5	Design Requirements	5
6	Safety Requirements	13
7	Operational & Maintenance Requirements	13
8	Quality Requirements, Inspection and Testing.	13
9	Performance Requirements	18
10	Spares and Special Tools & Tackles	18
11	Data Submission by Bidder	19
12	Demonstration by Bidder	19
13	Annexures	20
I	Data sheet for Li-ion battery.	
II	Pre-qualifying requirement for Lithium Ion Battery.	
III	Standard Quality Plan (SQP)	

TE/ELEC/STD-SPEC/0059 Rev: A Date: 03-03-2025	STANDARD SPECIFICATION FOR LITHIUM ION BATTERY	Section B
	Standard specification for Li-ion battery for EHV substation	

1. INTRODUCTION

The Technical specification covers the complete design, detailed engineering, manufacture, supply, inspection & testing, packing, transportation, delivery to site, performance testing, installation, commissioning and handing over of Lithium-ion Batteries required for EHV substation. All equipment, system and services covered under this specification shall comply with all current applicable statutory regulations and safety codes in the locality where the Equipment is proposed to be installed. The equipment and systems shall also confirm to the latest version of applicable codes and standards on the date of offer made by the Bidder unless otherwise indicated. Nothing in this specification shall be construed to relieve the Bidder of this responsibility.

2. BIDDER'S QUALIFICATION REQUIREMENTS

Refer Annexure- II Pre-qualifying requirement for bidder.

3. SYSTEM DESCRIPTION AND SCOPE

- 3.1 The specification covers the engineering, design, preparation of drawings, manufacturing, testing at works, loading, supply, transport to site, installation, testing and commissioning of Lithium-ion Battery according to standard engineering practices, IS or IEC standards.
- 3.2 Deputing personals with technical expertise for installation & commissioning of battery.
- 3.3 Site Acceptance Test to the Purchaser's satisfaction.
- 3.4 Submission of type test report of similar rating as per relevant IS/IEC which is not more than 5 years old from the date of bid submission.
- 3.5 Submission of technical documentation related to design, installation, testing, operation & maintenance of the equipment for owner's review & approval through Wrench system.

TE/ELEC/STD-SPEC/0059 Rev: A Date: 03-03-2025	STANDARD SPECIFICATION FOR LITHIUM ION BATTERY	Section B
	Standard specification for Li-ion battery for EHV substation	

4. CODES AND STANDARDS

Given below are the acceptable code and standards. The Bidder shall take Owner's approval for use of other codes & standards. Unless and otherwise specified, equipment shall conform to the latest applicable standard.

UL1642: UL Standard for Safety for Lithium Batteries

IEC 62133-2:2017 "Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications"

IEC 62619-2022: Secondary cells and batteries containing alkaline or other non-acid electrolytes – Safety requirements for secondary lithium cells and batteries, for use in industrial applications.

IEC 62620:2014: Secondary cells and batteries containing alkaline or other non-acid electrolytes – Secondary lithium cells and batteries for use in industrial applications.

IEC 61000-4-2 {2001} "Testing and measurement techniques of Electrostatic discharge immunity test".

IEC 60086-4:2000 Primary batteries. Safety standard for lithium batteries.

IEC 61960-2:2001 Secondary lithium cells and batteries for portable applications. Secondary lithium batteries.

IEC 62485-2 Safety requirements for secondary batteries and battery installations - to meet requirements on safety aspects associated with the erection, use, inspection, maintenance and disposal: Non-chemistry Specific (applicable to all secondary battery types).

IEC 62281:2019/UN 38.3 Safety of primary and secondary lithium cells and batteries during transport: Applicable for storage systems using Lithium-Ion chemistries.

TE/ELEC/STD-SPEC/0059 Rev: A Date: 03-03-2025	STANDARD SPECIFICATION FOR LITHIUM ION BATTERY	Section B
	Standard specification for Li-ion battery for EHV substation	

5. DESIGN REQUIREMENTS

a. Specific Requirements

1. Lithium-ion Storage batteries designed for continuous operation shall be provided. The system shall employ a modular configuration to provide flexibility, keeping in view the future backup requirement.
2. The Battery chemistry shall be LFP (Lithium Ferro phosphate) Type only.
3. Batteries are required to have all the necessities electronics and intelligence built into it to ensure that battery performs in the safest and proper manner with existing power plant. These batteries shall be charged normally at a minimum of 0.5C rate ('C' wherever used in this document, stand for the capacity of cell/module) in a constant current/constant voltage charge mode.
4. Maximum Charging rate shall be specified by the manufacturer. All other required Charge/discharge management parameters of battery module shall be provided by Manufacturer for parameters matching with switched-mode power supply (SMPS). The battery is normally not allowed to discharge beyond 80% of C (rated capacity). The discharge rate for these batteries shall be between 0.5C to 1 C up to 80% of its rated capacity.
5. The operating Temperature range of battery should be -10° C to 60° C. The offered battery sets shall be compact and shall require no regular maintenance. All safety equipment required for installation shall be provided by the Manufacturer.
6. The Li-ion battery shall be suitable for installation in indoor & outdoor cabinets. The ingress protection for indoor cabinet & outdoor cabinet shall be IP-20 and IP-55 respectively.
7. The Battery shall be Type Tested as per Listed Standards in Clause 4.

TE/ELEC/STD-SPEC/0059 Rev: A Date: 03-03-2025	STANDARD SPECIFICATION FOR LITHIUM ION BATTERY	Section B
	Standard specification for Li-ion battery for EHV substation	

b. Sizing/ Selection Criteria for Li-ion Batteries.

1. There shall be two (2) centrally grounded 220V / 110V / 48V DC systems for each project. Each DC system set shall consist of 1 x 100 % battery and 1 x 100 % battery charger and shall be able to operate in parallel.
2. Battery shall be Lithium-ion type.
3. An Approved Load Discharge Current profile/ Case details of the Battery shall be provided to the Bidder.
4. The Battery Backup duration shall be as Specified in the Load Discharge Profile.
5. The Lithium-Ion Battery shall be Factory Tested for the provided Discharge profile and shall successfully match the Discharge Current characteristics.
6. It is Mandatory for Bidder to Demonstrate Load Cycle Handling Capability of the Battery at Purchaser/Bidder works prior to finalization of the order. For the demonstration all the expenses incurred shall be borne by the bidder.
7. A Comprehensive Report shall be submitted by the Bidder to Tata Power after Factory Testing and the required approvals are to be taken.
8. Any Modifications/ Additions in Cell type/configuration OR Cell Modules for matching the Load Discharge Characteristics is the responsibility of the Bidder (without any cost impact)
9. The Test Environment characteristics i.e. Ambient Temperature etc. shall be provided to the manufacturer with the Load profile, which shall be simulated while Factory Testing of the Battery set.
10. A Temperature Rise Test as per Standard (UL-1642) shall be done while Discharging the Battery Pack as per the provided Discharge profile, which shall be submitted to Tata Power for review.
11. The Battery System shall be subjected to all Tests as mentioned in the UL Standard for Safety for Lithium Batteries, UL 1642.
12. The Battery Charger shall also be selected as per the provided Load cycle and should be able to cater to the Current requirements.
13. The Battery Modules provided shall be designed & tested for Ambient Temperature of 50°C without any External HVAC or Cooling requirement.
14. The Battery Module DC Voltage shall not be less than –10% of the specified system voltage.

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	Standard specification for Li-ion battery for EHV substation	

7.ii LOAD SUMMARY

	Description	Load Duration			
		0 - 1 min.	1 - 120 min.	120 - 359 min.	359 - 360 min.
1	DC LOAD DETAILS	196.59	97.71	56.69	74.93
	TOTAL LOAD	196.59 A	97.71 A	56.69 A	74.93 A
	Total Load considering min. system voltage (=198V)	218.44 A	108.57 A	62.99 A	83.25 A

Figure 1: Example of a Load Cycle for 220V system

c. General Constructional Features for Lithium-ion Batteries

The equipment offered shall be complete with all parts that are necessary or usual for the efficient operation of the equipment, whether specifically mentioned or not.

The design of battery shall be as per field proven practices. Lithium Iron Phosphate (LiFePO₄) should only be used as an active material. The paralleling of cells within the module is not permitted. The paralleling of modules for enhancement of capacity is permitted. The contractor shall provide as required no of modules for achieving rated capacity as specified in the Specification. The Battery module shall be so designed as to be suitable for Horizontal, Vertical and handstand position. Any installation position & method shall be as per requirement to ensure space and floor loading requirement.

CONTAINERS AND LID:

The cell shell made of aluminum metal or equivalent subjected to safety standard are met. It shall be capable of meeting all requirements of lithium cell and be consistent with the life of battery. The cell shell shall be in rigid casing of sufficient strength to prevent flexing. The module container made of painted galvanized sheet or equivalent shall be capable of meeting all the requirements of Lithium-

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ion battery and be consistent with the life of battery. Both cell shell and module container materials shall have chemical and electro-chemical compatibility and shall be acid resistant. The container shall be symmetrical in shape and stand level on the plane level surface. The internal area of cell shell has sufficient provision for expansion of +ve plate. The module container shall be fire retardant and shall have an Oxygen Index of at least 28% & should comply UL-94 V-0 for this purpose. The porosity of the container shall be such as not to allow any gases to escape except from the release valve. The tensile strength of the material of the container shall be such as to handle the internal cell pressure of the cells in the worst working condition. Module shall not show any deformity or bulge on the sides under all working conditions. The container shall be capable of withstanding the rigorous of transport, storage and handling. The materials of container shall be designed by AS (Aluminum shell) or equivalent subject to meet all the safety requirements.

CELL/MODULES COVERS:

The cell/module covers shall be made of suitable material compatible with the container material and permanently sealed with the container. It shall be capable of withstanding internal pressure without bulging or cracking. It shall also be fire retardant. Fixing of Pressure release Valve & terminal posts in the cover shall be such that the seepage of electrolyte, gas escapes and entry of electro-static spark are prevented.

PRESSURE RELEASE VALVE:

Each cell shall be provided with a pressure release valve (if applicable). The valve may open only as a final protection of the worst-case condition when abnormal cell over charge/discharge happens which further causes cell expansion, extreme high internal gas pressure. Once the safety valves blow off, the cell cannot be reused

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TERMINAL POST:

Both the +ve and –ve terminals of the cells/module shall be capable of proper termination and shall ensure its consistency with the life of the battery. The surface of the terminal post extending above the cell/module cover including bolt hole shall be coated with an acid resistant and corrosion retarding material. Terminal posts or any other metal part which is in contact with the electrolyte shall be made of the same alloy as that of the plates or of a proven material that does not have any harmful effect on cell/module performance. Both +ve and –ve posts shall be clearly and unambiguously identifiable. The terminal post & its sealing shall be capable of withstanding the heat generated in cell/module during external short circuit condition.

CONNECTORS, NUTS & BOLTS:

Where it is not possible to bolt the cell terminals directly to assemble a battery, separate non-corroding lead or copper connectors of suitable size shall be provided to enable connection of the cells. Copper connections shall be suitably tin coated to withstand corrosion. The thickness of the tin coating of connectors shall be not less than 0.025mm. The area of cross-section of the connectors shall be rated at 2 Amp/mm² minimum at C/5 rate of discharge. Nuts and bolts for connecting the cells shall be made of copper for –ve and aluminum for +ve, Stainless steel bolts, nuts and washers can be used.

BATTERY BANK STAND/RACK:

All batteries shall be mounted in a suitable steel stand/frame. The frame shall be powder coated with anticorrosive paint. Stand shall be painted for protection against fungus growth and other harmful effects due to tropical environment. Suitable insulation shall be provided between the stand/frame and floor to avoid the grounding of the frame/stand.

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d. VENTILATION

The BIDDER shall indicate the general requirements of ventilation in the battery room. The battery shall operate satisfactorily over the entire range of temperature indicated in Specific Requirements without affecting its normal life. BIDDER shall indicate the percentage reduction in battery capacity at the lowest temperature compared to that at standard temperature of 27°C. If any special ventilation requirements are necessary, the same shall be indicated.

The Battery Modules provided shall be designed & tested for Ambient Temperature of 50°C without any External HVAC or Cooling requirement.

e. EXPECTED BATTERY CYCLE LIFE

The Cell/module for Float application shall be capable of giving more than 2000 DOD (up to 80%) cycles at average temperature of 35 degree Celsius. Depth of Discharge (DOD) is defined as the ratio of quantity of electricity (in Ampere-hour) removed from a cell or battery on discharge to its rated capacity.

f. CAPACITY

When a cell is discharged at C/5 rate, it shall deliver 100% of C (rated capacity, corrected at 25°Celsius) before the cell voltage reaches end cell voltage specified by manufacture. All cells in a battery shall be designed for continuous float operation at the specified float voltage throughout the life.

Ampere hour efficiency shall be better than 90% and watt hour efficiency shall be better than 80%.

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g. LIFE AND WARRANTY

The Cell/module for Float application shall be capable of giving more than 2000 Cycles (@ DOD up to 80%) at an average temperature of 35 degree Celsius. The minimum guaranteed life span of the battery should not be less than 5 years. The bidder shall quote in his offer the guaranteed life of the battery when operating under the conditions specified.

h. BATTERY MANAGEMENT SYSTEM (BMS).

A Battery management system (BMS) shall be provided along with battery modules to manage rechargeable battery (cell or battery pack) by collecting all the information from the individual battery modules and communicates to the external system through defined protocol. It should monitor the state of battery by monitoring Battery voltage, voltage of individual cells, minimum & maximum cell voltage, average temperature, coolant intake temperature, coolant output temperature, current in or out of battery and can be shown in the display of the BMS.

It should have all the necessary electronics and intelligence built into it so as to ensure that the battery performs in the safest and proper manner with existing SMPS based power supply.

A BMS may also feature a pre-charged system allowing a safe way to connect the battery loads and eliminating the excessive inrush currents to load capacitors. The connection to load shall normally be controlled through Solid state or electronic switches.

The BMS should be consisting of following components:

- i. The BMS control with display for the control.
- ii. Solid-state or Electronic switch for disconnecting charging path and current limiter circuit to regulate charging current.
- iii. Solid-state or Electronic switch for disconnecting discharging path that is disconnecting the battery discharging circuit to prevent a total discharge.

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- iv. The current sensor to measure the charging and discharging currents.
- v. The power supply for the energy supply of the BMS.
- vi. The BMS cell board or the central box that are monitoring and balancing the single cells
- vii. Temperature sensors for monitoring

The Accuracy in data display by BMS and actual value of battery modules shall be as follows:

Voltage accuracy: better than 0.5%

Current accuracy: better than 2%

Capacity accuracy: better than 5%

Temperature accuracy: better than 5%

A BMS should calculate the following:

- i. Maximum charge and discharge current limit
- ii. Energy delivered since the last charge or charge cycle.
- iii. Internal voltage of a cell (to determine open circuit voltage)
- iv. Charge delivered or stored and Accumulated delivered Ah.
- v. Total energy delivered since first use
- vi. Total number of cycles, Charge/discharge count
- vii. State of charge or depth of discharge
- viii. State of health.

The BMS should have the following protections for battery:

- i. Over charge protection
- ii. Over discharge protection
- iii. Short Circuit Protection
- iv. Overload protection
- v. Temperature protection

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Following alarms shall be provided on display and available on communication port on a Terminal Box:

- i. Cell over voltage
- ii. Cell Under Voltage
- iii. Charge over Current level 1 &2
- iv. Cell Charge over Temperature
- v. Cell Discharge over Temperature
- vi. Cell Charge Under temperature
- vii. Cell Discharge Under temperature
- viii. Discharge over Current level 1&2
- ix. Current Limit Mode
- x. Cell Unbalance
- xi. Total cell over voltage
- xii. Total cell under volt.
- xiii. Hardware fail

The BMS should be able to remotely measure following Battery parameters:

- i. Charge capacity of battery module (SOC).
- ii. Voltage of battery module/cell.
- iii. Ambient temperature of battery module/PCBA board(optional)/cell (optional).
- iv. Charging/discharging current of battery module, Internal resistance of battery module (optional).
- v. State of healthy of battery module (SOH) etc.

The BMS should be able to remotely control switch off alarm, smart intermittent charge and limited current charge. Also, it should be able to remotely adjust Charge/discharge management parameters of battery module, parameters matching with switched-mode power supply (SMPS). LED/LCD to be provided for power, activity and fault status in BMS.

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i. SHORT CIRCUIT PROTECTION.

External short circuit (As per IEC60233), when applied to cell, until its voltage drop to zero, shall not cause fire or explosion of the cell. External short circuit when applied to module, there shall be immediate protection by BMS and shall not cause fire or explosion of the module. No internal short circuit shall occur, throughout the life of the cell/module due to active material expansion

j. CELL AND CONDUCTANCE MATCHING

Cell matching is essential for optimum life and performance of the battery. The difference between cell voltages in the cell module string, with the highest and lowest open circuit voltage shall be less than 0.05V under fully recharged conditions. The difference in the highest and the lowest cell capacities shall not be more than 4% percent of their rated capacity.

Conductance matching of each cell/ cell module in the battery, when connected in series, shall be within +/- 15% of the average cell conductance. Also, when the cells are connected in parallel to form a cell module, the conductance of all the cells in the cell module shall be within +/-15% of the average conductance of the cells of the module. The conductance matching test certificate shall be obtained from any recognized or accredited lab.

k. RELATIVE HUMIDITY.

Operation Relative humidity: >90% (40°C ± 2°C) Max 95% (40°C ± 2°C) Storage
Relative humidity: >95% (40°C ± 2°C)

I. CHEMICAL REQUIREMENTS.

While operating in the normal operating conditions, the cell/module or battery shall not lead to dry out, throughout the life of the battery. The Bidder shall supply the necessary data to support the requirement. The cell/module/battery shall not exhibit thermal runaway while working in the average ambient temperature of 35° C, operating range of -10 to 60 °C and at a charge rate of C/2.

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6. SAFETY REQUIREMENT

Offered battery cell/module shall conform to following Safety Requirements as per UL 1642/ IEC 62133 /IEC 62281/IEC 62619/ UN 38.3

- i) Electrical Safety
- ii) Mechanical Safety
- iii) Operational Safety (Environmental testing)
- iv) Projectile

The Manufacturer shall carry out the above safety tests or submit the previous test reports.

7. OPERATIONAL AND MAINTENANCE REQUIREMENTS:

Specific need for the type of charger required for the battery shall be specified by the bidder.

Bidder to ensure ventilation of battery room is adequate enough to keep H2 level in room well in limits.

8. QUALITY REQUIREMENT, INSPECTION AND TESTING

The batteries shall be type tested and the type test reports shall be submitted for purchaser's approval. Other acceptance tests shall be carried out as per the standard quality plan. Refer Annexure IV- QAP.

INSPECTION

The purchaser reserves right for inspection of the equipment or the manufacturing process at any point of time. The vendor shall raise inspection call after completion of the manufacturing process & offer the equipment for inspection.

QUALITY ASSURANCE PLAN

The vendor shall submit the Quality Assurance Plan (QAP) which has all items of SQP & FQP & get it approved from the purchaser. Dismantling and disposal of old battery sets in accordance with statutory norms is also in vendor scope.

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COMMISSIONING CHECK LIST

Bidder shall furnish the Commissioning check list for Tata Power approval before commissioning the Battery at Site. As such the checklist shall cover site-specific tests including interconnections with field equipment and other systems.

Trained manpower shall be provided for initial installation, testing and commissioning.

TESTING REQUIREMENTS

i.Type Tests

Earlier Type test report conducted as per below shall be accepted for Lithium-Ion battery. In absence of previous Type tests report, same shall be performed on the highest capacity Lithium ion Battery module along with Battery management system as per follow:

a. Mechanical Testing.

The following Mechanical testing shall be carried out as per UL 1642/IEC 62133/UN38.3.

- i. Crush
- ii. Impact
- iii. Shock
- iv. Vibration

b. Electrical Testing

The following Electrical testing shall be carried out as per UL 1642/IEC 62133/UN38.3.

- i. Short Circuit
- ii. Over Charging
- iii. Over Discharge and Forced Discharge.

c. Environment Testing.

The following environment testing shall be carried out as per UL 1642/IEC 62133

- i. Thermal Shock
- ii. Temperature cycling and Rise.
- iii. Low Pressure
- iv. High Temperature Storage

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d. Projectile Testing.

This test shall be carried out as per UL 1642/IEC 62133.

e. Electrostatic Discharge Testing.

The Battery shall comply with IEC 61000-4-2 {2001} "Testing and measurement techniques of Electrostatic discharge immunity test"

ii.Functional Tests

Functional Tests shall be required to be conducted on Lithium-Ion battery. The comprehensive test plan will be finalized with the successful bidder during detailed engineering. The test plan under Functional Test shall cover all aspects of features and functions described in this Section.

iii.Factory Acceptance Tests

Factory acceptance tests shall be performed as specified in Table.

Sr No	Test	Factory Acceptance Test	Site Acceptance Test
1	Verification of marking -Visual observation -Dimensional inspection -Polarity checking	√	√
2	Capacity Test	√	√*
Note: All the above tests to be conducted on the battery of highest rating (AH) offered. * Capacity Test during SAT shall be conducted as per available load at site/External load to be arranged by contractor in case of unavailability of equipment load at site.			

iv.Site Acceptance Tests

After the battery bank has been installed, the Contractor shall start up and conduct site acceptance tests to check the performance of the battery of field locations. The tests shall be conducted as per Table mentioned in FAT Section.

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9. PERFORMANCE REQUIREMENT

Battery full cycle charge-discharge test to be carried out successfully during commission. If any cell is found faulty same shall be replaced immediately. The full charge discharge test shall be carried out again after six months and the results shall comply to specification requirement.

10. SPARES AND SPECIAL TOOLS & TACKLES

SPARES

The spares supplied shall be strictly interchangeable with parts for which they are intended for replacement.

The spares shall be treated and packed for long storage (minimum 5 years) under the climatic conditions prevailing at the site.

The start-up spares shall be delivered at the site well in time before the start-up and commissioning of the plant.

BIDDER shall include the following items in mandatory list of spares along with item wise unit prices:

Sl. no	Item	Quantity
1	Inter-cell / Inter-row/ Inter-bank / connectors	5 nos. each
2	Battery stands insulators and cell insulators	10% of total Qty
3	Nuts, bolts, washers etc	10% of total Qty
4	Vent plugs	10% of total Qty
5	Complete set of spare cells	1 no. for 24/48 V set 2 no. for 110V DC set 4 no. for 220V DC set

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Above spares set shall be considered separate for each location of battery (i.e. separately for each receiving / generating station)

In addition to the spares mentioned above, the Bidder shall also furnish in his bid a list of recommended spares with unit prices.

The Bidder shall provide a list of recommended spares for a period of five years from the date of Site Acceptance Test (SAT)

SPECIAL TOOLS AND TACKELS

Bidder to provide the necessary tools and tackles required for successful commissioning and hassle-free operation of battery bank.

11. DATA SUBMISSION BY BIDDER:

WITH THE BID:

- Technical Data Sheet for offered battery
- Typical GA drawing for offered battery
- Factory Test Report for battery as mentioned in Clause 5.b (As per provided Discharge Profile).
- Manufacturing Quality Plan (MQP), Field Quality Plan (FQP)
- Detailed Bill of Material with make model and quantity.
- Declaration of support for 20 years of battery life. (on OEM's letter head)

12. DEMONSTRATION BY THE BIDDER:

- It is Mandatory for Bidder to Demonstrate Load Cycle Handling Capability of the Battery at Purchaser/Bidder works prior to finalization of the order. For the demonstration all the expenses incurred shall be borne by the bidder.
- If Bidder is found unsatisfactory during the Demonstration/Testing process, then the Order stands cancelled.
- The Lithium-Ion Battery shall be Factory Tested for the provided Discharge profile and shall successfully match the Discharge Current characteristics.

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- d) Any Modifications/ Additions in Cell type/configuration OR Cell Modules for matching the Load Discharge Characteristics is the responsibility of the Bidder (without any cost impact).
- e) The Test Environment characteristics i.e. Ambient Temperature etc. shall be provided to the manufacturer with the Load profile, which shall be simulated while Factory Testing of the Battery set.
- f) The Bidder shall demonstrate the Load Cycle handling Capability of the offered Lithium-ion battery set and provide Comprehensive reports for the same.

AFTER AWARD OF CONTRACT:

The following list of documents shall be submitted by successful bidder in Wrench for Owners review.

S.No.	List of drawing/Documents	Approval /information
1.	Data Sheet for the Battery	Approval
2.	General Arrangement drawings with layouts	Approval
3.	Mandatory and Recommended Spare list	Approval
4.	Tools & tackles list	Approval
5.	O&M Manual	Information
6.	Type test reports	Information
7.	Battery Sizing calculation.	Approval

13. ANNEXURE:

- Annexure I : Data sheet for Li-ion battery.
- Annexure II : Pre-qualifying requirement for Lithium Ion Battery.
- Annexure III : Standard SQP- Li-ion battery system.

Annexure-I

DATASHEET-B-3			
Sr.No	Parameter	Unit	Particulars
1	Manufacturer	Bidder to Specify	
2	Type	Bidder to Specify	
3	Maintenance free sealed type	Yes/No	
4 (i)	Module Capacity in AH	AH	
(ii)	No of module for achieving required capacity		
5	Weight of Module	Kg	
6	Dimension of Module	mm x mm x mm	
7	No. of Cells per module	No.	
8	Cell voltage	V	
9	No. of cycles supported for 80% depth of discharge at average ambient temperature of 35°C	No.	
10	Maximum Discharge rate		
11	Module (cell) Voltage for the fully charged battery when put to discharge at C/10 rate. i. After six minutes of discharge. ii. After six hours of discharge. iii. After 8 hours of discharge. iv. After 10 hours of discharge	V	
12	Module (cell) Voltage for the fully charged battery when put to discharge at C/5 rate i. After 4 Hours of discharge ii. After 4.85 hours of discharge. iii. After 4.96 hours of discharge. iv. After 5 hours of discharge	V	
13	Recommended Range of i. Float Voltage. Ii. Boost Voltage	V	
14	Ampere hour efficiency	%	
15	Watt hour efficiency	%	
16	Material used for manufacturing of container and oxygen index for the above material	Bidder to Specify	
17	Material used for manufacturing of cell cover, separator, heat sinkable sleeves , flame arrestors	Bidder to Specify	
18	Pressure related valve capable to withstand the internal cell pressure (PPFR material)	Bidder to Specify	
19	Temperature range Guaranteed performance: Operation without damage: Storage/ transport:	°C	
20	Relative humidity Minimum: Maximum:	%	
21	Thermal run away while working in the ambient temperature of 35°C, operating range of 0-50°C at a charge rate of C/2	Bidder to Specify	
22	Loss and capacity during storage at an ambient temperature of 35°C for a period of six months	Bidder to Specify	
23	Grid corrosion	Bidder to Specify	
24	Connector nut, bolts and washers	Bidder to Specify	

Sr.No	Parameter	Unit	Particulars
25	Details of racks for storage of battery bank	Bidder to Specify	
26	Outdoor operation	Yes/No	
27	Applicable Standards	Bidder to Specify	
Central Battery Management System (BMS)			
28	Display		
i)	Type	%	
ii)	Size		
iii)	Accuracy a) Voltage b) Current c) Capacity d) Temperature		
iv)	Capacity		
29	Measurements		
i)	Maximum Charging Current	Amp	
ii)	Maximum Discharge rate	Amp	
iii)	Energy delivered since last charge	kWH	
iv)	Internal impedance of cell	Bidder to Specify	
v)	Charge delivered/stored	AH	
vi)	Energy delivered since first use	AH	
vii)	Total operating time	Bidder to Specify	
viii)	Total numbers of cycles	No.	
ix)	State of Charge	AH	
30	Protections	Bidder to Specify	
i)	Overcharge protection	Yes/No	
ii)	Over discharge protection	Yes/No	
iii)	short circuit protection	Yes/No	
iv)	Overload protection	Yes/No	
v)	Temperature protection	Yes/No	
31	Remote communication	Yes/No	
i)	RS-232	Bidder to Specify	
ii)	RS-485	Bidder to Specify	
iii)	SNMP	Bidder to Specify	
32	Battery/Load disconnection through solid state switch	Yes/No	
33	Active balancing among battery modules through BMS	Yes/No	

Li-ion Battery

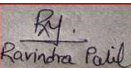
Technical Pre-qualification Requirement

Sr No	PARAMETER	TATA POWER REQUIREMENT	Documents To be submitted by Bidder to ascetrain meeting of Pre qualification requirement
1	2	3	4
1	Infrastructure	Bidder must be an OEM/Supplier of Li-ion Batteries with manufacturing facility / assembly in India.	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. In case of Channel Partner, OEM authorization letter to be furnished.
2	Demonstration of Battery Capacity	a) It is Mandatory for Bidder to Demonstrate Load Cycle Handling Capability of the Battery at Purchaser/Bidder works prior to finalization of the order. For the demonstration all the expenses incurred shall be borne by the bidder. b) If Bidder is found unsatisfactory during the Demonstration/Testing process, then the Order stands cancelled. c) The Lithium-Ion Battery shall be Factory Tested for the provided Discharge profile and shall successfully match the Discharge Current characteristics. d) Any Modifications/ Additions in Cell type/configuration OR Cell Modules for matching the Load Discharge Characteristics is the responsibility of the Bidder (without any cost impact). e) The Test Environment characteristics i.e. Ambient Temperature etc. shall be provided to the manufacturer with the Load profile, which shall be simulated while Factory Testing of the Battery set. f) The Bidder shall demonstrate the Load Cycle handling Capability of the offered Lithium-ion battery set and provide Comprehensive reports for the same.	A Comprehensive Report shall be submitted by the Bidder to Tata Power for Approval after Factory Testing of the Battery as per the provided Load Discharge Cycle/Profile.
3	Supply and Experience	Bidder shall have supplied two (2) quantity of Li-ion Battery of min.600 Ah capacity with 6 hours or longer in last one years and the system shall be in satisfactory service for last one year. As a special case, trial PO received / executed in last one year for reputed power utility company with min 600 Ah Capacity may be considered by the purchaser at their discretion during post bid evaluation. “In case the bidder has a previous association with Tata Power for similar products and services, the performance feedback for that bidder by Tata Power shall only be considered irrespective of performance certificates issued by any other organization. Technical performance, delivery timelines, service and support records of past executed projects in Tata Power will be considered for technical evaluation of bidder.” 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.	Supply List & Performance Certificates from the utilities / clients 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.
4	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 5 years prior to the date of bid opening. Time period for type test can be extended by another 5 years as a special case, if there is no change in design / material of construction (MOC). 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 despatch 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 5 years but less than 10 years prior to date of bid opening has to be considered (if applicable) 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 despatch of the equipment / material, in case type test reports furnished are not for the quoted equipment / material but for the equipment / material with higher voltage class and/or different capacity, (if applicable)
5	Commercial Capability	To be added by CC based on the package value	Copy of audited Balance Sheet and P&L Account to be submitted in this regard.
6	Installation & Commissioning for same equipment	In case the package involves installation & commissioning of the equipment / material, then the bidder shall have installed and commissioned at least two (2) quantity of Li-ion Battery of min.600 Ah capacity with 6 hours or longer and should have been in satisfactorily commercial operation for a minimum period of two years as on the date of bid opening.	Performance Certificates from the utilities / clients

ANNEXURE-III

		The Tata Power Company Limited Corporate Engineering-Quality Assurance Inspection & Testing		
TPQAIT-QAXX-00-EX-SQP-444-REV0		STANDARD QUALITY PLAN FOR LITHIUM ION BATTERY WITH BATTERY MANAGEMENT SYSTEM (BMS)		Date of Issue: 10.03.2025
Sr. No.	COMPONENT / OPERATION	CHARACTERISTICS CHECKED	TYPE / METHOD OF CHECK	Remarks
1	2	3	4	5
1.0 RAW MATERIAL: All material shall be as per approved drawing/ data sheet/ Specifications / IS / IEC Standards.				
1.1	Lithium-ion battery - Active material- Lithium Iron Phosphate (LiFePO4) or / Lithium Ferro Phosphate (LFP)	Chemical and Mechanical test certificates	TC review as per relevant standard	TC Review by Main Supplier and TATAPOWER
1.2	Cell/ Module covers (Aluminium or equivalent)	1- Make/ Model /Type 2- Mechanical and Chemical composition 3- Fire retardant properties 4- Dimension, Weight & Marking, 5- Electrical test- IR, open circuit voltage and Polarity 6- AH Capacity	TC review as per relevant standard	
1.3	Intercell connector/ Nickel Strip	1- Dimension and 2- Chemical and Mechanical composition	TC review as per relevant standard	
1.4	BMS	1- Functional Test with test pad 2- Communication RS485 Modbus 3- Voltage test	TC review as per relevant standard	
1.5	MS Box & Rack	1- Dimensional Conformance 2- Free from burrs or any visual defects 3- Paint shade and paint thickness / Power coated with anti corrosive paint	TC review as per relevant standard	
1.6	Pressure relief Valve (if applicable)	1- Make/ Model / Type 2- Mechanical and Chemical composition 3- Leakage test (shall be leak proof) and shall operate on extreme high internal gas pressure of electrolyte.	TC review as per relevant standard	
1.7	Connectors, Nuts & Bolts	1- Dimension, thickness 2- Mechanical and Chemical composition 3- Hardness test	TC review as per relevant standard	
2.0 INPROCESS INSPECTION: (Generally in line with manufacturer standard)				
3.0 FINAL INSPECTION: (as per IEC61427, IEC 61233 and Tata approved Specification and drawing).				
3.1	Acceptance tests on battery set	1- Verification of marking 2- Visual and Dimensional checks 3- Polarity checking 4- Paint Type, Paint Thickness 5- Peel off/Adhesion Test (Cleaning as per approved Process) 6- No leakage of electrolyte 7- BOM checks	Physical, Visual and Electrical	Customer Hold Point
		Capacity Test (C/5)	Electrical test	
3.2	Battery Monitoring System(BMS)	Communication function checks Accuracy checks (data display) for Voltage accuracy Current accuracy Capacity accuracy Temperature accuracy	better than 0.5% better than 2% better than 5% better than 5%	

		The Tata Power Company Limited Corporate Engineering-Quality Assurance Inspection & Testing		
TPQAIT-QAXX-00-EX-SQP-444-REV0		STANDARD QUALITY PLAN FOR LITHIUM ION BATTERY WITH BATTERY MANAGEMENT SYSTEM (BMS)		Date of Issue: 10.03.2025
Sr. No.	COMPONENT / OPERATION	CHARACTERISTICS CHECKED	TYPE / METHOD OF CHECK	Remarks
1	2	3	4	5
3.2.1	BMS Checks	BMS should be able to remotely measure following Battery parameters: 1- Charge capacity of battery module (SOC). 2- Voltage of battery module/cell. 3- Ambient temperature of battery module/PCBA board(optional)/cell (optional). 4- Charging/discharging current of battery module, Internal resistance of battery module (optional). 5- State of healthy of battery module (SOH) etc. 6- Remotely control switch off alarm 7- Smart intermittent charge and limited current charge 8- Remotely adjust Charge/discharge management parameters of battery module 9- Parameters matching with switched-mode power supply (SMPS) 10- LED/LCD to be provided for power, activity and fault status in BMS.	Electrical test	CHP
3.2.2	BMS Checks	Protection check for battery 1- Over charge protection 2-Over discharge protection 3- Short Circuit Protection 4- Overload protection 5- Temperature protection	Electrical test	CHP
3.2.3	BMS Checks	Alarms checks on display and available on communication port on a Terminal Box: 1- Cell Over Voltage 2- Cell Under Voltage 3- Charge Over Current level 1 & 2 4- Discharge over Current level 1&2 5- Cell Charge Over Temperature 6- Cell Discharge over Temperature 7- Cell Charge Under temperature 8- Cell Discharge Under temperature 8- Current Limit Mode 9- Cell Unbalance 10- Total cell over voltage 11- Total cell under volt. 12- Hardware fail	Electrical test	CHP
3.3 Type Test as per (Relevant IS/IEC Standards)				
3.3.1		Mechanical Testing 1- Crush 2- Impact 3- Shock 4- Vibration	As per UL 1642/IEC 62133/ UN38.3/ TEC GR/TX/LIB -001/01	Earlier Type test report conducted as per below shall be accepted for Lithium-Ion battery. In the absence of previous Type tests reports, same shall be performed on the highest capacity Lithium ion Battery module along with Battery management system
3.3.2		Electrical Testing 1- Short Circuit (As per IEC60233) 2- Over Charging 3- Over Discharge and Forced Discharge	As per UL 1642/IEC 62133/ UN38.3/ TEC GR/TX/LIB -001/01	
3.3.3		Environment Testing 1- Thermal Shock 2- Temperature cycling and Rise. 3- Low Pressure 4- High Temperature Storage	as per UL 1642/IEC 62133	

		The Tata Power Company Limited Corporate Engineering-Quality Assurance Inspection & Testing		
TPQAIT-QAXX-00-EX-SQP-444-REV0		STANDARD QUALITY PLAN FOR LITHIUM ION BATTERY WITH BATTERY MANAGEMENT SYSTEM (BMS)		Date of Issue: 10.03.2025
Sr. No.	COMPONENT / OPERATION	CHARACTERISTICS CHECKED	TYPE / METHOD OF CHECK	Remarks
1	2	3	4	5
3.3.4		Projectile Testing	As per UL 1642/ IEC 62133/ TEC GR/TX/LIB-001/01	
3.3.5		IP protection (Indoor cabinet IP-20 and outdoor cabinet (IP-55)		
3.3.6		Electrostatic Discharge Testing "Testing and measurement techniques of Electrostatic discharge immunity test"	IEC 61000-4-2 2001	
3.40 Spares verification (As per approved packing list)				
	Spares verification (As per approved packing list)	Inter-cell / Inter-row/ Inter-bank / connectors	5 nos. each	
		Battery stands insulators and cell insulators	10% of total Qty	
		Nuts, bolts, washers etc	10% of total Qty	
		Vent plugs	10% of total Qty	
		Complete set of spare cells	As per BOM	
4.0 Document review & Issuance of IRN				
4.1	Document review & Issuance of IRN	Review of Quality dossier (*) & Inspection report	Review	(*) along with index.
NOTE A). STATUTORY REQUIREMENTS WILL BE COMPLIED BY THE CONTRACTOR. B). ALL MATERIAL SHALL BE AS PER APPROVED DRAWINGS / DATA SHEET. C). TATA POWER / ITS REP IDENTIFICATION STAMP ON MATERIALS WILL BE PRESERVED, IF REQD, SAME SHALL BE TRANSFERRED BY TATA POWER / ITS REP ONLY. D). FINAL INSPECTION OF THE MAJOR ACTIVITIES ARE WITNESSED BY CLIENT AND IT IS HOLD POINT (AT THE DISCRETION TATA POWER) E). MANUFACTURER SHALL PREPARE AND SUBMIT COMPLETE MANUFACTURING QUALITY PLAN IN PRESCRIBED FORMAT OR THEIR REGULAR FORMAT INDICATING THEIR REGULAR PRACTICES, TAKING CARE OF MINIMUM REQUIREMENT AS INDICATED ABOVE. F). INSPECTION OF SPARES SHALL BE MANUFACTURED & INSPECTED AS PER APPLICABLE CLAUSES OF THIS QUALITY PLAN .SPARES OFFERED FOR INSPECTION SHALL BE PREFERRED ALONG WITH MAIN ITEMS (IF ORDERD). G). AS PER SEPCIFICATION PROPER PAINTING & PACKING SHALL BE ENSURED BY VENDOR BEFORE SHIPMENT TO AVOID ANY TRANSIT DAMAGE. H). ANY SEPARAT TEST SHALL BE CARRIED OUT IF CALLED FOR IN ACCORDANCE WITH TATA POWER TECHNICAL SPECIFICATION OR AS PER MUTUALLY AGREED IN MQP.				
Meant for (Internal Circulation / External – Stakeholders Circulation)				
				
Rev.No	Initial issue	RP	SR	GTJ
R0	Reason for Revision	Prepared By & Date	Checked By & Date	Approved By & Date

Annexure-3

THE TATA POWER COMPANY LIMITED

STANDARD

TECHNICAL SPECIFICATION

FOR

220V, 110V, 48V and 24V

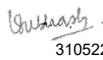
SMPS based Float cum boost battery charger

(DOCUMENT NO - ENGG/ ELECT/STD-SPEC/100/2021)



Tata Power

Engineering T&D

Rev. No	Date	Revision History	Prepared By	Checked By	Approved By
G	31/05/2022	Specification and test requirement for SMPS module updated. Point no 10.1.4 Performance test for Charger revised. Limit for temperature rise for heat run test added. IEC standard updated. Requirement for digital meters updated.	SSC 	SKV  310522	AAB 
F	23/01/2021	Final after incorporation of lesson learnt points from Projects	SSC	SKV	AM

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E	21/04/2020	Final after revision in PQR and inclusion of learnings from Projects	APM	SBL	AM
R3	05/12/2019	Final after revision in Standard Specification format	APM	SBL	AM
R2	14/11/2019	Revised Issue - Inclusion of Learnings from Projects	APM	SBL	AM
R1	15/08/2018	Revised Issue	TP	SBL	AM
R0	11/09/2017	First Issue	TP	AAB	AM

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1. INTRODUCTION

The intent of this specification is for the design, manufacture, testing at works, supply, transport to site and providing supervision services for installation, testing and commissioning of 24V, 48V, 110V, 220V Switched Mode Power Supply (SMPS) based modular battery chargers and meeting the DC load requirement of the station and charging the standby batteries. These chargers are used for monitoring and control of station equipment's, communication system etc. at various divisions of Tata Power.

2. BIDDER'S QUALIFICATION REQUIREMENTS

Manufacturer must meet all qualifying criteria as defined in Annexure V

3. SYSTEM DESCRIPTION AND SCOPE

- 3.1 Engineering, design, manufacture, testing at works, supply, transport to site, providing supervision services for installation, testing at site and commissioning of SMPS based modular battery chargers according to standard engineering practices, IS or IEC standards, meeting the DC load requirement of the station and charging the standby batteries at the stations.
- 3.2 Demonstration / testing of the system at Bidder's works before dispatch of the system at site (FAT).
- 3.3 Installation, testing & commissioning of the system including integration with Purchaser's existing systems, sub-vendors' systems & other systems, under supervision of OEM representative.
- 3.4 Site Acceptance Test to the Purchaser's satisfaction.
- 3.5 Submission of technical documentation related to design, installation, testing, operation & maintenance of the equipment and submission of Test Reports, job progress reports, final as built drawings etc.
- 3.6 Submission of type test report of similar rating as per relevant IS/IEC which is not more than 5 years old from the date of bid submission.
- 3.7 It is not the intent of this specification to specify completely herein, all details of design & construction of battery charger. However, the equipment shall conform in all respects to high standards of engineering, design & workmanship.

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4. CODES AND STANDARDS

- 4.1 The design, manufacture and performance of equipment shall comply with all currently applicable statutes, regulations and safety codes in the locality where the equipment will be installed. Nothing in this specification shall be construed to relieve bidder of his responsibility.
- 4.2 The Equipment shall conform to the latest edition of following standards:

Sr No	Applicable standards	IS	IEC
1.	Basic climatic and mechanical durability tests for components for electronic and electrical equipment, Environmental tests for electronic and electrical equipment	IS 9000	
2.	Transformers and inductors (power, audio, pulse and switching) for electronic equipment	IS 6297	
3.	Terminals for electronic equipment	IS 4007	
4.	Factory built assemblies of switchgear and control gear for voltages up to and including 1000 V AC and 1200 V DC.	IS 8623	IEC 61439
5.	Environmental testing - Part 2-78: Tests - Test Cab: Damp heat, steady state - For Burn in Test		IEC 60068-2-2
6.	Air break switches	IS 13947	IEC 60947
7.	Semiconductor converters - General requirements and line commutated converters	IS 4540	IEC 60146
8.	Low-voltage switch mode power supplies module	IS as applicable	IEC 61204
9.	Degree of Protection	IS 60529	IEC 60529

5. DESIGN REQUIREMENTS

- 5.1 Specific requirements of battery chargers:

1.	Type of Charger	Float-cum-Boost charger, with modular (Switch Mode Power Supply) SMPS based, microprocessor controlled, suitable to operate with an input supply of three phase, 3/4 wire AC 415V supply with input voltage variation $\pm 20\%$, 50 Hz, frequency variation: $\pm 5\%$ suitable for charging Lead Acid Grade cells and capable of the two modes of operation as follows: -
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2.1	Constant Current Mode	In the constant current mode, the float-cum-boost charger shall be capable of boost charging the Lead Acid Grade battery set at any constant current settable from 0 to 110% of rated current of charger or initial charging of the battery as recommended by Battery OEM x 10% design margin The set constant current shall remain stabilized within 10ms of the set current for AC input supply voltage variation of $\pm 20\%$, -20% from 415V and frequency variation $\pm 5\%$ from 50 cycles. The DC output voltage settable range of 1.80V to 2.75V per cell, (110 cells for 220V battery.....) required for boost charging shall be automatically selected by the float cum boost charger in this constant current mode. In case of variation in voltage range output voltage range shall remain stabilized within 10ms.
2.2	Constant Voltage Mode	In the constant voltage mode, the float cum boost charger shall operate as float charger. The float-cum-boost charger in the constant voltage mode shall float the battery at rated float voltage (2.21 to 2.3 V) per cell with a voltage stabilization of $\pm 1\%$ and also feed the DC continuous load of rated capacity of charger connected to the DCDB.
2.3	Configuration of SMPS Modules	N+1 configuration (Where N=No of SMPS Modules to feed Initial Charging current of battery +10% current as design margin)
3	DC System Voltage	24V, 48V, 110V & 220V as per requirement
3.1	Current Rating of Charger	20A for 100Ah, 30A for 200Ah, 40A for 300Ah & 100A for 750Ah. This is indicative only. However final sizing calculations shall be specified by bidder.
4.0	AC system data	
4.1	Supply	415 V, 3-phase, 3/4-wire, 50Hz (3 wire for generating stations, 4 wire for receiving stations)
4.2	Variation in supply	Voltage: $\pm 20\%$ (Without power deration) , Frequency: $\pm 5\%$
4.3	Short Circuit Level	50 KkA, 1 sec.

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4.4	Type of Earthing	Solidly grounded.
5.0	Performance	
5.1	AVR required	Yes - Automatic Voltage Regulator required
5.2	Regulation with AVR	+0.5%
5.3	Permissible ripple/harmonics at 30% to rated continuous load	Ripple: <1 % Harmonics: < 2.5% (THDi)
5.4	Max. Permissible variation in DC Voltage (No load to full load)	1% rms
5.5	Guaranteed efficiency at 25%, 50%, 75% and 100% load,	25% Load : $\geq 90\%$ 50% Load : $\geq 93\%$ 75% Load : $\geq 94\%$ 100% Load: $\geq 94\%$
5.6	Power factor from rated load to 50% load	>0.99%
6.0	Protection degree	Not less than IP42 as per IS
7.0	Battery Details	
	Type	Lead Acid battery _ Please see Section A for Type of Lead Acid battery
	Voltage	As per requirement- Please see Section A
	Ah Capacity	As per requirement- Please see Section A
	No. of Cells	As per requirement- Please see Section A
8.0	Integration of battery charger's microcontroller with Purchaser's SCADA System	Integration on Open protocol such as MODBUS-RTU. Additionally, if available on IEC104 or IEC 61850. Controller should have SMMP v2/Vv3, Modbus TCP/IP Ethernet port. Integration on Open protocol such as MODBUS-RTU. Additionally, if available on IEC104 or IEC61850

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		All the signals mentioned in the SCADA IO List should be integrated with the SCADA

5.2 TYPE

The offered battery charger shall be of SMPS based float cum boost battery charger (with N+1 modules configuration) compatible for charging of Lead acid battery sets and DC Load (N+1 configuration (Where N=No of SMPS Modules to feed Initial Charging current of battery +10% current as design margin)

5.3 DESIGN AND PERFORMANCE REQUIRED

5.3.1 The float charger shall be designed for supplying:

5.3.2 The DC loads

5.3.3 The float charging current of the battery (ungrounded) as specified in specific requirements.

5.3.4 The boost charger shall be designed for supplying the boost charging current of the battery whenever the battery is discharged partly or fully. Under normal conditions, the float charger connected to the DC switchboard and battery shall cater to the continuous load of DC system plus trickle charging current of battery. In case of AC supply failure to charger, battery shall meet the DC load. After restoration of power supply, the float charger will continue to supply the loads as well as trickle charge the battery. If required, depending on the battery condition, same will be put to boost charge.

5.3.5 Bidder shall submit necessary type test certificate and quality reports of offered SMPS module as per latest IEC standards.

5.3.6 SMPS module shall be designed for ambient atmospheric temperature of 50 degree Celsius & type test report to this effect shall be provided by OEM by SMPS module. Report for Burn in test as per IEC 60068-2-2 for Rectifier module and Controller at ambient atmospheric temperature of 50°C and 95% Relative Humidity for min. 72 hours shall be submitted.

5.3.7 Battery charger SMPS units shall be modular and plug-in type rack mountable. Rectifier modules & controller shall be hot swappable without affecting the charger working or change in output voltage variation. The rack for these systems shall always be supplied, fully pre-wired for the ultimate rack capacity. The modules can be added and removed even in the working system without any interruption to the load.

SMPS module shall be designed for ambient atmospheric temperature of 50 degree Celsius

SMPS modules shall be capable of operating in parallel with one or more modules of similar type, make and rating, other output conditions remaining within specified limits. The load sharing by these modules shall be within $\pm 10\%$ of the average current per modules in the system (mounted in same or different racks) when loaded between 50 to 100% of its rated capacity for all working conditions.

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- 5.3.8 Each SMPS Unit shall be capable of getting either connected or disconnected to AC mains through miniature circuit breakers and on DC side it shall be directly connected to the bus.
- 5.3.9 The charger shall be equipped with built in voltage and current regulators such that during the float charging operation, it shall act as a constant voltage regulator and during the boost charging operation, it shall act as a constant current regulator.
- 5.3.10 The automatic voltage regulator on charger shall maintain the output voltage within 1% of the set value from no load to full load under input supply voltage fluctuations of +10% to -10% and frequency fluctuations of +5%.
- 5.3.11 The float charger shall have built in current limiting feature to drop the output voltage on currents more than 110% of the rated current.
- 5.3.12 Charger shall be provided with controller and display unit which can act as HMI.
- 5.3.13 Suitable ripple filtering circuits shall be provided to limit the ripple content within 1%.
- 5.3.14 Battery charger efficiency shall be as specified in specific requirements and power factor shall be >0.99% for load variation from 50% to 100%.
- 5.3.15 In case of AC Mains failure and subsequent restoration of supply, the charger shall start itself and shall be provided with a soft start feature.
- 5.3.16 Harmonics generated due to above shall be limited to minimum and not exceeding 2.5% (THDi) with suitable arrangement.
- 5.3.17 The charger shall be provided with links for carrying out the discharge test on the batteries.
- 5.3.18 Auto float/boost mode integrated in the controller & shall be activated manually from controller settings.
- 5.3.19 MCCB shall be provided for AC incomer of the charger with auxiliary switch & contact multiplier.
- 5.3.20 One (1) set – Automatic voltage regulator unit (for float/ Boost mode) with manual/ auto control switch shall be provided.
- 5.3.21 Control unit shall regulate battery current and monitor temperature, battery temperature compensation, system Voltage, Float/Boost status. Low voltage Disconnect (LVD) status etc shall be provided.
- 5.3.22 MCCB on DC side with thermal overload and magnetic release with auxiliary switch & contact multiplier shall be provided.
- 5.3.23 Double pole ON/ OFF DC moulded case circuit breaker with Aux switch & contact multiplier for battery isolation shall be provided.
- 5.3.24 There shall be provision of central zero (mA) for earth fault detection circuit with push button. Earth leakage relay to be provided.
- 5.3.25 There shall be provision of double pole ON/OFF DC rotary switch with lock & key for connecting the discharge resistor for periodical discharge test.
- 5.3.26 There shall be provision of potential free contacts for remote annunciation & the same shall be wired to the terminal block.
- 5.3.27 The panel shall have adequate cross –ventilation arrangement to avoid any undue rise in temperature. The charger shall be suitable for satisfactory and reliable performance at natural room temperature
- 5.3.28 The power supply to controller display unit shall be directly sourced from Battery voltage

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5.3.29 Phase separators should be provided between different phases of AC and DC terminals.

5.3.30 Arrangement of Copper Bus at the output with facility to disconnect battery and DCDB individually separately shall be provided.

5.4 INDICATING METERS:

The following indicating meters shall be provided on the battery charger:-

5.4.1 Digital meters for dual range DC to read the battery charge / discharge & trickle charging current, voltage etc.

5.4.2 All the meters provided shall be of approved Tata Power make and shall comply to latest IEC standard.

5.5 PROTECTIVE RELAYS

Each battery charger shall be provided with following relays: -

5.5.1 DC under-voltage relay with adjustable set point and settable time delay of up to 10 sec.

5.5.2 DC over-voltage relay with adjustable set point and fixed time delay of 500-1000 msec.

5.5.3 AC over-voltage and under-voltage relay with auto reset facility.

5.5.4 Insulation monitoring device for detecting ground in DC system.

5.5.5 Short circuit protection.

5.5.6 SPD Surge Protection device

5.6 Integration with SCADA System

5.6.1 The chargers shall be digitally controlled by microprocessor-based controller & the same shall have a RS485 serial / Ethernet communication port which can communicate with existing SCADA system over Modbus RTU (on serial) and if available on IEC104 or IEC61850 protocol. The requisite communication cables, converters and accessories up to SCADA Gateway panel shall be considered by the Bidder.

5.6.2 The integration of battery charger with SCADA shall provide all Analog and Digital information of the battery charger.

5.6.3 For all analog data, bidder to consider necessary sensor's, which shall get integrated to microcontroller, for further transmission to SCADA System

5.7 INDICATIONS

Battery Charger shall be provided with the following indications: -

5.7.1 LED indicators on AC supply of the charger to indicate AC mains 'ON' condition.

5.7.2 DC 'ON' indicating LEDs.

5.7.3 Fault indicating shall be provided on the charger display unit and initiating contacts & soft signals shall be provided for remote alarm in SCADA / DCS for each of the following faults:

5.7.4 Mains AC failure

5.7.5 Float charger AC input fuse blown / Breaker Trip

5.7.6 Charger DC output fuse blown / Breaker Trip

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5.7.7 Charger U/V and current limit protection

5.7.8 Charger over voltage protection

5.7.9 Charger over current protection

5.7.10 SMPS module failure

5.7.11 Earth fault alarm

5.8 ANNUNCIATION

Each float/ float cum boost charger shall have annunciation system integrated in controller display for the following fault conditions: -

5.8.1 AC under/ over voltage

5.8.2 Float cum boost charger AC input MCCB trip

5.8.3 Float cum boost charger AC overload

5.8.4 Float cum boost charger control supply MCB off/ trip

5.8.5 Float cum boost charger DC output under voltage

5.8.6 Float cum boost charger DC output over voltage

5.8.7 Float cum boost charger DC output MCCB trip

5.8.8 Load DC under voltage

5.8.9 Load DC over voltage

5.8.10 Battery earth fault

5.8.11 SMPS module failure

5.8.12 Alternatively, for indicating meters and annunciations, microprocessor based control & monitoring unit can also be used.

5.8.13 There shall be provision of alarm relay with indication for failure of annunciation supply.

5.8.14 There shall be provision of duplicate power supply for annunciation circuit, one from DC side and one from AC side with changeover selector switch.

5.9 CONSTRUCTION & DESIGN OF STATIC EQUIPMENT

5.9.1 All equipment and design shall be as far as possible of modular construction and equipment shall use solid state components and integrated circuits of latest design/ techniques.

5.9.2 All components shall be readily accessible to the maintenance technician for easy disassembly and replacement.

5.9.3 Readily accessible and clearly marked test points shall be provided at all important points in the circuit.

5.9.4 Safety equipment such as protective covers and interlocks shall be provided.

5.9.5 No component shall be connected by dry soldering. Solder will not be applied on the end contacts of PCB to improve contacts.

5.9.6 SMPS modules should be coded for ensuring its insertion in correct position.

5.9.7 Clips or channels shall be provided for holding the SMPS modules in position.

5.9.8 SMPS modules should be glass epoxy to avoid warping. The SMPS modules should be protected against dust and moisture

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- 5.9.9 The PCB layout should be designed with minimum of crossing over of wires.
- 5.9.10 Metal sheet thickness for side the panel shall comprise minimum 2mm for load bearing members & 1.6mm for other.
- 5.9.11 Control cabinets shall be provided with hinged doors.
- 5.9.12 All doors, removable covers etc. shall be gasketed all round with neoprene gaskets. Ventilating louvers, if provided, shall have screens and filters. The screens shall be made of either brass or GI mesh.
- 5.9.13 All accessible line connections shall be shrouded and it shall be possible to change individual fuses, switches and MCCB without danger of contact with live portion.
- 5.9.14 The cabinet shall be powder coated with light grey colour shade RAL 7032.
- 5.9.15 Cabinets shall be supplied completely wired, ready for external connections at the terminal blocks. All wiring shall be carried out with 1100V grade, single core, PVC insulated, stranded copper conductor wires and shall be vermin & rodent proof.
- 5.9.16 Device labelling shall be on its fixed mounting and not on the device itself such that labelling remains even when the device is replaced.
- 5.9.17 All control and selector switches shall be of rotary type provided with properly designated escutcheon plates clearly marked to show the operating positions. Selector switches shall have stay put contacts with oval handles. The number of contacts and their operation in each switch shall be as per the requirements of the connected circuit. The switch contact shall be rated for minimum 10A at 240V AC and 1A inductive break at 220V DC or as per the connected circuit/ coil requirements.
- 5.9.18 All push buttons shall be of push to actuate type having 2 NO + 2 NC self-reset contacts. They shall be provided with integral escutcheon plates, engraved with their functions. Push button contacts shall be rated for making & breaking duty as per connected circuit/coil requirements.
- 5.9.19 All indicating lamps shall be of LED cluster type and low watt consumption. All LEDs shall be provided with adequately rated series resistors.
- 5.9.20 All wiring terminations shall be made with solderless crimping type tinned copper lugs which firmly grip the conductor and insulation. Insulated sleeves shall be provided at all the wire terminations. Engraved core identification plastic ferrules, marked to correspond with panel wiring diagrams shall be fitted at both ends of each wire.
- 5.9.21 Regarding terminal blocks, wherever duplication of a terminal is necessary, it shall be achieved by solid bonding links. At least 20% spare terminals of each type shall be provided on each panel. Also, all spare contacts and terminals of the panel mounted equipment and devices shall be wired to terminal blocks.
- 5.9.22 Each panel/ cubicle(s) shall be provided with a 230V, 1 phase, 50 Hz, 20 W LED lighting fixture for interior illumination on front & rear side, controlled by ON-OFF door switch and 230V, 1 phase, 5/15 Amp, 3/5 pin receptacle. Power source for interior lighting and receptacles shall be completely independent of control power source.
- 5.9.23 Each panel/ cubicle(s) shall be provided with heaters to prevent moisture condensation within the enclosure and shall be complete with switch-fuse unit for power supply. Heaters with switch-fuse units shall be suitable for continuous operation on 240V, 1 phase, 50Hz.

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AC supply. Heaters with thermostatic control shall be provided with suitable covers to prevent accidental contact during maintenance.

- 5.9.24 All foundation hardware/ accessories as may be required for mounting the panel/ cubicle(s) shall be provided by the bidder. All panel/ cubicle(s) shall have a 25 x 3mm copper earthing strip running through the length of the panel/ cubicle(s) and at both the ends suitable stud type terminals shall be brought out for connections to earthing grid.
- 5.9.25 Insulating terminal separators shall be provided at input terminals (A,B, C phases) of charger and output terminals of Charger +ve & -ve and between terminals of discharger resistors.

6. LAYOUT REQUIREMENTS FOR THE EQUIPMENT / SYSTEM

- 6.1 The panel/ cubicle(s) shall be simplex in design, free standing, suitable for floor mounting and indoor type.
- 6.2 All components of float cum boost charger shall be housed in a cubicle and shall be dust and vermin proof providing degree of protection of IP42 for indoor use without air-conditions system.

7. SAFETY REQUIREMENTS

- 7.1 Safety instructions as per detailed hazards of the electrical work must be adhered to while working on battery charger.
- 7.2 Battery Charger shall be provided with safety requirements as listed out in clause no. 5 & 6 above.

8. OPERATIONAL AND MAINTENACE REQUIRMENT

8.1 OPERATIONAL REQUIRMENT

- 8.1.1 Easy access shall be provided for all the components used in the system to reduce maintenance period.
- 8.1.2 The bidder shall furnish operating manuals to enable the purchaser to carry out operation of the equipment.
- 8.1.3 Bidder shall offer panel that is operational in a non-air-conditioned environment.

8.2 MAINTENACE REQUIRMENT

- 8.2.1 There shall be MCCB on AC side with Thermal Overload & magnetic release with auxiliary switch & multiplying contactor.
- 8.2.2 Double pole ON/OFF DC moulded case circuit breaker for battery isolation with auxiliary switch.
- 8.2.3 There shall be provision of Double pole ON/OFF DC rotary switch with lock & key for connecting the discharge resistor for periodical 10 Hour discharge.
- 8.2.4 The chargers shall be protected with adequate protective relays.

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- 8.2.5 All non-current carrying metallic parts shall be grounded with adequate grounding arrangements.
- 8.2.6 The vendor shall supply maintenance manuals clearly bringing out all maintenance and safety aspects of the equipment.
- 8.2.7 Each SMPS module shall be provided with rated / required capacity of MCB's

9. TECHNICAL PARAMETERS OF EQUIPMENT (INCL. DATA SHEET)

Sl. No	Specifications	Requirement	Bidder's Remark
1.0	Make	Bidder to Provide	
2.0	Type	Bidder to Provide	
2.1	For SMPS N + 1 configuration considered	Bidder to Provide	
	SMPS make model (Country)	Bidder to Provide	
	SMPS operating temperature	-20 deg C to 50 deg C	
	Compliance to IEC standard	Bidder to Provide	
	SMPS cooling	Fan	
3.0	Ratings	Bidder to Provide	
3.1	Input		
	a) Nominal Voltage		
	b) Supply Voltage Variation		
	c) Input Current		
	d) Frequency		
	e) Short Circuit Level		
3.2	Output	Bidder to Provide	
	a) Nominal Voltage		
	b) Float Voltage per cell		
	c) Float Charge Voltage		
	d) Float Voltage Range Adjust		
	e) Boost Charge Voltage per cell		
	f) Boost Charge Voltage		
	g) Charge Voltage Range Adjust		
	h) Boost Current Limit (max. Battery charging current)		
	i) Total Current Rating		
4.0	Guaranteed efficiency at 25% load, 50% load, 75% load , 100% load	25%load : $\geq 90\%$ 50% Load $\geq 93\%$ 75%Load $\geq 94\%$	

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		100% Load : $\geq 94\%$	
5.0	Power Factor		
5.1	Power Factor Correction provided	Yes / No	
6.0	Regulation		
6.1	Automatic Voltage Regulator required	Yes	
7.0	Ripple Content		
7.1	Ripple Filtering Circuits provided	Yes/No	
8.0	Harmonics		
8.1	Total Harmonic Distortion	Ripple : $<1\%$ Harmonics : $<2.5\%$ (THDi)	
9.0	Type of Cooling provided		
10.0	IP class	IP 42	
11.0	Dimensions	Bidder to Provide	
12.0	Height	Bidder to Provide	
13.0	Width	Bidder to Provide	
14.0	Depth	Bidder to Provide	
15.0	Approximate Weight	Bidder to Provide	
16.0	Annunciation		
	a) AC Over/Under Voltage	Required	
	b) Float-cum-boost charger AC input MCCB trip	Required	
	c) Float-cum-boost charger control supply MCB OFF/TRIP	Required	
	d) Float-cum-boost charger DC output under voltage	Required	
	e) Float-cum-boost charger DC output over voltage	Required	
	f) Float-cum-boost charger DC MCCB trip	Required	
	g) Load DC under voltage	Required	
	h) Load DC over voltage	Required	
	i) Battery Earth Fault	Required	
17.0	Integration with SCADA System	Yes/No	
19.1	Communication port shall be RS485 or Ethernet (Copper/Fibre) for SCADA integration	Yes/No	
19.2	Protocol Support – Modbus RTU (on serial). Bidder to provide details of additional SCADA protocols supported	Bidder to Provide	

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19.3	Potential free contacts for remote annunciation & indication on SCADA provided	Yes/No	
20.0	LED indications		
	a) AC Mains 'ON'	Yes/No	
	b) DC 'ON'	Yes/No	
21.0	Indicating Meters		
	a) DC ammeter to read battery charge/ discharge & trickle charging current	Yes/No	
	b) DC ammeter to read charger output current Charger	Yes/No	
	c) Voltmeter to read output voltage with selector switch	Yes/No	
22.0	Insulation monitoring device for detecting ground in DC system provided	Yes/No	
23.0	Central zero (mA) for earth fault detection circuit with push button provided	Yes/No	
24.0	Blocker diode provided	Yes/No	
25.0	Links provided for carrying out battery discharge test	Yes/No	
25.1	Double pole ON/OFF rotary switch with lock & key for connecting battery discharge resistor provided	Yes/No	
26.0	Features		
	a) Soft start feature	Required	
	b) Current limiting feature	Required	
27.0	Controller for FCB whether digital or microprocessor based	Yes/No	
28.0	Metal sheet thickness	Bidder to Provide	
29.0	Painting color code	Bidder to Provide	
30.0	Factory test as per approved SQP		
31	Mandatory Signals to be considered for SCADA integration as per below mentioned list	Yes/No	
32	Permanent centre tap grounding	Yes/No	

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33	Burn in test as per IEC 62040-3 for Rectifier module and Controller of offered product at ambient atmospheric temperature of 50°C and 95% Relative Humidity for min. 72 hours	Bidder to Provide Test report	
34	Limit of temperature rise during heat run test	45 deg C above ambient	
35	Dimension and weight	To be provided by Bidder	

10. QUALITY REQUIREMENTS, INSPECTION & TESTING (INCL. SQP & SFP)

To ensure that a well-engineered and contractually compliant system is produced, Bidder shall adhere to a quality assurance program for the preparation of all contract deliverables. The program shall provide for early detection of actual or potential deficiencies, timely and effective corrective action, and a method of tracking all such deficiencies.

10.1 Factory Acceptance Test (FAT)

10.1.1 The Bidder shall adhere to the Standard Quality Plan of Tata Power attached with this specification. The purpose is to ensure that the Bidder has interpreted the specified requirements correctly and that the FAT includes checking to the degree required by the user. The general philosophy shall be to deliver a system to site only after it has been thoroughly tested and its specified performance has been verified, as far as site conditions can be simulated in a test lab.

10.1.2 The purpose of Factory Acceptance Testing is to ensure trouble free installation at site. Prior to release for shipment of the equipment the Purchaser or his representative will witness Factory Acceptance Test (FAT) in which the system is checked against the specifications.

10.1.3 Type and routine tests certificates for all components made use in the Battery Charger system shall be furnished. Tests for components shall be as per relevant standard specifications.

10.1.4 Following Performance test on the Chargers as per Specification shall also be carried out on each Charger as per specification:

- i. Voltage regulation test
- ii. Total Harmonic distortion test
- iii. Power factor at full load
- iv. Load limiter characteristics test
- v. Efficiency tests
- vi. High voltage tests
- vii. Temperature rise test
- viii. Short circuit test at rated voltage for sustained short-circuit.
- ix. Measurement of ripple by oscilloscope

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10.1.5 System tests shall be performed on the completely assembled charger system. Type, routine and optional tests covered as mentioned in the SQP attached with this specification shall be conducted. Type tests as per SQP are

- x. Temperature rise test at maximum rated continuous current in Float/Boost mode
- xi. Degree of protection
- xii. Noise Level
- xiii. Electromagnetic compatibility test (EMC)

10.1.6 Bidder shall incorporate all FAT comments prior to despatch. After Bidder confirms that all changes have been incorporated, Purchaser's Office will issue Despatch Clearance.

10.1.7 The Test Reports as well as Test Certificates of OEM, third party, Bidder shall be submitted for approval / verification. Type test report shall not be more than five years old.

10.1.8 FAT and Despatch Clearance by the Purchaser shall not relieve the Bidder from complete responsibility for the total system and its performance subsequently.

10.2 Commissioning Check List

10.2.1 Bidder shall furnish the Commissioning check list for Tata Power approval before commissioning the Battery Charger at Site. As such checklist shall cover site-specific tests including interconnections with field equipment and other systems. Apart from testing and commissioning,

10.2.2 Unstructured tests shall be employed as necessary, to verify overall system operation under field conditions.

11. PERFORMANCE REQUIREMENTS

11.1 Performance Requirement -

The Battery charger is intended to be installed in a non-air-conditioned room at temperatures ranging to 50 degrees celcius. Any requirement of air- conditioning for the satisfactory working of the Battery charger should be specifically brought by the Bidder.

11.2 Float Charger

11.2.1 The D.C. output voltage during float charging shall be stabilized within +1% of the set DC bus voltage for AC input voltage variation of +20%, -20% and frequency variation of +5% and DC load variation from 0 - 100%. The voltage regulation shall be achieved by a constant voltage regulator having fast response SCR control. The ripple content shall be within 1% of D.C. output nominal voltage with battery disconnected. Also in any mode of operation, the maximum harmonics in the charger output shall not exceed 2.5 % (THD).

11.2.2 The setting of the output D.C. bus voltage shall be adjustable between +10% of nominal rated voltage.

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11.3 Boost Charger:

- 11.3.1 For boost charging the discharged battery after a mains failure, the rectifier shall charge the battery at high rate limited to the maximum boost charging voltage. The boost charging shall come on only when selected for boost mode manually.
- 11.3.2 In auto control, the DC output current shall be stabilized within +2% for AC input voltage & frequency variation of + 20% / - 20% and +5% respectively. There shall be provision for manual control if auto-mode fails.
- 11.3.3 The boost charge voltage and current settings shall be adjustable between 70 to 100% of maximum boost charge voltage and between 30 to 100% of maximum boost charging current.

12. SPARES AND SPECIAL TOOLS & TACKLES

SPARES

The spares supplied shall be strictly interchangeable with parts for which they are intended for replacement.

The spares shall be treated and packed for long storage (minimum 5 years) under the climatic conditions prevailing at the site.

The start-up spares shall be delivered at the site well in time before the start-up and commissioning of the plant / station.

BIDDER shall include the following items in Mandatory list of spares along with item wise unit prices:

Sr. No.	Description of spare	Quantity recommended (Per Set)	Total Sets required
1	SMPS Module	1 of Each Rating	
2	Power / Control / Selector switches Voltmeter selector switch	1 No. each	
3	All types of Cards / Modules SMPS Controller E/F Card	1 No. each	
4	Fuses - Control HRC fuse link	5 No. each rating	
5	Panel Cooling fans	1	
6	Annunciation Window / Display Unit	1	
7	Control Transformer (if used)	1	
8	Blocker Diode	1	
9	Load Breaking Switches Battery Switch	1 No. each type and rating	

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10	Contactors	1 No. each type and rating	
11	Thermal Over load Relays	1 No. each type and rating	
12	Converters for SCADA (If any) - with proper power supply, communication cable and other accessories.	1	

Above spares set shall be considered separate for each location of battery charger (i.e. Separately for each receiving / generating station)

12.1 START-UP SPARES

The start-up spares are those spares which will be required during start-up and commissioning of the equipment/systems, and until Final Take Over. It is the responsibility of the bidder to supply all the necessary spares as required until the equipment/systems are handed over to the Owner. An adequate stock of start-up spares shall be available at the site such that the start-up and commissioning of the equipment/systems, performance testing and handing over the equipment/systems to the Owner will be carried out without hindrance and delay. All start-up spares which remain unused after the taking over the sub-station shall remain the property of the Owner. The Bidder shall furnish the Schedule of Start-up Spares.

12.2 ESSENTIAL / MANDATORY SPARES

Essential / Mandatory spares are those considered necessary by the owner for first three (5) years of normal sub-station operation. A list of such spares has been listed in the below mentioned table and the same shall be included in bidder's scope. When a particular item of spares is indicated as 'percentage', it shall be considered as percentage of total number of that item of spares in the single equipment/system, unless specified otherwise and the fraction shall be rounded-off to the next higher whole number. Whenever the item of spares has been indicated as 'set' the same shall mean the supply for a single equipment/system. One set of spares for the particular equipment shall mean the total quantities of that particular spares for a single equipment e.g., 'set' of Server, set of Gateway, shall include HMI, keyboard, mouse etc. The 'set' shall however include all components required to replace that item of spares. The Owner reserves the right to buy any of the essential spare parts as considered necessary.

In case during start-up and commissioning certain essential spares are used up, the same shall be replaced within one (1) month without any commercial implications.

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VENDOR shall furnish details for all essential spares as per the approved vendor document list.

12.3 RECOMMENDED SPARES

In addition to the spares mentioned above, the Bidder shall also furnish in his bid a list of recommended spares with unit prices. The Owner reserves the right to buy any of the recommended spare parts as considered necessary by him. The prices of recommended spares shall be consistent with those of start-up/essential spares. Purchase of these spare parts will be covered by a separate order or an amendment to the contract.

The Bidder shall provide a list of recommended spares for a period of five years from the date of Site Acceptance Test (SAT) and confirm that the shelf-life of these spares is such as to last for at least 7 years from the date of SAT.

The Bidder shall provide the MTBF of various components, sub-assemblies, assemblies etc. (recommended as spares) and the relationship between MTBF and spare quantities recommended.

The Bidder shall submit the product life cycle details of the all hardware offered under this RFP.

Above tools & tackles set shall be considered separate for each location of battery charger (i.e. Separately for each receiving / generating station)

12.4 SPECIAL TOOLS & TACKLES

As part of the proposal, the BIDDER shall indicate below, the list of erection/maintenance tools & tackles offered by him.

Sr. No.	Description of spare	Quantity recommended per unit of equipment	Delivery period from date of LOI	Remarks

Above tools & tackles set shall be considered separate for each loaction of battery charger (i.e. Separately for each receiving / generating station)

13. DATA SUBMISSION BY BIDDER

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13.1 ALONGWITH BID

- 13.1.1 The SMPS module make, model number
- 13.1.2 Data sheet / technical catalogue of SMPS module
- 13.1.3 Works site and location address and sub- vendor credentials shall be submitted by the bidder for purchaser's review and acceptance.
- 13.1.4 Acceptance to Manufacturing Quality Plan (MQP), Field Quality Plan (FQP)
- 13.1.5 Type test reports for similar rated of SMPS module / charger
- 13.1.6 Schedule of activities for drawing submission, drawing approval, inspection, delivery to be submitted along with offer.
- 13.1.7 Recommended spare list

13.2 AFTER AWARD OF CONTRACT

Following list of documents shall be submitted by successful bidder in Wrench for Owners review.

Sr. No.	List of Drawings & Documents	Approval / Information	Submission Format	
			ACAD	Pdf
13.2.1	Technical Datasheet of Charger & SMPS module	Approval	---	Yes
13.2.2	GA Diagram of offered panel	Approval	Yes	Yes
13.2.3	Schematic Diagram (SLD & detailed drawing)	Approval	---	Yes
13.2.4	Bill of Material	Approval	---	Yes
13.2.5	Recommended Spares List / Mandatory spares list / Tool & tackles List	Approval	---	Yes
13.2.6	O&M Manual	Information	---	Yes
13.2.7	Type test reports	Review	---	Yes
13.2.8	List of Soft Signals and Hard Wired Signals	Approval	---	Yes
13.2.9	Manufacturing Quality Plan and Field Quality Plan in line with SQP/SFP			

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14. ANNEXURES

Annexure I : SCADA I/O List

DC charger panel	SPI	Float/Boost
Charger DC Earth Fault	SPI	Operated/ Healthy
Charger DC Under Voltage	SPI	Operated/ Healthy
Charger DC Rectifier Fault/No Can	SPI	Operated/ Healthy
Charger DC Output MCCB	SPI	Trip/Normal
Charger AC input MCCB	SPI	Trip/Normal
Charger AC Under Voltage	SPI	Operated/ Healthy

Annexure II : Typical Scheme drawing for Battery Charger (Tender purpose)

Annexure III : Standard Quality Plan for Battery Charger TPQAIT-QAXX-00-EX-SQP-154-REV0

Annexure IV : SFP for Battery Charger and Battery Bank Installation TPQAIT-QAXX-00-EX-FQP-148 REV.0

Annexure V : Bidders Prequalifying Requirements

Annexure I
DATASHEET B1- Battery Charger

Sl. No	Specifications	Requirement	Bidder's Remark
1	Make	Bidder to Provide	
2	Type	Bidder to Provide	
2.1	For SMPS N + 1 configuration considered	Bidder to Provide	
	SMPS make model (Country)	Bidder to Provide	
	SMPS operating temperature	-20 deg C to 50 deg C	
	Compliance to IEC standard	Bidder to Provide	
	SMPS cooling	Fan	
3	Ratings	Bidder to Provide	
3.1	Input		
	a) Nominal Voltage		
	b) Supply Voltage Variation		
	c) Input Current		
	d) Frequency		
	e) Short Circuit Level		
3.2	Output	Bidder to Provide	
	a) Nominal Voltage		
	b) Float Voltage per cell		
	c) Float Charge Voltage		
	d) Float Voltage Range Adjust		
	e) Boost Charge Voltage per cell		
	f) Boost Charge Voltage		
	g) Charge Voltage Range Adjust		
	h) Boost Current Limit (max. Battery charging current)		
	i) Total Current Rating		
4	Guaranteed efficiency at 25% load, 50% load, 75% load , 100% load	25%load : $\geq 90\%$ 50% Load : $\geq 93\%$ 75%Load : $\geq 94\%$ 100% Load : $\geq 94\%$	
5	Power Factor		
5.1	Power Factor Correction provided	Yes / No	
6	Regulation		

Annexure I
DATASHEET B1- Battery Charger

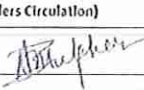
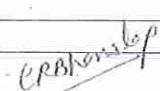
Sl. No	Specifications	Requirement	Bidder's Remark
6.1	Automatic Voltage Regulator required	Yes	
7	Ripple Content		
7.1	Ripple Filtering Circuits provided	Yes/No	
8	Harmonics		
8.1	Total Harmonic Distortion	Ripple : <1 % Harmonics : <2.5% (THDi)	
9	Type of Cooling provided		
10	IP class	IP 42	
11	Dimensions	Bidder to Provide	
12	Height	Bidder to Provide	
13	Width	Bidder to Provide	
14	Depth	Bidder to Provide	
15	Approximate Weight	Bidder to Provide	
16	Annunciation		
	a) AC Over/Under Voltage	Required	
	b) Float-cum-boost charger AC input MCCB trip	Required	
	c) Float-cum-boost charger control supply MCB OFF/TRIP	Required	
	d) Float-cum-boost charger DC output under voltage	Required	
	e) Float-cum-boost charger DC output over voltage	Required	
	f) Float-cum-boost charger DC MCCB trip	Required	
	g) Load DC under voltage	Required	
	h) Load DC over voltage	Required	
	i) Battery Earth Fault	Required	
17	Integration with SCADA System	Yes/No	
18.1	Communication port shall be RS485 or Ethernet (Copper/Fibre) for SCADA integration	Yes/No	
18.2	Protocol Support – Modbus RTU (on serial). Bidder to provide details of additional SCADA protocols supported	Bidder to Provide	
18.3	Potential free contacts for remote annunciation & indication on SCADA provided	Yes/No	
19	LED indications		
	a) AC Mains 'ON'	Yes/No	

Annexure I
DATASHEET B1- Battery Charger

Sl. No	Specifications	Requirement	Bidder's Remark
	b) DC 'ON'	Yes/No	
20	Indicating Meters		
	a) DC ammeter to read battery charge/ discharge & trickle charging current	Yes/No	
	b) DC ammeter to read charger output current Charger	Yes/No	
	c) Voltmeter to read output voltage with selector switch	Yes/No	
21	Insulation monitoring device for detecting ground in DC system provided	Yes/No	
22	Central zero (mA) for earth fault detection circuit with push button provided	Yes/No	
23	Blocker diode provided	Yes/No	
24	Links provided for carrying out battery discharge test	Yes/No	
24.1	Double pole ON/OFF rotary switch with lock & key for connecting battery discharge resistor provided	Yes/No	
25	Features		
	a) Soft start feature	Required	
	b) Current limiting feature	Required	
26	Controller for FCB whether digital or microprocessor based	Yes/No	
27	Metal sheet thickness	Bidder to Provide	
28	Painting color code	Bidder to Provide	
29	Factory test as per approved SQP		
30	Mandatory Signals to be considered for SCADA integration as per below mentioned list	Yes/No	
31	Permanent centre tap grounding	Yes/No	
32	Burn in test as per IEC 60068-2-2 for Rectifier module and Controller of offered product at ambient atmospheric temperature of 50°C and 95% Relative Humidity for min. 72 hours	Bidder to Provide Test report	
33	Limit of temperature rise during heat run test	45 deg C above ambient	
34	Dimension and weight	To be provided by Bidder	

TATA POWER		The Tata Power Company Limited Corporate Engineering-Quality Assurance Inspection & Testing		
TPQAIT-QAXX-00-EX-SQP-154-REV 0		STANDARD QUALITY PLAN FOR BATTERY CHARGER		Date of Issue: <i>23 March 2016</i>
Sr. No.	COMPONENT / OPERATION	CHARACTERISTICS CHECKED	TYPE / METHOD OF CHECK	Remarks
1	2	3	4	5
1.0	MATERIAL: All material shall be as per approved drawing/ data sheet/ Specifications.			
1.1	Raw Material: Copper Conductor/Flats,	Chemical composition, physical properties, impurities, Electrical properties, IS: 191	TC verification	Manufacturer TCs to be reviewed by main supplier and Tata Power.
1.2	Current Transformer	Routine Test Report as per relevant Standard/Data Sheet	Verification of Type, Rating, Vendor and correlated TC	
1.3	Capacitors			
1.4	Rectifier Element (SCR/DIODES/OTHER)			
1.5	Power Resistors, Potentiometers			
1.6	Meters and Transducers			
1.7	Protection Relays, Controller Unit			
2.0	INPROCESS INSPECTION: (Generally in line with manufacturer standard)			
3.0	FINAL INSPECTION (IS)			
3.1.1	Routine Tests	Visual, Name Plate, General Arrangement of Components, Dimensions, Door Alignment, Straightness, Gasketing Checks	Visual, Physical, Measurement	Customer Hold Point
3.1.2		Painting: Paint Type, Shade, Thickness, Peel off/Adhesion Test as per relevant standards and approved drawings	Visual, Physical, Measurement	
3.1.3		Bill Of Material	Visual check of Make, Model, Rating, etc.	
3.1.4		Verification of correct wiring, neatness and firmness of cards and terminaltions	Electrical Testing as per relevant standards and approved drawing, GTP	
3.1.5		Insulation Resistance Before and After HV Test of Main and Auxiliary Circuits		
3.1.6		High Voltage Test of Main and Auxiliary Circuits		
3.1.7		Calibration check of metering and Protection circuits by primary voltage and primary current injection test		
3.1.8		Logic Simulation, Operation, Protection and Earth Fault testing		
3.1.9		Soft Start and Current Limiting Function Test		
3.1.10		Short Circuit Test		
3.1.11		No Load Test		
3.1.12		Load Test (Full Load Test)		
3.1.13		Ripple Measuremnt		
3.1.14		Voltage Regulation at Full Load		
3.1.15		Harmonic Measurement at 50% and 100% of Load		
3.1.16		Efficiency test at nominal input voltage at 25%, 50%, 75% and 100% loads		
3.1.17		Power Factor at nominal input voltage and rated Load		
3.1.18		Annunciation Test of Charger and for Battery Alarm Condition (AC and DC UV, OV, Earth Fault, MCB trip, AC Main Fail, Annunciation Supply Fail, SCADA contact)		

Signature
23rd March 2016

TATA POWER		The Tata Power Company Limited Corporate Engineering-Quality Assurance Inspection & Testing			
TPQA/IT-QA/XX-00-EX-SQP-151-REV 0		STANDARD QUALITY PLAN FOR BATTERY CHARGER		Date of Issue: 23 March 2016	
Sr. No.	COMPONENT / OPERATION	CHARACTERISTICS CHECKED	TYPE / METHOD OF CHECK	Remarks	
1	2	3	4	5	
3.2	Type Test				
3.2.1	Type Test	Temperature Rise Test (Heat Run Test) at Maximum Rated Continuous Current in Float/Boost mode.	Verification of Type Test Report/Certificate as per specific IEC standard	Valid type test certificate for the same design not older than 5 years is a pre-requisite	
3.2.2		IP degree protection.	/conducting test as per mutual agreement		
3.2.3		Noise Level			
3.2.4		Electro Magnetic Compatibility Test			
4.0	Document review & Issuance of IRN				
4.1	Document review & Issuance of IRN	Review of Quality dossier (*) & Inspection report	Review	(*) along with index.	
N O T E	A). STATUTORY REQUIREMENTS WILL BE COMPLIED BY THE CONTRACTOR.				
	B). ALL MATERIAL SHALL BE AS PER APPROVED DRAWINGS / DATA SHEET.				
	C). TATA POWER / ITS REP IDENTIFICATION STAMP ON MATERIALS WILL BE PRESERVED, IF REQD, SAME SHALL BE TRANSFERRED BY TATA POWER / ITS REP ONLY.				
	D). FINAL INSPECTION OF THE MAJOR ACTIVITIES ARE WITNESSED BY CLIENT AND IT IS HOLD POINT (AT THE DISCRETION TATA POWER)				
	E). MANUFACTURER SHALL PREPARE AND SUBMIT COMPLETE MANUFACTURING QUALITY PLAN IN PRESCRIBED FORMAT OR THEIR REGULAR FORMAT INDICATING THEIR REGULAR PRACTICES, TAKING CARE OF MINIMUM REQUIREMENT AS INDICATED ABOVE.				
	F). INSPECTION OF SPARES SHALL BE MANUFACTURED & INSPECTED AS PER APPLICABLE CLAUSES OF THIS QUALITY PLAN. SPARES OFFERED FOR INSPECTION SHALL BE PREFERRED ALONG WITH MAIN ITEMS (IF ORDERD).				
	G). AS PER SPECIFICATION PROPER PAINTING & PACKING SHALL BE ENSURED BY VENDOR BEFORE SHIPMENT TO AVOID ANY TRANSIT DAMAGE.				
	H). ANY SEPARATE TEST SHALL BE CARRIED OUT IF CALLED FOR IN ACCORDANCE WITH TATA POWER TECHNICAL SPECIFICATION OR AS PER MUTUALLY AGREED IN MQP.				
Meant for (Internal Circulation / External - Stakeholders Circulation)					
Rev.No		 23 March 2016 AMZ	 CRB	 SS 23/03/16	
RO	Reason for Revision	Prepared By & Date	Checked By & Date	Approved By & Date	

TATA POWER

The Tata Power Company Limited
Corporate Engineering-Quality Assurance Inspection & Testing



TPQA/IT-QA/XX-00-EX-FQP-148

REV.0

**FIELD QUALITY PLAN FOR
BATTERY CHARGER AND BATTERY BANK INSTALLATION**

Sl. No	COMPONENT / OPERATION	CHARACTERISTICS CHECKED	CLASS OF CHECK	TYPE OF CHECK	EXTENT / FREQUENCY OF CHECK	REFERENCE DOCUMENTS / ACCEPTANCE NORM	FORMAT OF RECORD	REMARKS
7.0	<u>Erection of Battery charger</u>	Check DC system panel location & readiness of foundation. (As per joint protocol signed with Civil)	Minor	Physical	100%	Site Approved Drawing.	SIR* (Site Inspection Report)	
		Ensure alignment and leveling of base frame as per drawing.						
		Check tag welding with existing structure / grouting of panel frame (As applicable)						
		Ensure clearance from wall / column is as per drawing.						
		Place panels on frame / foundation properly						
		Connect various sections / units and complete inter panel connections.	Major	Measurement Physical				
		Check Torque Tightness of interpanel connection						
		Check completeness of panel as per drawing including earthing connections.						
		Measure IR of power and control circuit before HV test.						
		Conduct HV test on main busbar.						
8.0	<u>Pre commissioning of Battery charger</u>	Conduct Functional Checks by current injection for relay, indicating meters	Critical	Measurement	100%	Manufacturer's Test Certificate. Approved Drg and Data sheet.	SIR* (Site Inspection Report)	
		Check the tightness of bus bar joints, termination, cleanliness i.e. Removal of loose wire, foreign particles						
		Conduct Load / capacity test on battery charger						
		Conduct overshoot & undershoot test, Battery & load current limit test						
		Check Trip and alarm signals through SCADA / LCP as applicable						
9.0	<u>Commissioning of Battery charger (Indicative)</u>	Obtain charging clearance of battery and battery charger from appropriate authority.	Critical	Physical Measurement	100%	Approved Drg, Data sheet.	Commissioning Report.	These are to be finalized by commissioning team along with CTDS/PE
	<u>Handing Over</u>	Check for the voltage, current, frequency, phase sequence.						
10.0	<u>Final documentation</u>	Compilation of all field inspection protocol, test reports including closure of non conformance if any.	Critical	Visual	100%	SAT (Site acceptance test report)	*SWCF (Site work completion file)	Handing over will be done to commissioning engineer or O&M team

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REV.0

FIELD QUALITY PLAN FOR BATTERY CHARGER AND BATTERY BANK INSTALLATION

Sr. No	COMPONENT / OPERATION	CHARACTERISTICS CHECKED	CLASS OF CHECK	TYPE OF CHECK	EXTENT / FREQUENCY OF CHECK	REFERENCE DOCUMENTS / ACCEPTANCE NORM	FORMAT OF RECORD	REMARKS
1.0	Receipt of Material	Availability of instruction manuals, drawings, quality dossier. Verification of main unit and all loose items / accessories for any visual damage and shortage during transit.	Minor	Physical	At the Time of Receipt.	IRN, MDCC, Bill of material, shipping list No damages.	Site register	Any shortfall/ damage shall be reported jointly with site FQC & Execution team
2.0	Storage & Preservation	Battery and Battery charger: Storage Type-2 (for short term storage) For long term Type- 3 / 4	Major	Physical	At the time of storage.	Manufacturer's Instruction Manual.	Site register	Short term storage shall be 1 month or as per manufacturer's recommendation which ever is stringent
3.0	Transportation from storage yard	Transporting of panels from storage yard to Battery / Battery charger room using proper loading tools and tackles.	Minor	Physical	100%	Manufacturer's Instruction Manual.	Site register	
4.0	Unpacking	Check material thoroughly and report damage in any	Major	Physical	100%	Dispatch document and packing list	Joint inspection record	
5.0	Pre erection	Check availability of all tools, tackles and ropes etc. required for erection work are available.	Minor	Physical	100%	Manufacturer's Instruction Manual.	Site register	
6.0	Erection of Battery Bank	Verify constructional requirement including material / loose accessories verification. Install the battery stand on the frame and check the quality of welding of stand with the existing structure Verify dimensions, Marking and install loose accessories on each cell as per drawing Install the batteries on battery stand and do the acid filling Check the Acid resistance painting of the room is done before battery charging. Verify availability of cross ventilation & eye wash facility in the room. Verify flame proof lighting installed in the battery room Verify charging and discharging of battery bank as per manufacturers instruction.	Major	Physical	100%	Site Approved Drawing. Manufacturer's Test Certificate.	SIR* (Site Inspection Report)	
	Pre-commissioning of Battery Bank	Measure voltage during discharge and test for C10 load capacity. Measure Impedance and conductance on battery bank	Critical	Measurement		Manufacturer's instruction manual		

TATA POWER

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Corporate Engineering-Quality Assurance Inspection & Testing



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REV.0

FIELD QUALITY PLAN FOR BATTERY CHARGER AND BATTERY BANK INSTALLATION

Sl. No	COMPONENT / OPERATION	CHARACTERISTICS CHECKED	CLASS OF CHECK	TYPE OF CHECK	EXTENT / FREQUENCY OF CHECK	REFERENCE DOCUMENTS / ACCEPTANCE NORM	FORMAT OF RECORD	REMARKS
N. A1. STATUTORY REQUIREMENTS WILL BE COMPLIED BY THE CONTRACTOR. B. FOR STAGES WITNESSED / DOCUMENTS REVIEWED BY TATA POWER, COPIES OF RELEVANT DOCUMENTS WILL BE FURNISHED TO TATA POWER. C. TATA POWER / ITS REP. IDENTIFICATION STAMP ON MATERIALS WILL BE PRESERVED / NOT TRANSFERRED BY TATA POWER / ITS REP AT APPROPRIATE STAGES. (IF REQUIRED). D. THE EXTENT INDICATED IN COLUMN 6 IS IN CONTRACTOR'S SCOPE. TATA POWER MAY INSPECT AS PER THIS COLUMN OR RANDOM SAMPLES AT ITS DISCRETION. E. COLUMN 7 WILL BE AS PER TATA POWER APPROVED DRAWINGS / DATA SHEETS / CONTRACT DOCUMENTS WHEREVER APPLICABLE. F. INSTRUMENTS FOR LEAK TESTS AND PERFORMANCE TESTS WILL HAVE VALID CALIBRATION CERTIFICATE WITH TRACEABILITY TO NATIONAL LEVEL.								
Critical Category is HOLD point.			This activity / required inspection / Verification & acceptance by inspection authority responsible for this stage before further processing is permitted. 24 Hrs advance notice to be given to TATA POWER QA/QC. Contractor / sub contractor shall not process activity beyond HOLD point without written permission by TATA POWER QA/QC. This activity shall be formed by TATA POWER (Execution +QA/QC), Main & Sub- Contractor (Execution +QA/QC). (Also Surveillance by Head FOA / Project Head)					
Major Category is Witness point.			This activity / required inspection / Verification & acceptance by inspection authority responsible for this stage before further processing. 24 Hrs advance notice to be given to TATA POWER (Execution). Contractor / sub contractor shall not process activity beyond Witness point without written permission by TATA POWER (Execution). This activity shall be performed by TATA POWER (Execution), Main and Sub- Contractor (Execution +QA/QC). (Surveillance by FOA)					
Minor Category is Review point.			This activity / required review of documents by TATA POWER for the compliance & acceptance. However 24 Hrs advance notice to be given to TATA power (Execution). This activity shall be formed by Main and Sub- Contractor (Execution +FOC). (Surveillance by Execution / Project Head)					
			TATA POWER QA/QC is also authorized to carryout surveillance in any major & minor class of check at their discretion.					
STORAGE TYPE: TYPE-1: OPEN AREA & ABOVE GROUND ON WOODEN PLANK WITH SLOPE FOR WATER DISPOSITION. TYPE-2: OPEN AREA & ABOVE GROUND ON WOODEN PLANK (WITH SLOPE FOR WATER DISPOSITION) AND COVERED WITH TARPALIN. TYPE-3: OPEN SHED WITH FULLY FORMED FLOORING/CEMENT FLOORING. TYPE-4: COVERED SHED/STORE ROOM ON RACKS & IDENTIFIED LOCATION. TYPE-4A: CLOSED CHAMBER WITH TEMPERATURE & HUMIDITY CONTROL.								
NOTE: Items/equipments having shelf life like paints, alumina, desiccant etc. are to be stored separately for identification purpose.								
Rev. No	Reason for Revision	Prepared By & Date	Checked By & Date	Approved By & Date				
R0	ISSUE FOR USE	RSP / 20.03.2017	CRB/ 20.03.2017	SS / 30/03/2017				

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Bidders Prequalifying Requirements for Battery Charger		
Technical Pre-qualification Requirement		
Parameter	Tata Power Requirement	Documents To be submitted by Bidder to ascertain meeting of Pre-qualification requirement
Infrastructure	Bidder must be an OEM of Battery Charger with manufacturing facility / assembly in India.	Self-undertaking to be submitted in this regard. TATA Power reserves the right to inspect the said manufacturing facility as a proof of compliance to this parameter.
Supply and Experience	Bidder shall have supplied SMPS battery charger for last 5 years as on date of bid submission. Out of which atleast 25 (twenty five) numbers of SMPS battery chargers shall be in successful operation for more than three (3) years as on date of bid submission. In case the bidder has a previous association with Tata Power for similar products and services, the performance feedback for that bidder by Tata Power shall only be considered irrespective of performance certificates issued by any third organization. Technical performance, delivery timelines, service and support records of past executed projects in Tata Power will be considered for technical evaluation of bidder. 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.	Supply List & Performance Certificates from the utilities / clients 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.
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 5 years prior to the date of bid opening. Time period for type test can be extended by another 5 years as a special case, if there is no change in design / material of construction (MOC). 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 despatch 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 5 years but less than 10 years prior to date of bid opening has to be considered (if applicable) 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 despatch of the equipment / material, in case type test reports furnished are not for the quoted equipment / material but for the equipment / material with higher voltage class and/or different capacity, (if applicable)
Commercial Capability		Copy of audited Balance Sheet and P&L Account to be submitted in this regard.
EPC Experience (if applicable)	In case the package involves installation & commissioning of the equipment / material, then the bidder shall have the following experience: a) He should have successfully completed one single order of value (80% of estimated value of similar work in last three years) OR b) He should have successfully completed two single orders of value (50% of estimated value of similar work in last three years) OR c) He should have successfully completed three single orders of value (40% of estimated value of similar work in last three years).	Performance Certificates from the utilities / clients

Li-ion Battery			
Technical Pre-qualification Requirement			
Sr No	PARAMETER	TATA POWER REQUIREMENT	Documents To be submitted by Bidder to ascetrain meeting of Pre qualification requirement
1	2	3	4
1	Infrastructure	Bidder must be an OEM/Supplier of Li-ion Batteries with manufacturing facility / assembly in India.	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. In case of Channel Partner, OEM authorization letter to be furnished.
2	Demonstration of Battery Capacity	a) It is Mandatory for Bidder to Demonstrate Load Cycle Handling Capability of the Battery at Purchaser/Bidder works prior to finalization of the order. For the demonstration all the expenses incurred shall be borne by the bidder. b) If Bidder is found unsatisfactory during the Demonstration/Testing process, then the Order stands cancelled. c) The Lithium-Ion Battery shall be Factory Tested for the provided Discharge profile and shall successfully match the Discharge Current characteristics. d) Any Modifications/ Additions in Cell type/configuration OR Cell Modules for matching the Load Discharge Characteristics is the responsibility of the Bidder (without any cost impact). e) The Test Environment characteristics i.e. Ambient Temperature etc. shall be provided to the manufacturer with the Load profile, which shall be simulated while Factory Testing of the Battery set. f) The Bidder shall demonstrate the Load Cycle handling Capability of the offered Lithium-ion battery set and provide Comprehensive reports for the same.	A Comprehensive Report shall be submitted by the Bidder to Tata Power for Approval after Factory Testing of the Battery as per the provided Load Discharge Cycle/Profile.
3	Supply and Experience	Bidder shall have supplied two (2) quantity of Li-ion Battery of min.600 Ah capacity with 6 hours or longer in last one years and the system shall be in satisfactory service for last one year. As a special case, trial PO received / executed in last one year for reputed power utility company with min 600 Ah Capacity may be considered by the purchaser at their discretion during post bid evaluation. “In case the bidder has a previous association with Tata Power for similar products and services, the performance feedback for that bidder by Tata Power shall only be considered irrespective of performance certificates issued by any other organization. Technical performance, delivery timelines, service and support records of past executed projects in Tata Power will be considered for technical evaluation of bidder.” 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.	Supply List & Performance Certificates from the utilities / clients 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.
4	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 5 years prior to the date of bid opening. Time period for type test can be extended by another 5 years as a special case, if there is no change in design / material of construction (MOC). 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 despatch 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 5 years but less than 10 years prior to date of bid opening has to be considered (if applicable) 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 despatch of the equipment / material, in case type test reports furnished are not for the quoted equipment / material but for the equipment / material with higher voltage class and/or different capacity, (if applicable)
5	Commercial Capability	To be added by CC based on the package value	Copy of audited Balance Sheet and P&L Account to be submitted in this regard.
6	Installation & Commissioning for same equipment	In case the package involves installation & commissioning of the equipment / material, then the bidder shall have installed and commissioned at least two (2) quantity of Li-ion Battery of min.600 Ah capacity with 6 hours or longer and should have been in satisfactorily commercial operation for a minimum period of two years as on the date of bid opening.	Performance Certificates from the utilities / clients

Annexure-5

Bidders Prequalifying Requirements for Battery Charger		
Technical Pre-qualification Requirement		
Parameter	Tata Power Requirement	Documents To be submitted by Bidder to ascertain meeting of Pre-qualification requirement
Infrastructure	Bidder must be an OEM of Battery Charger with manufacturing facility / assembly in India.	Self-undertaking to be submitted in this regard. TATA Power reserves the right to inspect the said manufacturing facility as a proof of compliance to this parameter.
Supply and Experience	Bidder shall have supplied SMPS battery charger for last 5 years as on date of bid submission. Out of which atleast 25 (twenty five) numbers of SMPS battery chargers shall be in successful operation for more than three (3) years as on date of bid submission. In case the bidder has a previous association with Tata Power for similar products and services, the performance feedback for that bidder by Tata Power shall only be considered irrespective of performance certificates issued by any third organization. Technical performance, delivery timelines, service and support records of past executed projects in Tata Power will be considered for technical evaluation of bidder. 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.	Supply List & Performance Certificates from the utilities / clients 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.
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 5 years prior to the date of bid opening. Time period for type test can be extended by another 5 years as a special case, if there is no change in design / material of construction (MOC). 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 despatch 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 5 years but less than 10 years prior to date of bid opening has to be considered (if applicable) 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 despatch of the equipment / material, in case type test reports furnished are not for the quoted equipment / material but for the equipment / material with higher voltage class and/or different capacity, (if applicable)
Commercial Capability		Copy of audited Balance Sheet and P&L Account to be submitted in this regard.
EPC Experience (if applicable)	In case the package involves installation & commissioning of the equipment / material, then the bidder shall have the following experience: a) He should have successfully completed one single order of value (80% of estimated value of similar work in last three years) OR b) He should have successfully completed two single orders of value (50% of estimated value of similar work in last three years) OR c) He should have successfully completed three single orders of value (40% of estimated value of similar work in last three years).	Performance Certificates from the utilities / clients

Annexure-6

DATASHEET-B-3			
Sr.No	Parameter	Unit	Particulars
1	Manufacturer	Bidder to Specify	
2	Type	Bidder to Specify	
3	Maintenance free sealed type	Yes/No	
4 (i)	Module Capacity in AH	AH	
(ii)	No of module for achieving required capacity		
5	Weight of Module	Kg	
6	Dimension of Module	mm x mm x mm	
7	No. of Cells per module	No.	
8	Cell voltage	V	
9	No. of cycles supported for 80% depth of discharge at average ambient temperature of 35°C	No.	
10	Maximum Discharge rate		
11	Module (cell) Voltage for the fully charged battery when put to discharge at C/10 rate. i. After six minutes of discharge. ii. After six hours of discharge. iii. After 8 hours of discharge. iv. After 10 hours of discharge	V	
12	Module (cell) Voltage for the fully charged battery when put to discharge at C/5 rate i. After 4 Hours of discharge ii. After 4.85 hours of discharge. iii. After 4.96 hours of discharge. iv. After 5 hours of discharge	V	
13	Recommended Range of i. Float Voltage. Ii. Boost Voltage	V	
14	Ampere hour efficiency	%	
15	Watt hour efficiency	%	
16	Material used for manufacturing of container and oxygen index for the above material	Bidder to Specify	
17	Material used for manufacturing of cell cover, separator, heat sinkable sleeves , flame arrestors	Bidder to Specify	
18	Pressure related valve capable to withstand the internal cell pressure (PPFR material)	Bidder to Specify	
19	Temperature range Guaranteed performance: Operation without damage: Storage/ transport:	°C	
20	Relative humidity Minimum: Maximum:	%	
21	Thermal run away while working in the ambient temperature of 35°C, operating range of 0-50°C at a charge rate of C/2	Bidder to Specify	
22	Loss and capacity during storage at an ambient temperature of 35°C for a period of six months	Bidder to Specify	
23	Grid corrosion	Bidder to Specify	
24	Connector nut, bolts and washers	Bidder to Specify	

Sr.No	Parameter	Unit	Particulars
25	Details of racks for storage of battery bank	Bidder to Specify	
26	Outdoor operation	Yes/No	
27	Applicable Standards	Bidder to Specify	
Central Battery Management System (BMS)			
28	Display		
i)	Type	%	
ii)	Size		
iii)	Accuracy a) Voltage b) Current c) Capacity d) Temperature		
iv)	Capacity		
29	Measurements		
i)	Maximum Charging Current	Amp	
ii)	Maximum Discharge rate	Amp	
iii)	Energy delivered since last charge	kWH	
iv)	Internal impedance of cell	Bidder to Specify	
v)	Charge delivered/stored	AH	
vi)	Energy delivered since first use	AH	
vii)	Total operating time	Bidder to Specify	
viii)	Total numbers of cycles	No.	
ix)	State of Charge	AH	
30	Protections	Bidder to Specify	
i)	Overcharge protection	Yes/No	
ii)	Over discharge protection	Yes/No	
iii)	short circuit protection	Yes/No	
iv)	Overload protection	Yes/No	
v)	Temperature protection	Yes/No	
31	Remote communication	Yes/No	
i)	RS-232	Bidder to Specify	
ii)	RS-485	Bidder to Specify	
iii)	SNMP	Bidder to Specify	
32	Battery/Load disconnection through solid state switch	Yes/No	
33	Active balancing among battery modules through BMS	Yes/No	

C1 - SCHEDULE OF QUANTITIES & PRICES					
S No	Description	Unit	Unit Price	Taxes	Total Price
Bidders to attach copy of unpriced copy of price schedule					
Seal of the Company			Signature		
Date			Name		
			Designation		

C2 - PROJECT TIME SCHEDULE								
Bidders to attach copy of Project schedule								
Seal of the Company			Signature					
Date			Name					
			Designation					
Note: The bidder shall indicate schedule of milestones and also attach/furnish a detailed bar chart identifying customer inputs.								

C3- SCHEDULE OF DEVIATIONS FROM TECHNICAL SPECIFICATIONS

All deviations from this specification, shall be set out by the Bidders, indicating clause no and page in this schedule. Unless ***specifically*** mentioned in this schedule, the tender shall be deemed to conform to the purchaser's specifications:

S No	Clause No	Details of Deviations with Justifications					
We confirm that there are no deviations.							
Seal of the Company			Signature				
Date			Name				
			Designation				

C4- SCHEDULE OF DEVIATIONS FROM GENERAL & SPECIAL CONDITIONS OF CONTRACT

All deviations from this specification, shall be set out by the Bidders, indicating clause no and page in this schedule. Unless **specifically** mentioned in this schedule, the tender shall be deemed to conform to the purchaser's specifications:

[illegible]

C5- SCHEDULE OF DRAWINGS & DOCUMENT SUBMISSION				
S No	Title of Drawing / Document	Target Date of Submission	For Information / Review / Approval	Remarks
1.0	Overall Dimensions			
1.1				
1.2				
2.0	Layout			
2.1				
2.2				
3.0	SLD / P&ID			
3.1				
3.2				
4.0	GA of Equipment / Skids			
4.1				
4.2				
5.0	O&M Manual			
5.1				
5.2				
Seal of the Company			Signature	
Date			Name	
			Designation	
Note: The titles of drawings / documents listed out in the schedule are examples. The bidder shall list out all relevant drawings / documents.				

C7 - SCHEDULE OF SPECIAL ERECTION/MAINTENANCE TOOLS & TACKLES

As part of the proposal, the BIDDER shall indicate below, the list of erection/maintenance tools & tackles offered by him.

[illegible]

C8 - SCHEDULE OF PLACES OF MANUFACTURE, TESTS AND INSPECTION		
For major equipment / systems, the Bidder shall indicate the name of the Manufacturer / SUBCONTRACTOR and place of test and inspection		
ITEM OF EQUIPMENT	Manufacturer / SUBCONTRACTOR	PLACE OF TESTING & INSPECTION
Seal of the Company		Signature
Date		Name
		Designation

[illegible]

Signature	
-----------	--

Name

Designation

FORMAT F.1

AFFIDAVIT (ON LETTER HEAD)

I, S/o Director of M/s.....
..... having its registered office at do hereby solemnly affirm and
declare as follows:

1. That I have been authorized to execute this affidavit on behalf of this company by the Board of Directors vide its resolution passed on
2. That Tata Power vide advertisement published in had invited offers for Tender Reference No _____.
3. That in response to the said advertisement as stated in paragraph (2) above, our firm has submitted its proposal to Tata Power.
4. That the proposals of our firm M/s containing necessary information and particulars furnished as response to the Tender Document.
5. That our firm have neither failed to perform on any contract, as evidenced by imposition of a penalty by an arbitral or judicial authority or a judicial pronouncement or arbitration award against our firm, nor our firm have been expelled from any project or contract by any public authority or private firm nor have had any contract terminated by any public authority or private firm for breach of our part.
6. That our firm during the last three years, neither failed to perform on any agreement, as evidenced by imposition of a penalty by an arbitral or judicial authority or a judicial pronouncement or arbitration award against us.

That the statements made in paragraph 1 to 6 of the foregoing affidavit as above are true to my knowledge and belief and if anything is found contrary, I stand liable to be prosecuted under appropriate Act / laws in force.

Stamp:

Sign:

Name:

Place and date:

Note: In case of any arbitration / judicial proceeding / legal litigation initiated against or by the bidder in last three years then the same have to Annexed to this Affidavit

FORMAT F.2

**PROFROMA OF LETTER OF UNDERTAKINGS
(To be submitted by the Bidder along with his Bid)**

ON BIDDER's LETTER HEAD

Ref..... Date.....

To

Head – Procurement

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

Dear Sir,

I / We have read and examined the entire Tender Document to the (Full scope of work)

I / We hereby submit our Bid and undertake to keep our Bid Valid for a period of 180 days from the date of bid opening i.e. up to

I / We hereby further undertake that during said period.

I / We shall not vary/alter or revoke my / our Bid.

This undertaking is in consideration of Tata Power agreeing to open my Bid and consider and evaluate the same for the purpose of award of work in terms of provision of tender specifications.

Should this Bid be accepted, **I / We** also agree to abide by and fulfill all the terms & conditions of provision of the above mentioned bid documents.

Signature along with Seal of Co.....

(Duly authorized to sign the Tender on behalf of the Bidder)

Name

Designation

E-mail (used in E-Tender):

Name of Co.

(In Block Letters.)

FORMAT F.3

ACCEPTANCE FORM FOR PARTICIPATION IN REVERSE AUCTION EVENT

(To be signed and stamped by the bidder)

In a bid to make our entire procurement process more fair and transparent, Tata Power intends to use the reverse auctions through E-Tender system as an integral part of the entire tendering process. All the bidders who are found as technically qualified based on the tender requirements shall be eligible to participate in the reverse auction event.

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

1. Tata Power shall log-in to the authorized representative of the bidder.
2. Tata Power will make every effort to make the bid process transparent. However, the award decision including sharing of work would be final and binding on the supplier.
3. The bidder agrees to non-disclosure of trade information regarding the purchase, identity of Tata Power, bid process, bid technology, bid documentation and bid details.
4. The bidder is advised to understand the auto bid process to safeguard themselves against any possibility of non-participation in the auction event.
5. In case of bidding through Internet medium, bidders are further advised to ensure availability of the entire infrastructure as required at their end to participate in the auction event. Inability to bid due to telephone line glitch, internet response issues, software or hardware hangs, power failure or any other reason shall not be the responsibility of Tata Power.
6. Tata Power has sole discretion to extend or restart the auction event in case of any glitches in infrastructure observed which has restricted the bidders to submit the bids to ensure fair & transparent competitive bidding. In case of an auction event is restarted, the best bid as already available in the system shall become the start price for the new auction.
7. In case the bidder fails to participate in the auction event due any reason whatsoever, it shall be presumed that the bidder has no further discounts to offer and the initial bid as submitted by the bidder as a part of the tender shall be considered as the bidder's final no regret offer. Any offline price bids received from a bidder in lieu of non-participation in the auction event shall be out-rightly rejected by Tata Power.
8. The bidder shall be prepared with competitive price quotes on the day of the bidding event.
9. The prices as quoted by the bidder during the auction event shall be inclusive of all the applicable taxes, duties and levies and shall be FOR at Tata Power site.
10. The prices submitted by a bidder during the auction event shall be binding on the bidder.
11. No requests for time extension of the auction event shall be considered by Tata Power.
12. Detailed price split of E-auction price will be submitted within 24 hours from completion of E-auction. If not submitted, the original price bids of the bidders shall be reduced on pro-rata basis against each line item based on the final all inclusive prices offered during conclusion of the auction event for arriving at Contract amount.

Signature & Seal of the Bidder



BG Format (EMD BG , PBG/ CPBG)

CONFIDENTIAL

FORMAT F.4

Format of BID BG / EMD

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

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

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

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

- (a) You shall have the right to file/make a claim on us under the Guarantee for a further period of six months from the said date of expiry.
- (b) That this guarantee shall not be revoked during its currency without your written express consent.
- (c) That you may without affecting this guarantee grant time or other indulgence to or negotiate further with BIDDER in regard to the conditions contained in the said Bid

document and thereby modify these conditions or add thereto any further conditions as may be mutually agreed upon between you and BIDDER.

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

Notwithstanding anything contained herein above:

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

FORMAT OF PERFORMANCE BANK GUARANTEE

Note: a) Format shall be followed in toto
b) Claim period of six months must be kept up
c) The guarantee to be accompanied by the covering letter from the bank confirming the signatories to the guarantee on the Bank's letter head.

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

Our Letter of Guarantee No.....

Contract/Purchase Order No.....dated.....

- 1.0 You have entered into a Contract No..... with.....
.....(hereinafter referred to as " the Vendor")
for the supply and delivery of (hereinafter
referred to as "the said equipment") for the price and on the terms and
conditions contained in the said contract.
- 2.0 In accordance with the terms of the said contract, " the Vendor" has
agreed to furnish you with an irrevocable and unconditional bank
guarantee in a form and from a bank acceptable to you as security for the
due performance by " the Vendor" of all his contractual obligations under
the said contract in an amount equal to 10% (ten percent) of the total value
of the contract to be valid from the date of contract and up to 12 months
from the date of satisfactory commissioning of the said equipment into
service or 18 months from the date of delivery whichever is earlier.
- 3.0 In consideration thereof, we, hereby irrevocably and
unconditionally guarantee to pay to you on demand and without demur and
without reference to " the Vendor" such amount or amounts not exceeding
the sum of Rs.....(Rupees
only) being 10% (ten percent) of the total value of the contract on receipt of
your intimating that " the Vendor" has not fulfilled his contractual
obligations. You shall be the sole judge for such non-fulfilment and " the
Vendor" shall have no right to question such judgement.

- 4.0 You shall have the right to file/make your **claim** on us under the guarantee for a **further period of six months** from the said date of expiry.
- 5.0 This guarantee shall not be revoked without your express consent and shall not be affected by your granting time or any other indulgence to “ the Vendor”, which shall include but not be limited to, postponement from time to time of the exercise of any powers vested in you or any right which you may have against “ the Vendor” and to exercise the same in any manner at any time and either to enforce or forbear to enforce any covenant contained or implied in the said contract or any other course or remedy or security available to you, and our Bank shall not be released from its obligations under this guarantee by your exercising any of your rights with reference to matters aforesaid or any of them or by reasons of any other act or forbearance or other acts of omission or commission on your part or any other indulgence shown by you or by any other matter or thing whatsoever which under the law would, but for this provision, have the effect of relieving our bank from its obligation under this guarantee.
- 6.0 We also agree that you shall be entitled at your option to enforce this guarantee against our bank as a principal debtor, in the first instance, notwithstanding any other security or guarantee that you may have in relation to “ the Vendor” 's liabilities in respect of the premises.
- 7.0 This guarantee shall not be affected by any change in the constitution of our Bank or “ the Vendor” or for any other reason whatsoever.
- 8.0 Any claim/extension under the guarantee can be lodged at issuing outstation branch or at Mumbai branch and also become payable at our issuing outstation bank or at the Mumbai branch as per confirmatory letter/letters of the concerned bank branches as attached. **(This Confirmatory letter is to be obtained from Mumbai Branch by the vendor and submitted along with the Performance Bank Guarantee and is applicable for PBG submitted from Banks located outside Mumbai).**
- 9.0 Notwithstanding anything herein contained, our liability under this guarantee is limited to Rs..... (Rupees only) and the guarantee will remain in force up to and including(Date) and shall be extended from time to time for such period or periods as may be desired by “ the Vendor” .
- 10.0 Unless a demand or claim under this guarantee is received by us in writing within six months from (expiry date) i.e. on or before(claim period end date) we shall be discharged from all liabilities under this guarantee thereafter.
- 11.0 For any correspondence in relation to extension / invocation / discharge of bank guarantee contact us at Tel No. _____ and Bank branch email id _____

Dated at , this day of2020 .



Vendor Registration Form

Corporate Contracts

To be Filled in Block letters By Vendor. Note **Annexure 1 - CSM F1** is Mandatory for Service / Composite Vendor Registration

MATERIAL

SERVICE

COMPOSITE

CONSULTANT

Title (M/S., Mr., Mrs., Dr.) *							
Company Name (35 Char) *							
Country code - Mobile No *							
Country Code - Tel. No *							
Country Code - Fax No							
Email ID *							
Street / House No *							
Country *		State *		District *			
City *		Pin code *		Language			
Category	General	MOEF		SC / ST			
	Related Party	MSME / SSI		OBC/Others			
Bank Details (all details to be filled for enabling NEFT Transfer)							
Name of Bank *							
Bank Details ID *		PAN Number *					
Account No. *		Account Holder *					
Bank Key *		Bank Country *					
MICR Code * (Attach Cancelled Cheque)							
IFSC Code *							
IBAN *							
Payment thro RTGS/NEFT*							
Quality / Safety Systems (Mandatory for Service and Composite Vendor Registration)							
OHSAS 18001 Certified		Risk Management Process					
ISO 9001 Certified		ISO 14001 / EMS Certified					
Declaration and Vendor Authorized Signature							
I / We certify that the information furnished above is correct and complete to the best of my/our knowledge and belief. If at any time, I / We are found to have concealed any material information or given any false details, my/our registration shall be liable to summary termination without notice or compensation. I / We are not related to any employee of Tata Power . We have also received a copy of your Tata Code Of Conduct. We hereby confirm that we have read the same and understand the need to follow the same in Spirit and Letter. If we have any concerns we shall bring the same to the notice of your Chief Ethics Officer. Email: cecounsellor@tatapower.com, * Copy also available on our website http://www.tatapower.com/aboutus/code-of-conduct.aspx							
Name *							
Designation *							
Email *							
Signature & Company Seal *							

ERP Vendor India Requirement - Taxation Registration Details

LST / VAT Registration No.	
LST / VAT Registration Date	
CST / TIN Registration No.	
CST / TIN Registration Date	
Service Tax Registration. No.	
Service Tax Registration Date	
Excise Registration No.	
Excise Registration. Date	
Provident Fund No.	
ESI Registration No.	
MSME / SSI Registration No.	
MSME / SSI Registration Date	

Mandatory For SERVICE & COMPOSITE (Material + Service) Vendor Registration

Annexure 1 - CSM F1-'Safety Category Qualification Form	YES		NO		N / A	
OSHAS 18001 Certificate	YES		NO		N / A	
ISO 9001 Certificate	YES		NO		N / A	
ISO 14001 / EMS Certificate	YES		NO		N / A	
Safety Organization Structure	YES		NO		N / A	
Safety Training Process	YES		NO		N / A	
Safety Policy	YES		NO		N / A	
Safety Statistics	YES		NO		N / A	
Address of sites where WIP	YES		NO		N / A	

Check List of Documents enclosed (To be filled by the Vendor)

PAN Card Copy	YES		NO		N / A	
VAT / CST / TIN Registration Certificate	YES		NO		N / A	
Service Tax Registration Certificate (for services)	YES		NO		N / A	
Certificate of Incorporation / Partnership Deed etc	YES		NO		N / A	
Signed Conflict of Interest Declaration	YES		NO		N / A	
MSME Industry Registration (Mandatory if applicable)	YES		NO		N / A	



Evaluation Sheet

(To be filled by **Requisitioner** - After Checking & Verifying Page 1 to 2 and Annexure 1 - CSM F1 Form)

Whether mandatory requirements are filled/attached and verified?	YES		NO		If No, explain reason for waiver in evaluation area	
If registration is for Services also, whether CSM F1 Form has been completed? Documents attached CSM F1 - Safety Category Qualification Form	YES		NO		N / A	
OHSAS 18001/ ISO 9001 / ISO 14001 Certificate	YES		NO		N / A	
Safety Organization Structure	YES		NO		N / A	
Safety Training Process	YES		NO		N / A	
Safety Policy	YES		NO		N / A	
Safety Statistics	YES		NO		N / A	
Evaluation Process Report	YES		NO		N / A	
Company Code & Description -						

Requested By		Approved by (HOD)	
Name		Name	
Signature		Signature	
Department		Department	
ERP Vendor Company Codes			
Company Code *		Sort Key *	
Reconciliation A/C *		Check Double Invoice	
With Holding Tax Country		With Hold Tax	
Terms of Payment		Payment Methods	
ERP Vendor Purchasing Organization			
Purchasing Organization *		Order Currency *	
Schema Group *		Sales Person *	
ABC Indicator *		Terms of Payment	
Service Based Invoice		GR Based Invoice	



ANNEXURE – 1 (CSM F1 - Safety Category Qualification Form)

Type of Vendor - Service / Composite (Material + Service)

Name of the Vendor -

No	Safety Information	Remarks	Attachments		
1	Certificate				
1A	OHSAS : 18001	Yes / No			
1B	ISO : 14001	Yes / No			
1C	ISO : 9001	Yes / No			
2	Safety Statistics for Last Three (03) Years		Year 1	Year 2	Year 3
2A	LTIFR – Lost Time Injury Frequency Rate	Yes / No			
2B	LTISR – Lost Time Injury Severity Rate	Yes / No			
3	Safety Training Process	Yes / No			
4	Safety Organization Structure	Yes / No			
5	Safety Policy	Yes / No			
6	Name and Address of Sites where work are in Progress or worked earlier	Yes / No			

Name, Signature & Company Seal

To be filled by the Tata Power Requestor

Vendor to be registered for CATEGORY

A

B

C

- 1) **Category A**- Vendors eligible to carry out High risk Jobs
- 2) **Category B**- Vendors eligible to carry out technical jobs that are low risk
- 3) **Category C**- Vendors eligible to carry out administrative and office jobs

No	Description	Category "A"	Category "B"	Category "C"
1	Does the Contractor have OHSAS 18001 Certificate?	√		
2	During site visit check for safety adequacy at site	√	√	
3	Check the safety statistics of Contractor	√	√	√
4	Check the safety orientation & training process of contractor	√	√	√
5	Check the organization structure for safety professionals / engineers / supervisors	√	√	
6	Certified / skill workers as a percentage overall work force	√	√	
7	Does the Contractor have ISO 9001 Certificate?		√	√

ANNEXURE – 2 (Conflict of Interest Certification)

Objective

The intent of this disclosure is NOT to prevent an aspirant supplier from making an application, but rather to provide the decision making authorities with information on which Tata Power can make its own judgements and ensure that dealing with such parties is done fairly and transparently by ensuring that people / parties in conflict of interests are involved in the transactions / decision making process.

While requesting a registration, a supplier MUST disclose any actual or potential conflict of interest by giving the details of the person/s within the supplier's company (whether a director or an employee) who may be in actual or potential conflict of interest as per the above referred clause 20 of Tata Code of Conduct.

Conflict of Interest

An actual or potential conflict of interest with supplier's may arise where, directly or indirectly.

- a. A proprietor or partner or director or employee (who is party to a transaction) of the supplier is also a member of family or relative of a Tata Power employee.
- b. A proprietor or partner or director or employee (who is party to a transaction) of the supplier is also a director of family or relative of a Tata Power or Tata Group of companies or a person of influence within Tata Power.
- c. A proprietor or partner or director of the company is also a proprietor or partner or director in another company already registered with Tata Power and competing for similar products and / or services.
- d. A company has subsidiary or associate companies already registered with Tata Power and competing for similar products and / or purpose.

For detailed explanation on when an actual or potential conflict of interest may arise, please refer to the clause 20 of Tata Code of Conduct available on the Tata Power website

www.tatapower.com/aboutus/code-of-conduct.aspx

Format for declaration

Supplier's willing to register with Tata Power need to print the enclosed form which should be printed on the Letter Head of their company and be signed by proprietor / partner / executive directors / person authorized by the company for giving such declaration affixing his name, designation below the signature along with seal of the company.



To

Corporate Contracts
The Tata Power Company Ltd
Technopolis Knowledge Park, CENTEC,
Mahakali Caves Road, Chakala,
Andheri (E), Mumbai 400 093

Declaration on Conflict of Interest

This is to certify that we, M/s _____ are having the following entities / persons in actual or potential conflict of interest while dealing with Tata Power within the spirit of Clause 20 of Tata Code of Conduct.

Name & Designation of the entity / person in conflict of interest	Name of Tata Power person to whom related to	Nature of relationship / conflict

Note – In case there is no conflicts to be declared, please clarify state as NIL in the first row and strike out the balance lines)

This is to further certify that, we M/s _____

- Are not dealing with Tata Power under any other name or through any other subsidiary / associate companies other than the list disclosed above.
- None of our other directors / partners / other proprietors is dealing with Tata Power under any other company name.
- None of the other directors / partners / proprietors / employees holding a position of responsibility and / or authorized to transact with Tata Power has any significant financial interest or other relationship i.e., (Father, Mother, Brother, Sister or any other close family relationship) with any other Tata Power employee or directors of Tata Power or directors of Tata group of companies.

We further declare that as and when there is any change to the above certification, we shall intimate to Tata Power about such changes in the status. We also declare that we have read and understood the Tata Code of Conduct – latest version hosted on Tata Power website www.tatapower.com/aboutus/code-of-conduct.aspx and shall abide by all the provisions of the same and will bring any concerns regarding this to the notice of your chief ethics officer on the email id cecounsellor@tatapower.com

This is to certify that the above said information is true to the best of my knowledge and that I have the requisite authority to sign above said declaration in my capacity as _____ (ID No. _____)

Regards,

Name, Signature and Company Seal

HEALTH AND SAFETY POLICY

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

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

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

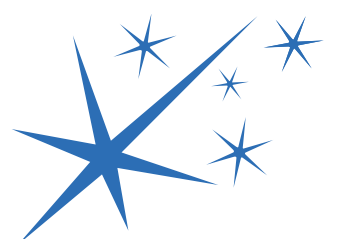


(Praveer Sinha)
CEO & Managing Director

Date: 15th June, 2018

TATA POWER

Lighting up Lives!



CORPORATE ENVIRONMENT POLICY

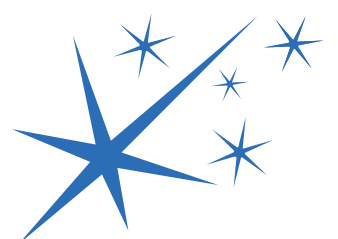
Tata Power is committed to a clean, safe and healthy environment, and we shall operate our facilities in an environmentally sensitive and responsible manner. Our commitment to environmental protection and stewardship will be achieved by:

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



(Praveer Sinha)
CEO & Managing Director

Date: 15th June, 2018



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

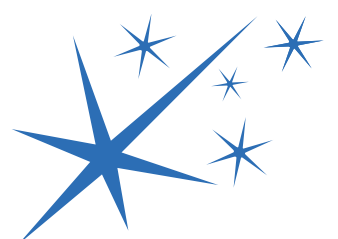
- We will uphold the values of honesty, partnership and fairness in our relationship with stakeholders
- We shall provide and maintain a clean, healthy and safe working environment for employees, customers, partners and the community
- We will strive to consistently enhance our value proposition to the 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

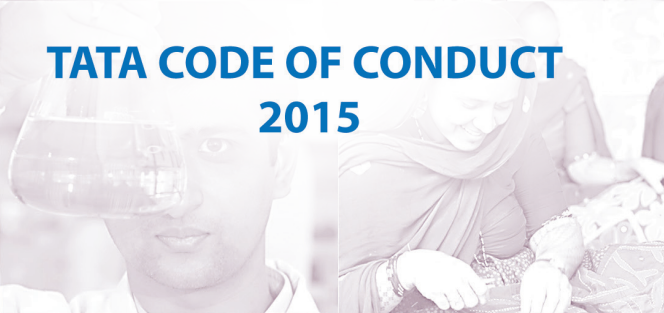
The management will commit all the necessary resources required to meet the goals of Corporate Sustainability.



(Praveer Sinha)
CEO & Managing Director

Date: 15th June, 2018





TATA 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:



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.

Q&A

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

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

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

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

ACCOUNTABILITY

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

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

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

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

SPEAK UP...

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

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

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

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

NOTE

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

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

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

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

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



TATA CODE OF CONDUCT – 2015

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

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

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

Signature: _____

Date: _____

Name: _____

Department: _____

Address: _____

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

NOTES

[illegible]

NOTES

[illegible]



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



SUPPLIER MANUAL ANSWERING TO E-BIDDING & E-AUCTION

CELEBRATING 100 YEARS OF INVISIBLE GOODNESS

TATA POWER

	Version 1.1
Company Confidential	DEC - 2016

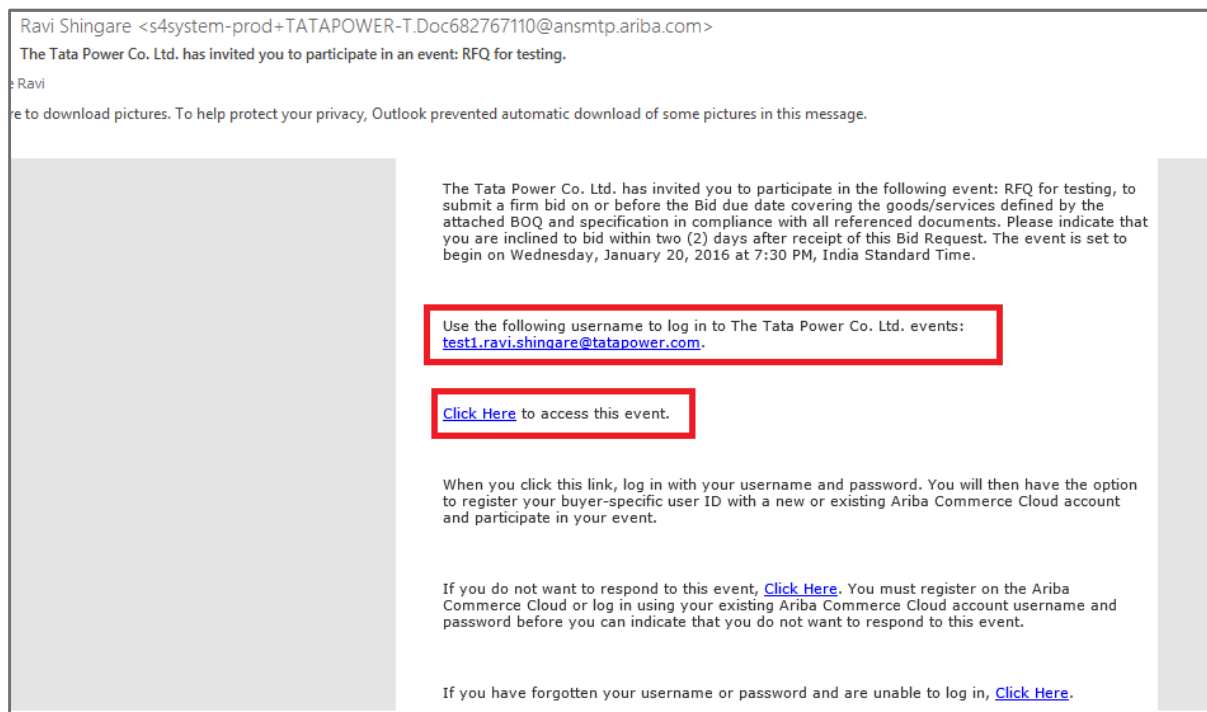
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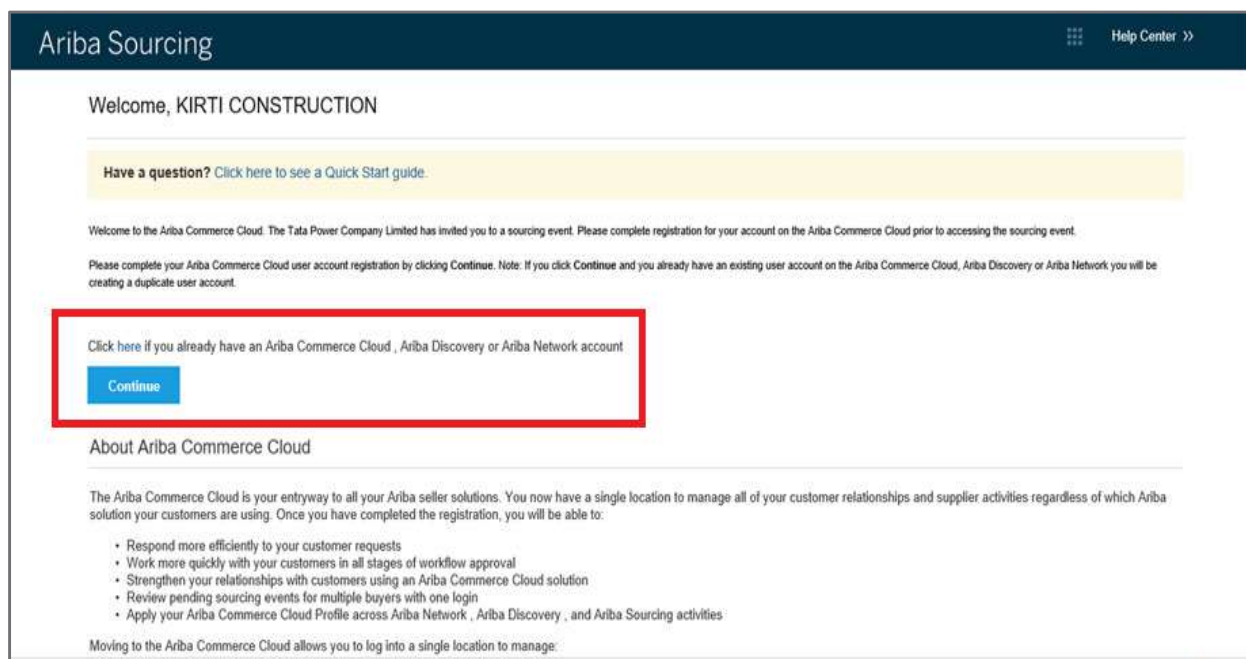
1- Accessing Ariba Sourcing

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.



Step 3: Supplier has to click on "Continue"



Step 4: The registration process only takes a few moments, with a simple one-page registration. Define your password and secret question. Click “OK”

* Indicates a required field

Company Name: * KIRTI CONSTRUCTION

Country: * India [IND]

Address: * Yashodeep E3- 08
Sector 22 Koperkhaima Navi Mumbai
400709

City: * mumbai

State: maharashtra

Postal Code: * 400709

Product and Service Categories: * Enter Product and Service Categories -or-

Ship-to or Service Locations: * Enter Ship-to or Service Location -or-

Tax ID: Optional Enter your Company Tax ID number.

DUNS Number: Optional Enter the nine-digit number issued by Dun & Bradstreet. ⓘ

Supplier has to fill the form

Help | Logout

Welcome USER_TEST2 - UPM-Kymenlahti Corporation

Expired Password

Your password has expired. Follow these instructions to complete this step: Create a new password and confirm. Select a secret question and answer it so ...

Passwords are case-sensitive, and must be between 8 and 16 characters long. They can include any Latin characters and punctuation marks, and must include at least one numeral between the first and last character. They must also include at least one letter. For example, goZenba.

The current secret answer that you have entered is different from the one that has been recorded for this user.

New Password: * ●●●●●●●●

New Password (confirm): * ●●●●●●●●

Secret Question: * Who is your favorite sports team? ▼ ⓘ

Secret Answer: * 11ves

(*) indicates a required field

You expressly agree and understand that your data entered into this system may be transferred outside of the European Union or other jurisdiction where you are located, as further described in the Ariba Data Policy [Data Policy](#)

OK

Step 5: 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 “Submit”.

Secret Question: * In what city was your mother born? ▼

Language: English ▼

The answer to your secret question must be atleast 5 characters.

The language used when Ariba sends you configurable notifications. This is different than your web browser.

Ariba will make your company profile, which includes the basic company information, available for new business opportunities to other companies. If you want to hide your company profile, you can do so anytime by editing the profile visibility settings on the Company Profile page after you have finished your registration. By clicking the Submit button, you expressly acknowledge and give consent to Ariba for your data entered into this system to be transferred outside the European Union, Russian Federation or other jurisdiction where you are located to Ariba and the computer systems on which the Ariba services are hosted (located in various data centers globally), in accordance with the Ariba Privacy Statement, the Terms of Use, and applicable law.

You have the right to access and modify your personal data from within the application, by contacting the Ariba administrator within your organization or Ariba, Inc. This consent shall be in effect from the moment it has been granted and may be revoked by prior written notice to Ariba. If you are a Russian citizen residing within the Russian Federation, You also expressly confirm that any of your personal data entered or modified in the system has previously been captured by your organization in a separate data repository residing within the Russian federation.

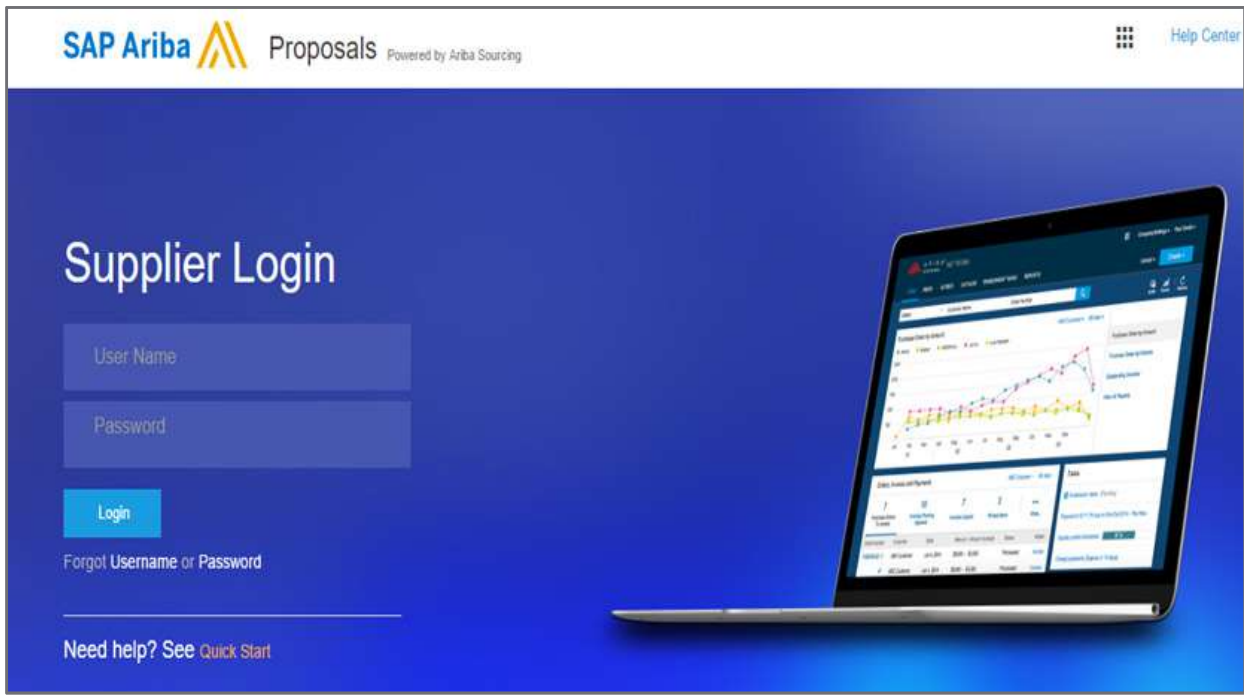
☒ I have read and agree to the [Terms of Use](#) and the [Ariba Privacy Statement](#)

2 Vendor Screen

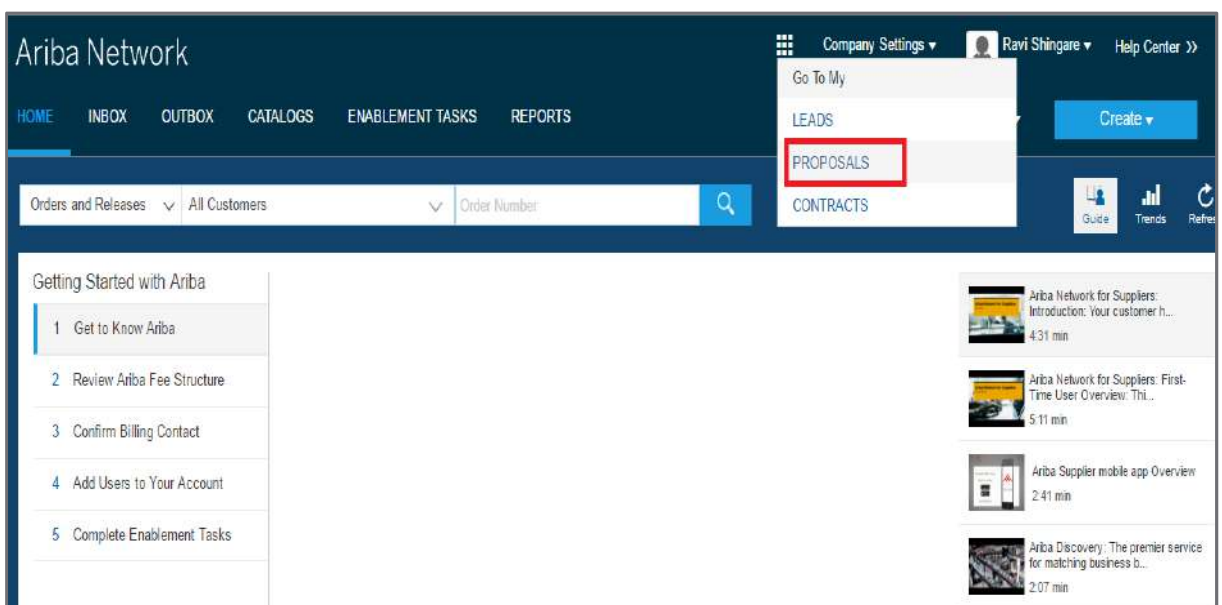
2.1.1 If vendor goes through mail invitation then directly Screen 3.1.1 will appear, but if If you have used Ariba before and have already accessed an event for the buyer-specific account with your current log in ID, click the **Login** button to continue. Log in with your Ariba username and password in order to participate in the event OR you have to follow the following steps.

Step 1 - Log on supplier.ariba.com

Step 2 - Put your USER ID and Password in following screen



Step 3 - Go to ARIBA APPS  and click on Proposals.



3 Submitting Your Answers / Proposal

3.1.1 Review and Approve "Prerequisites"

Step 1: Review and download all documents & then Click on "Review Prerequisites"

The screenshot shows the Ariba SPEND MANAGEMENT interface. The top navigation bar includes 'Home | Preferences | Help | Logout'. The main header displays 'Doc681345837 - Hotel RFQ Finland' and a timer 'Time remaining: 4 days 23:00:00'. A yellow banner contains a warning: 'Review any record in the prerequisites. Prerequisite questions must be answered below you can view event content or participate in the event. Some prerequisites may require the buyer to review and accept your responses before you can continue with the event. If you decline the terms of the prerequisite, you cannot view the event content or participate in this event.' Below the banner, a row of buttons includes 'Download Costs', 'Review Prerequisites' (highlighted with a red box), 'Declare to Respond', and 'Print Event Information'. The left sidebar shows a checklist with '1. Review Event Details' selected. The main content area displays 'UPM Prerequisites' with a list of items, including '1.1 Do You accept UPM General Purchasing Conditions for Products and Services?' and '1.2 Do you accept UPM code of conduct?'. The bottom right corner shows '(Section 1 of 4)' and a 'Next >>' button.

Step 2: Review and accept "Bidder Agreement".

The screenshot shows the 'Prerequisites' page for 'Doc681345837 - sourcing-project-001'. The left sidebar shows a checklist with '2. Review and Accept Prerequisites' highlighted with a red box. The main content area contains a yellow banner stating 'Prerequisites must be completed prior to participation in the event.' Below this, a text block explains the terms of the Bidder Agreement. The bottom right corner features two radio buttons: 'I accept the terms of this agreement.' (highlighted with a red box) and 'I do not accept the terms of this agreement.'.

3.1.2 Select Items or Lots

Step 1: Select Items. - If you do not want to quote for any items/lots then you do not select that lot / items and then go ahead for select and submit lot.

Step 2: Click "Submit Select Lots".

The screenshot shows the 'Select Lots' page for 'Doc29687402 - E-auction'. The left sidebar shows a checklist with '3. Select Lots' selected. The main content area contains a yellow banner stating 'Choose the lots in which you will participate. You can cancel your intention to participate in a lot until you submit a response for that lot; once you submit a response you cannot withdraw it.' Below the banner, a table titled 'Lots Available for Bidding' lists three items: '2.1 Item 1', '2.2 Item 2', and '2.3 Item 3', all with a status of 'Preview'. The 'Submit Selected Lots' button is highlighted with a red box. The bottom right corner shows a 'Cancel' button.

3.1.3 Entering your offer for RFQ

Step 1: as per following screen Vendor Dashboard will appear where RFQ from TATA Power will be visible.

THE TATA POWER COMPANY LIMITED-TEST

Welcome to the Ariba Spend Management site. This site assists in identifying world class suppliers who are market leaders in Ariba, Inc. administers this site in an effort to ensure market integrity.

Events

Title	ID	End Time
Status: Completed (104)		
Status: Open (1)		
RFQ-Test 11th Aug 2016	Doc905524000	12/16/2015 6:35 PM
Status: Pending Selection (80)		

Tasks

Name	Status	Due Date	Completion Date
------	--------	----------	-----------------

Step 2 - Follow all the steps of 3.1.1 to 3.1.3

Step 3 - Vendor has to submit their techno commercial offer in 2.1. In this field Do No attach any price content. For Price Bid put all the unit price and taxes and duties in provided field. Put "0" (ZERO) in not applicable field.

2. Review and Accept Prerequisites

3. Select Lots

4. Submit Response

Event Contents

- 1.4.1 Contract Safety Manual [Annexure I \(Contract Safety M](#)
- 1.4.2 TATA Code of Conduct [Annexure III \(TCOC\).pdf](#)
- 1.5 Technical Specification
 - 1.5.1 Technical Specification Details [Attach a file](#)
 - 2 Techno Commercial bid
 - 2.1 Please attach the Techno-Commercial Bid [Attach a file](#)
 - 3 Price Bid
 - 3.1 Bidder to specify the prices either in terms of percentage (%) or Value where the options are available for both. In case price is specified in percentage (%) , please Specify Zero (0) in the amount field and vice-versa.
 - 3.2 Bearingfor motor 1.90991 [More...](#) + * 15,000.00 INR 30 each
 - 3.3 AMC 20,000 IS-U/CCS CONTRACTS [More...](#) + * 35,000.00 INR 35 month
 - 3.4 ANALYSIS TAILRACE WTR SAMPLE [More...](#) + * 35,000.00 INR 45 each

Step 4 - After successfully putting Techno commercial offer and price part then click on "Submit Entire Response"

Submit Entire Response [Update Totals](#) [Save](#) [Compose Message](#)

3.1.4 Entering Your Prebid for e-auction

Before participation to the e-auction you must place a pre-bid. If you haven't placed a Prebid in the Prebid time you won't be able to participate to the auction itself.

Step 1: Populate Your Answers.

Step 2: Click "Submit Entire Response".

The screenshot shows the 'Doc681345837 - sourcing-project-001' page. A yellow banner at the top right indicates 'Time remaining in preview 1 day 04:05:05'. A message states: 'The event owner has requested that you submit a prebid before the end of the preview period. You have not yet submitted a prebid.' The left sidebar contains a checklist with '4. Submit Bids' highlighted. The main content area shows a table with columns 'Name' and 'Extended Price'. The table has three sections: '1 Introduction', '2 Commercial Terms' (with a sub-item '2.1 lot-1' showing '4 core cable' and a price of '5000 INR'), and '3 Pricing' (with a sub-item '3.1 FOR SITE DELIVERY' showing 'P&F INCLUSIVE' and a file 'COMP-1.xlsx'). At the bottom, the 'Submit Entire Response' button is highlighted.

When the Prebid time is still open you can still modify your Prebid:

Click on "revise Prebid" and repeat in step 1 and step 2.

The screenshot shows the same 'Doc681345837 - sourcing-project-001' page. The yellow banner at the top right now indicates 'Time remaining in preview 1 day 04:02:39'. A green banner states: 'Your prebid has been submitted. You will be notified when the event is open for bidding.' The left sidebar contains a checklist with '4. Submit Bids' highlighted. The main content area shows the same table as before. A 'Revise Prebid' button is highlighted in the center of the page.

3.1.5 Participate to the e-auction

If you have placed a bid in the Prebid time you will be able to participate to the e-auction. E-auctions are rather sort in time (usually less than 20 min per item). Once the time is closed you won't be able to bid anymore.

The screenshot shows the 'Doc681345837 - sourcing-project-001' page. A green banner at the top states 'Your response has been submitted.' and 'Your price rank in the auction'. A red box highlights 'My Bid Rank : 1'. A red box highlights the 'Extended Price' field, which is set to '4,000.00 INR (1)'. A red box highlights the 'Bidding time left for the item' timer, which shows '00:08:39'. A red box highlights the 'Submit Current Lot' button. A red box highlights the 'Decrement bid by' field, which is set to '1,000'. A red box highlights the 'Apply' button. A red box highlights the 'Submit Current Lot' button. A red box highlights the 'Update Totals' button. A red box highlights the 'Reload Last Bid' button. A red box highlights the 'Save' button. A red box highlights the 'Compose Message' button. A red box highlights the 'Need Help?' link. A red box highlights the 'Go back to The Tata Power Company Limited-TEST Dashboard' link. A red box highlights the 'Desktop File Sync' link. A red box highlights the 'Notifications' link. A red box highlights the 'Help Center' link. A red box highlights the 'Event Messages' link. A red box highlights the 'Response History' link. A red box highlights the 'Checklist' link. A red box highlights the '1. Review Event Details' link. A red box highlights the '2. Review and Accept Prerequisites' link. A red box highlights the '3. Select Lots' link. A red box highlights the '4. Submit Bids' link. A red box highlights the '5. Enter Lot Details' link. A red box highlights the 'Event Contents' link. A red box highlights the 'All Content' link. A red box highlights the '1 Introduction' link. A red box highlights the '2 Commercial Terms' link. A red box highlights the '3 Pricing' link. A red box highlights the 'Need Help?' link. A red box highlights the 'Go back to The Tata Power Company Limited-TEST Dashboard' link. A red box highlights the 'Desktop File Sync' link. A red box highlights the 'Notifications' link. A red box highlights the 'Help Center' link. A red box highlights the 'Event Messages' link. A red box highlights the 'Response History' link. A red box highlights the 'Checklist' link. A red box highlights the '1. Review Event Details' link. A red box highlights the '2. Review and Accept Prerequisites' link. A red box highlights the '3. Select Lots' link. A red box highlights the '4. Submit Bids' link. A red box highlights the '5. Enter Lot Details' link. A red box highlights the 'Event Contents' link. A red box highlights the 'All Content' link. A red box highlights the '1 Introduction' link. A red box highlights the '2 Commercial Terms' link. A red box highlights the '3 Pricing' link.

When you want to submit your price presses “submit current lot”

In case the new price you submit is lower by 10% of the starting price (Prebid Price) the following warning Message will be displayed.

To submit the new price, check the box and press submit. If you made a mistake press cancel so that you Mistake would not be submitted.

The screenshot shows the 'Doc681345837 - sourcing-project-001' page. A red box highlights 'My Bid Rank : 2'. A red box highlights the 'Extended Price' field, which is set to '4,000.00 INR (2)'. A red box highlights the 'Submit Current Lot' button. A red box highlights the 'Update Totals' button. A red box highlights the 'Reload Last Bid' button. A red box highlights the 'Save' button. A red box highlights the 'Compose Message' button. A red box highlights the 'Decrement bid by' field, which is set to '1,000'. A red box highlights the 'Apply' button. A red box highlights the 'Submit' button. A red box highlights the 'Cancel' button. A red box highlights the 'Check here to ignore the warnings and submit your bid anyway.' checkbox. A red box highlights the 'Submit this response?' message. A red box highlights the 'Your bid has generated the following warnings:' message. A red box highlights the 'The value you entered for Item 2.1 (4,000.00 INR) improves your previous bid or the ceiling value (5,500.00 INR) by more than 10%' message. A red box highlights the 'Submit' button. A red box highlights the 'Cancel' button. A red box highlights the 'Check here to ignore the warnings and submit your bid anyway.' checkbox. A red box highlights the 'Submit this response?' message. A red box highlights the 'Your bid has generated the following warnings:' message. A red box highlights the 'The value you entered for Item 2.1 (4,000.00 INR) improves your previous bid or the ceiling value (5,500.00 INR) by more than 10%' message. A red box highlights the 'Submit' button. A red box highlights the 'Cancel' button. A red box highlights the 'Check here to ignore the warnings and submit your bid anyway.' checkbox.

3.1.5.2 What to do if you have a problem during the e-auction?

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

➤ **e- Bidding /Auction Cell details:-**

Core team		
<u>Contact Person</u>	<u>E-Mail Id</u>	<u>Contact Details</u>
Ravi Shingare	ravi.shingare@tatapower.com	9029004168
Himanshu Ranjan	himanshur@tatapower.com	9820339961
Escalation Matrix		
Paresh Bhatt	pareshbhatt@tatapower.com	
C T Prakash	ctprakash@tatapower.com	9223545185

4 Communicating with Tata Power Buyer & Auction team during auction / e- bidding

Step 1: Click “Compose Message”.

The screenshot shows the 'All Content' section of the Tata Power e-auction interface. It lists various items for bidding, including 'UPM Prerequisites' and 'Request for Quotation'. The 'Compose Message' button is located at the bottom left of the interface and is highlighted with a red box.

Step 2: Compose Your Message and click “Send”.

The screenshot shows the 'Compose New Message' form in the Tata Power e-auction interface. The form includes fields for 'From', 'To', 'Subject', and 'Attachments'. The 'Send' button is located at the top right of the form and is highlighted with a red box.

SUPPLIER FREQUENTLY ASKED QUESTIONS

If I registered on my buyer's Ariba Sourcing site in the past, do I need to register again?

Answer- Yes. Although you have registered on your buyer's Ariba Sourcing site in the past, registering on the Ariba Commerce Cloud is required. The registration process only takes a few moments, with a simple one-page registration. Registering on the Ariba Commerce Cloud gives you access to all your buyer relationships with one username and password.

What is the Ariba Commerce Cloud?

Answer: - The Ariba Commerce Cloud is your entry point to all of your seller solutions. Rather than managing log in information for multiple buyers' sites, you will have one log in and one account. This means fewer passwords to remember, easier user maintenance for your company, and a unified profile for your organization.

Do I need to add Product and Service Categories during registration?

Answer:-Yes; this is a required field. Product and Service Categories classify what your company sells, and the system uses this information to match potential business opportunities with your products and services.

Click **Add Product and Service Categories** to select one or more categories from the list of options. During registration, you only need to choose one category, preferably related to the event you are joining. You can add, refine, or remove categories any time after the registration process.

Do I need to add ship-to or service locations during registration?

Answer: - Yes; this is a required field. Ship-to or Service locations inform buyers where your company sells its products or provides its services, and the system uses this information to match potential business opportunities with your products and services.

Click **Add Ship-to or Service Locations** to select one or more sales territories from a list. You can add, refine, or remove ship-to or service locations any time after the registration process.

Do I need to enter a D-U-N-S number when I register?

Answer: - No; this is an optional field. You are only required to complete the fields marked with an asterisk (*). If you enter a D-U-N-S number, and you get a message that the value is already in use, leave the field blank, as D-U-N-S numbers must be unique within the Ariba Commerce Cloud. Your company can have multiple Ariba accounts, but only one account can use the D-U-N-S number.

Additional Information: - D-U-N-S is a registered trademark of Dun & Bradstreet or its subsidiaries in the United States and other countries.

Do I need to enter a Tax ID when I register?

Answer: - No, the Tax ID is an optional field. You are only required to fill in the fields marked with an asterisk (*).

What is the difference between the Email and Username fields in my profile?

Answer: - The Email field represents the email address where you wish to receive email notifications. The Username field is the identifier that you use to access your account. The Username field must be in email format, but you do not have to use a valid email address.

Note: Leave the **This is my username** box checked if you want your email address to be the same as your username.

How do I participate in my buyer's event using an email invitation?

Answer: - Use the **Click here** link in the email notification to access the sourcing event.

While buyers might customize the email content you receive, all email invitations contain a link to access the event.

Depending on your previous experience with Ariba solutions, do one of the following to access the event after you click the link:

- If you are new user, click **Continue** on the welcome page. You continue to register an Ariba account to link with your buyer and participate in the event.
- If you have used Ariba before and have already accessed an event for the buyer-specific account with your current log in ID, click the **Login** button to continue. Log in with your Ariba username and password in order to participate in the event.
- If you already have an existing Ariba Network, Ariba Discovery, or Ariba Sourcing supplier account, but you have not accessed any events for the inviting buyer's site, use the **Click here if you already have an Ariba Commerce Cloud, Ariba Discovery or Ariba Network account** link. After clicking the link, log in with your existing account to move your information to your buyer's site.

Additional Information :- Registering an Ariba account provides you with a consolidated view of all your customer relationships. With this one profile, you can view business opportunities, participate in sourcing events, participate in contract negotiations, and manage orders, catalogs, and invoices.

Why doesn't the link in the email invitation to participate in a sourcing event work?

Answer:-If you cannot click the link, or the link does not open the log in page, highlight and copy the Uniform Resource Locator (URL), and then paste the URL into your web browser.

Can my company have multiple accounts?

Answer:-Your Company can have multiple Ariba accounts, depending on your business needs. For example, if your company has several locations around the world, you might want a separate account for each region.

Most companies choose to have one account with multiple customer relationships, which provides a centralized location to maintain their company profile information and all of their customer relationships.

Additional Information

Consider the following items when deciding whether to have more than one account:

- **Administrators:** For each account, you can have only one account administrator, but the account administrator can provide access to multiple users. All users from your company have their own **Username** and **Password** to access the account.
- **DUNS** (data universal numbering system) **numbers:** You can add your company's DUNS number to only one account. If you plan to have multiple accounts, leave the DUNS number blank during registration.

How do I complete registration if my username already exists?

Answer: - This message means that you already have an Ariba Network, Ariba Discovery, or Ariba Sourcing supplier account registered under username you entered. You can either register a new account by creating a new username, or access one of the following sites to request a password reset for the registered username:

- [Ariba Network](#) (This login page is used for all Ariba Network, Ariba Sourcing, or Ariba Contracts suppliers).
- [Ariba Discovery login page](#)

To reset your password, click the **Having trouble logging in?** Link on the Login page.

Nothing happens when I click Forgot Username and enter my email address

Issue: - Nothing happens when I click the **Forgot Username** link and enter my email address.

Cause: - After you submit your request to retrieve your username, the Ariba Network sends an email notification with usernames that match the email address you submitted.

Some possible reasons why you may not receive this username retrieval email notification:

- The email address on your account does not match the email address you entered when submitting the request.
- Your buyer-specific account was deactivated before you could move it to the Ariba Commerce Cloud. Generally, that means you probably have not participated in an event with that buyer for a while.

Solution: -

- To ensure you receive this email notification:
- Make sure you type the email address configured within your account.

If your buyer-specific account has been deactivated, contact your buyer to determine how to proceed.

Where is my password reset email?

Answer: - After you submit your request for a password reset, Ariba sends instructions to the email address associated with your account. If you didn't receive a password reset email, check the following scenarios to troubleshoot.

The username you entered is in the wrong format, or it isn't associated with the email address you are checking.

- Keep in mind, your username is in the format of a full email address, but it can be associated with any email address you entered previously.
 - Your username is also case-sensitive.
 - To confirm that you are using the correct username and format, return to the Ariba login page, and click the **Having trouble logging in?** link (**Forgot Username** if you're working in Ariba Discovery).
 - Choose **I forgot my username**, and click **Continue**.
 - Enter the email address associated with your account, and click **Submit**.
 - You will receive an email that lists the exact format of the username associated with the email you entered.
-

You entered the correct username, but you still didn't receive the password reset email notification.

- This can occur if the configured email address is different from the account you are checking.
- You might have multiple accounts for your company, so make sure you are attempting to access the correct account.

Your email configuration or company's security settings might also prevent you from receiving the password reset email. To find out, check your junk mail folder or email filter settings to verify that automated emails from Ariba are not blocked from your email account.

 **Why do I get this message on the SAP Ariba Login page: "The username and password pair you entered was not found"?**

Answer: - You entered an incorrect **Username** or **Password**. You might receive this message if you entered a previous **Username** or **Password**. Remember that your **Username** has the format of an email address, and both the **Username** and **Password** are case sensitive.

Click the **Having trouble logging in?** Link on the Login page if you don't remember your log in information.