

<b>The Tata Power Company Ltd</b>		<i>Corrigendum</i>
<i>Tender Reference:</i> <b>4100038996/CC25ADO0019</b>		<i>Document Date: 2<sup>nd</sup> December 2024</i>

**Amendment 01**

**Tender Ref No.: 4100038996/CC25ADO0019**

**“Installation and commissioning of Electrical and Civil Infrastructure  
at Yamuna Expressway (Noida to Mathura Highway)”**

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

<b>The Tata Power Company Ltd</b>		<i>Corrigendum</i>
<i>Tender Reference:</i> <b>4100038996/CC25ADO0019</b>		<i>Document Date: 2<sup>nd</sup> December 2024</i>

**Following amendments to the subject tender be noted by the bidders**

**1) Clause 1.3: Dates in Calendar of events stands revised as below,**

(a)	Date of availability of tender documents on TPC Website	From 11.11.2024 to 03.12.2024, 15:00 Hrs.
(b)	Date & Time of Pre-Bid Meeting (If any)	Shall be intimated in advance.
(c)	Last Date of receipt of pre-bid queries, if any	18.11.2024 up to 15:00 Hours
(d)	Last Date of Posting Consolidated replies to all the pre-bid queries as received	03.12.2024 up to 17:00 Hours
(e)	Last date and time of receipt of Bids	11.12.2024 up to 5:00 Hrs.
(f)	Date & Time of opening of Price of qualified bids	Will be notified to the successful bidders through our website / e-mail.

**2) Rest of the tender document remains unchanged.**

CONFIDENTIAL

Reply to Prebid Queries - CC25ADO0019 - OLA for 6 months for Installation of Electrical and Civil Infrastructure at Yamuna Expressway (Noida to Mathura Highway)

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation	Tata Power Response
1	2	3	4	5
1	Page No - 24, Clause No 3.2	LIASIONING OF ELECTRICAL EQUIPMENT OF FLEET HUB - It shall include all the downstream LT equipment, including connecting cables, connected to the transformer drawing power from that transformer (For eg. EV Chargers, other equipment, lighting circuits, Power circuits etc). Vendor should take a note that effectively all the equipment in substation of the EV Project shall be covered in the approval taken from the competent statutory authority.	The Liasioning of Electrical Inspector Should be In Tata Power Scope.	EI approval for downstream equipment is not in scope of bidder
2	In General	Mobilization Period	Mobilization Period should be Minimum One Months	After issue of P.O./LOI/confirmation mail from Corporate Contracts, vendor should mobilize manpower within 7-10 days
3	In General	Drawing of Plinth and approved Make	Please provide Drawing of Plinths and Approved Make of Tata Power for Panels, If possible then please provide the Contact details of Manufactures for the getting the quotation in time.	Tentative drawing is attached. Please check revised specification sheet for LT Panel & DB Panel.
4	1	Supply & Testing & Commissioning of Kisok LT Panel Outdoor Double Door Type (IP65) with Aluminum Busbar, I/C and O/G - 800 Amp 50KA 4P MCCB with LSIG & RYB Indicator Lamp, Volt Meter, Ampere Meter ASS VSS , RYB Indication, Including MS Angle Stand.	1. Panel SLD Required 2. Approved Material Make List 3. Panel Specification Required	1. Technical Specification Sheet is provided. Bidder to submit SLD based on technical specifications & same will be verified by Tata Power for manufacturing. 2. Material make list is shared in Technical Specification Sheet.
5	2	Supply, Testing & Commissioning of LT Distribution Panel Outdoor Double Door Type (IP65) with Aluminium Busbar, with 3 Nos outgoing, Volt Meter, Ampere Meter ASS VSS , RYB Indication. Bus Bar Rating 500 A Incomer-500A MCCB 36 kA TM type (1 No.) Outgoing- 400 Amp MCCB 36 kA TM type (1No.), 125 Amp MCCB 25KA TM Type (2 No.), 25A MCB 4P 10KA (1 No.)	1. Panel SLD Required 2. Approved Material Make List 3. Panel Specification Required	1. Technical Specification Sheet is provided. Bidder to submit SLD based on technical specifications & same will be verified by Tata Power for manufacturing. 2. Material make list is shared in Technical Specification Sheet.
6	6	Supply & Erection /installation /Nomenclature of Earth Electrode GI copper bounded 3 Meter long 48mm Dia pipe IS 3043 with chamber CI cover - JEF ECO Safe Environment Friendly Maintenance Free Earthing System Consisting of (A) ONE BAG OF LORESCO SPECIAL POWER SET BACK FILL COMPOUND OF 50 kg.	1. Earth Pit Drawing Required	Chemical Earth Pit preparation drawing along with SOP is attached.
7	1 (Civil BoQ)	Foundation for 240 KW EV Chargers as per the enclosed drawing and details as per specification ( 240 EV Charger (SMR UNIT ) Civil Foundation For 2000 mm X 2000 mm and Height 200 mm from ground level, 300 mm below the ground, PCC, M25 grade, along with a Pipe 4" for Cable Entry All 4 Sides and Top to be covered, edges shall be properly chamfered	1. Please Provide Foundation Drawing	We Have added foundation related Civil Item like Excavation, PCC, Brick work,Plastering, Steel/ MS item which required for Charger / Panel foundation hence rate to be quoted against this item being utilized for foundation. Foundation Drawing will be release basis on site condition however tentative drawing is attached .

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation	Tata Power Response
8	2 (Civil BoQ)	Foundation for 60 & 50 KW EV Chargers as per the enclosed drawing and details as per specification ( 60Kw & 50Kw EV Charger ) Civil Foundation For 2000 mm X 2000 mm and Height 200 mm from ground level, 300 mm below the ground, PCC, M25 grade, along with a Pipe 4" for Cable Entry All 4 Sides and Top to be covered, edges shall be properly chamfered	1. Please Provide Foundation Drawing	We Have added foundation related Civil Item like Excavation, PCC, Brick work,Plastering, Steel/ MS item which required for Charger / Panel foundation hence rate to be quoted against this item being utilized for foundation. Foundation Drawing will be release basis on site condition however tentative drawing is attached .
9	3 (Civil BoQ)	Foundation for 10 KW EV Chargers as per the enclosed drawing and details as per specification ( 10 kW EV Charger ) Civil Foundation For 1500 mm X 1500 mm and Height 200 mm from ground level, 300 mm below the ground, PCC, M25 grade, along with a Pipe 4" for Cable Entry All 4 Sides and Top to be covered, edges shall be properly chamfered	1. Please Provide Foundation Drawing	Tentative drawing attached. However, actual drawing may vary as per site requirement.
10	4 (Civil BoQ)	Civil Foundation for Kisok Panel (Size 300x300x 200 mm form ground level 300 mm below as per the specification, PCC, M25 grade	1. Please Provide Foundation Drawing	Tentative drawing attached. However, actual drawing may vary as per site requirement.
11	5 (Civil BoQ)	Civil Foundation for LTDB (Size 2000x1500x 200 mm form ground level 300 mm below as per the specification, PCC, M25 grade	1. Please Provide Foundation Drawing	Tentative drawing attached. However, actual drawing may vary as per site requirement.
12	Mandatory Requirement	Technical Bid Evaluation	We are having an Electrical Contractor License which has been issued from the Government of Maharashtra, Government of Gujarat & Government of Rajasthan.  We can't having Electrical contractor License of UP Licensing board in the name of Rutvik Engineering Private Limited  We are operating work by name of track Engineering in UP State and we are having Electrical Licence in the name of track engineering.Track engineering is our group of firms. If required we will show a license of track engineering as a sub vendor.  Please clarify that we will eligible for tender participation.	Bidder to comply with state regulatory requirements.
13	Scope Of Services:		Not provied the SLD in EV Charging Station	Site SLD attached
14	Electrical BoQ		Panel Equipment Make Not Mention	1. Technical Specification Sheet is provided. Bidder to submit SLD based on technical specifications & same will be verified by Tata Power for manufacturing. 2. Material make list is shared in Technical Specification Sheet.
15	Scope Of Services:		why you need electrical of Electrical Liceses In U.P State	Bidder to comply with state regulatory requirements.
16	Warranty/Guarantee Period:		24 months from the date of Commissioning on manufacturing defect of all kinds of supply, installation & services.	Bidders to give back to back guarantee of the bought items, as provided by the OEM. For other work Warranty/guarantee shall be per the tender document.

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation	Tata Power Response
17	Electrical BoQ	1. 100 mm Sand cushioning and Protection tiles to be provided in between 2 layers of cable.	it will be Tiles and Brick	Cable will be laid through trenches available at site. If trench is not available, bidder should follow standard cable laying procedure as per RFP document. Tiles or bricks can be used for cable protection.
18	Electrical BoQ	Supply & Testing & Commissioning of Kiosk LT Panel Outdoor Double Door Type (IP65) with Aluminium Busbar, I/C and O/G - 800 Amp 50KA 4P MCCB with LSIG & RYB Indicator Lamp, Volt Meter, Ampere Meter ASS VSS , RYB Indication, Including MS Angle Stand.	DO you required Aggregated NABL Lab Test Certification in 800Amp Kiosk Panel (IP 65)	Manufacturer test certification is required for major compenents like 800 A MCCB/ 500 A MCCB/ all MCBs. FAT certificate is accepted along with manufacturer test & warranty certificate.

<b>The Tata Power Company Ltd</b>		<i>Annexure to Reply to Prebid Queries</i>
<i>Tender Reference:</i> <b>4100038996/CC25ADO0019</b>		<i>Document Date: 2<sup>nd</sup> December 2024</i>

**CONFIDENTIAL**

**Revised Scope of Work**  
**RFP for Yamuna Expressway (Electrical and Civil Work)**

**SUBJECT:**

**RFP FOR ELECTRICAL & CIVIL INFRASTRUCTURE JOBS & OTHER MISCELLANEOUS JOB FOR EV PROJECT AT YAMUNA EXPRESSWAY, (NOIDA TO MATHURA HIGHWAY)**

**CONTENT:**

- SCOPE OF WORK
- SCOPE OF SUPPLY
- SCOPE OF SERVICES
- SCOPE OF INSTALLATION
- TOOLS, TACKLES & SAFETY APPARELS
- SUPERVISION
- SAFETY
- MEASUREMENT OF WORK
- WARRANTY/GUARANTEE PERIOD
- PAYMENT TERMS
- BANK GUARANTEE
- SPECIAL CONDITIONS OF CONTRACT FOR ELECTRICAL & CIVIL SERVICES
- MANPOWER DEPLOYMENT
- PROJECT COMPLETION SCHEDULE
- VENDOR'S PERFORMANCE EVALUATION & PENALTIES
- BOM ANNEXURE - 1 & ANNEXURE - 2

**1.SCOPE OF WORK:**

**I. Electrical & Civil Infrastructure Development:**

The vendor is responsible for the development of both electrical and civil infrastructure, from the utilities metering room to the EV charging station. This includes the installation of both AC and DC chargers as per the specific site requirements.

**II. Scope of Work:**

The vendor will carry out the following electrical and civil activities based on the site conditions:

- **Construction of Pedestals:** For both AC and DC charging stations.
- **Electrical Installations:** Includes the installation of LT panels and distribution boxes, covering all activities such as excavation, brickwork, RCC construction, plastering, and painting, with all necessary materials provided.
- **Flooring Works:** Breaking of flooring for cable laying purposes and subsequent restoration of the flooring post-trenching activities.
- **Installation, Testing, and Commissioning:**

- Installation of chargers, LT panels, outdoor distribution boxes, and LT cables, including cable laying and terminations.
- Installation of MCCB/MCB for circuit protection, along with the necessary earthing arrangements.
- Installation of fire extinguishers to ensure electrical safety.
- Completion of miscellaneous electrical and civil tasks as required.

### **III. Vendor Responsibilities:**

- **Housekeeping & Site Coordination:** The vendor is responsible for maintaining proper housekeeping within the working premises and ensuring coordination with the customer and Tata Power for all site-related issues.
- **Project Timeline:** The vendor must begin work within one week of the purchase order (PO) placement, adhering to the schedule provided by Tata Power. The vendor will be responsible until all equipment is energized and handed over for operation.

### **2. SCOPE FOR SUPPLY:**

#### **a. Electrical Equipment Specifications:**

All electrical equipment required for the project, including LT Panels, Outdoor Distribution Boxes, LT cables, MCCBs/MCBs, earthing arrangements, and other miscellaneous items, must comply with Tata Power's standard technical specifications and approved manufacturers.

#### **b. Civil Supply Items:**

All civil supply items required for the project must align with Tata Power's standard Bill of Materials (BOM) and approved manufacturers.

#### **c. Documentation Requirements:**

The vendor must provide the following documents:

- Type test reports from the Original Equipment Manufacturer (OEM) for MCCBs/MCBs.
- Manufacturer's warranty certificates.
- Reports for Routine Test Certificates (RTC) and Factory Acceptance Tests (FAT) for LT panels, distribution boxes, cables, and other supply items.

#### **d. Timely Delivery and Installation:**

The vendor is required to adhere to the agreed-upon timelines for the delivery and installation of all equipment and materials.

The materials required for the construction of the EV project on the Yamuna Expressway are detailed in **Annexure 1** and **Annexure 2**.

### **3. SCOPE OF SERVICES**

#### **A. Scope of Site Survey & Feasibility Analysis**

The vendor is responsible for conducting a detailed site survey and feasibility analysis to prepare civil and electrical layouts, ensuring proper demarcation of LT panels, cable laying SLD, parking areas, and chargers. The survey must be carried out with skilled personnel, in collaboration with a TPEVCSL representative. The vendor will complete the survey form in the approved TPEVCSL format, providing necessary information for feasibility checks within the specified timeline, and submit it to TPEVCSL for further action. The turnaround time for the site survey will be shared with the bid document.

The following information must be obtained during the survey (but is not limited to):

- **Identification of Power Source**
- **Charger Location & Parking Lot:** Ensuring easy access for the EV operator.
- **Scope of Civil Work:** Identifying the requirements for pedestals, concrete break, backfilling, etc., subject to TPEVCSL's approval.
- **Earthing Point Identification**
- **Measurement of Cable Length:** For power and earth cables.
- **Location of LT Panels, Distribution Boxes, MCBs, etc.**
- **Cable Route Finalization:** Finalizing scope of activities for cable laying, earthing installation, etc.
- **Earth Pit Feasibility:** Determining the number of earth pits required based on site conditions.
- **Permissions:** Vendor to obtain necessary clearance/approvals from the TPC representative before commencing work at the site.
- **Shed Work:** Vendor to arrange for prefabricated lightweight structures and submit design sketches for approval.
- **Skilled Manpower Deployment:** Ensuring deployment of trained personnel for the survey work.
- **Coordination with Other Teams:** Collaborating with other OEMs/discom teams for multiple chargers or new meters as per site requirements.
- **Timelines for Survey & Reporting:** The vendor must submit the survey report within 1-2 days of PO issuance.

#### **4. Scope of Installation**

##### **Prerequisite:**

- Coordination with the Location Partner and TPC representative is necessary before starting the work.

- Ensure all required materials are delivered to the site. The vendor is responsible for material storage and handling by skilled personnel.
- A power shutdown should be planned for terminations at the power source, ensuring electrical isolation at each termination point before connection.

The following activities must be carried out during the installation:

- **Electrical Equipment Supply & Installation:** Including the energization of all electrical equipment.
- **Installation of Lightning Arrestors (LA) & Earth Pit**
- **Cable Laying, Glanding, & Termination:** Ensure electrical isolation before connecting cables at both ends.
- **Civil Foundation Construction:** For chargers and LT panels/distribution boxes, including installation of chain link fencing around the distribution panel area, as required by the site.
- **Trenching & Excavation Services:** As part of the civil works.
- **Installation Report Submission:** A completed report should be submitted to the TPC team after installation.
- **Clearances & Approvals:** The vendor is responsible for managing any necessary clearance or approval processes related to installation and commissioning.
- **Infrastructure Selection:** Infrastructure items will be selected based on the site survey to ensure successful commissioning per the load conditions.
- **Annexure Details:** Infrastructure-related items, as listed in **Annexure I** and **Annexure II**, should be used based on engineering judgment and standard practices required to complete site work and make chargers operational.
- **Installation Standards:** Adherence to Tata Power's standards, CEA guidelines for EV chargers, and standard SLD and installation guidelines.
- **Installation Schedule:** The installation date will be communicated after receiving confirmation from TPCL.
- **Charger Onboarding:** Charger onboarding at any stage will be handled by the charger OEM.
- **Skilled Manpower for Energization & Commissioning:** The vendor will ensure the deployment of trained personnel for the energization and commissioning of the project.
- **Project Monitoring:** The vendor must plan, monitor, and control the execution and commissioning work. They will also be responsible for monitoring the performance of their sub-vendors involved in logistics, transportation, installation, and commissioning.
- **Site Installation Audit:** The vendor will perform an audit of the site installation and adhere to safety guidelines during execution, in accordance with Tata Power's safety standards.
- **Compliance with Safety Guidelines:** The vendor must adhere to Tata Power's safety guidelines for survey, execution, and commissioning.
- **Multiple Charger Coordination:** The vendor must coordinate with the site in-charge for the installation plan for multiple chargers.
- **Quality Audit:** A quality audit should be conducted during and/or post-installation to ensure compliance with quality standards.

## **Installation Requirements Include:**

- **Demonstration, Training & Support:** The vendor must provide a demonstration, training, and support to the end user/EV operator, along with the handover of the charging equipment after onboarding by both the vendor and OEM. The installation and commissioning team will ensure that the installation report is signed off by the end user/location partner.
- **Regulatory Compliance:** All work must comply with local municipal and relevant government regulations and policies.
- **Standard Installation Requirements:** This includes the delivery of products, laying cables to the power source, installing electrical conduits, MCBs, and proper earthing to enable charger energization.
- **Bill of Quantities (BOQ)/Bill of Materials (BoM):** A complete list of additional items required for the site, other than the chargers, should be submitted to TPC for order processing. Refer to **Annexure I** and **Annexure II** for item details.
- **Documentation Submission:** The vendor must submit technical documentation related to the design, installation, testing, operation, and maintenance of the equipment, along with test reports and job progress updates.
- **Employee Training:** The vendor must ensure that employees are trained in standard installation processes, quality control, and safety protocols.
- **Workforce Availability:** The vendor is responsible for ensuring their workforce is available on-site, whether in shifts or extended hours, as required by the project. Security of materials, tools, and equipment on-site will be the vendor's responsibility. In the event of theft, the vendor will bear the replacement cost of missing items.

## **5. TOOLS, TACKLES, SAFETY APPAREL & OTHER REQUIREMENTS**

### **5.1 Tools and Equipment Procurement**

Vendors are responsible for procuring and maintaining all necessary tools and equipment required to carry out the work. This includes, but is not limited to:

- Generator sets for lighting (if work extends into the night)
- Scales for checking earth pit depth
- Traffic signals
- Toolbox talk register
- Ladders, pliers, and other necessary materials

These tools must be available in adequate quantities to support the work. The serviceability of all tools will be verified by the Tata Power site engineer or supervisor before work begins. If the tools are found to be unsatisfactory, the vendor will not be permitted to begin work.

Protection and safe custody of the materials are the vendor's responsibility. The vendor must ensure that the materials are stored securely to prevent theft, pilferage, or damage from any cause. Any loss of materials in this regard must be compensated by the vendor.

## **5.2 Tool Registration and Exit Procedures**

The vendor must supply all tools required for job execution. These tools must be declared at the gate upon entry, with proper documentation and a challan, and certified by gate security personnel. An exit gate pass will only be issued after the job is completed and the tools are registered. Exit gate passes cannot be issued for unregistered equipment. Tools and materials may only be removed from the site with a valid exit pass.

## **.3 Job Hazard Analysis and Safety Precautions**

The vendor is required to conduct a job hazard analysis (JHA) for the site and take the necessary safety precautions. For work in non-operational areas, the vendor must ensure that a non-operational area work permit is obtained from the concerned site engineer. This permit must be validated daily until the work is completed

## **5.4 Personal Protective Equipment (PPE)**

The vendor must ensure that all personnel are equipped with the appropriate PPE, including but not limited to:

- Properly colored helmets
- Safety shoes
- Gumboots with toecaps
- Safety belts

The vendor is responsible for arranging the transportation of all materials within the company's premises.

## **5.5 Work on Live Systems**

For work on live systems, Tata Power's site engineer/supervisor will identify the live equipment on which the work needs to be carried out. After necessary outages are performed and the system is confirmed to be de-energized, the equipment will be handed over to the vendor. The identified equipment will be marked with red tape, and the vendor will be issued a work permit to begin work.

## **5.6 Saety Measures in Operational Areas**

When working in operational areas, the vendor must take extreme care to prevent accidents or safety hazards. The vendor should ensure that all personnel are fully aware of the safety risks associated with the tasks and implement appropriate safety measures throughout the work process.

## **6. SUPERVISION**

The vendor shall assign a full-time, qualified supervisor who is knowledgeable and capable of overseeing and controlling all aspects of the activities entrusted to the vendor. The supervisor will be responsible for coordinating with the Tata Power site engineer regarding all work-related activities.

Additionally, the vendor will employ skilled workers and ensure they receive timely refresher training and maintain valid certifications to perform their tasks efficiently and safely.

## **7. SAFETY:**

**7.1** The Vendor shall ensure the use of all required personal protective equipment (PPE) and safety apparel, including helmets, safety shoes, hand gloves, full-body harnesses, and ladders in proper condition. A fire extinguisher (type ABC 5kg) must be available on-site at all times.

**7.2** All tools and tackles must be properly insulated on their handles. Only tools approved by Tata Power shall be used; homemade or unauthorized tools are not permitted on-site.

**7.3** The Vendor shall ensure compliance with all statutory requirements, including ESIC, EPS, PF, and insurance coverage for all working personnel before the commencement of the job.

**7.4** The Vendor shall adhere to the safety terms and conditions specified in the Vendor Safety Code of Conduct and submit all required documents in accordance with the Code of Conduct.

**7.5** The Vendor shall take all necessary precautions to avoid causing damage to consumer property or public utilities (such as cables, gas lines, and water lines) when performing work at public places or any other sites.

**7.6** A qualified safety officer shall be deployed by the Vendor, as mandated in the Project Safety Plan.

**7.7** The Vendor shall provide safety orientation/induction training (TPSDI Training) to the entire workforce prior to deployment. The records of such training must be submitted monthly to Tata Power's safety officer.

**7.8** The Vendor shall conduct daily toolbox talks and participate in safety meetings as outlined in the Project Safety Plan.

**7.9** The Vendor shall ensure proper housekeeping at the worksite and ensure waste segregation at pre-identified locations.

**7.10** The Vendor shall assess the work scope thoroughly, understand the associated hazards and risks, and implement appropriate risk mitigation measures.

**7.11** The Vendor shall develop and implement a detailed safety plan for the scope of work, addressing aspects such as proper access, laydown areas, storage areas, waste disposal,

movement of manpower and equipment, and inspection schedules for tools, PPE, gas cylinders, etc.

**7.12** The Vendor shall deploy skilled and competent personnel for tasks including heavy equipment erection, fabrication of MS, welding, equipment operation, cable laying and termination, and electrical work.

**7.13** The Vendor shall obtain work permits from Tata Power before commencing any work.

**7.14** All workers performing tasks at heights must be specifically trained and medically certified to ensure safety.

**7.15** The Vendor shall ensure the use of proper scaffolding of approved quality by their workforce, and prohibit the use of temporary work platforms.

**7.16** The Vendor shall ensure that all of their workforce is provided with approved PPE, such as gum boots with steel toes, safety shoes, helmets, reflective jackets, leather gloves, etc. Failure to provide the necessary PPE will result in Tata Power providing the PPE and debiting the cost plus an additional 20% from the Vendor's bill.

**7.17** The Vendor shall comply with the Safety, Health, and Environmental requirements outlined in the Tata Power Safety Plan.

**7.18** The Vendor shall submit a detailed breakdown of the estimate for safety compliance as required by the Project Safety Plan.

**7.19** The Vendor shall promptly report any unsafe acts, conditions, or near-misses to Tata Power. Proactive reporting will be rewarded as per the Reward & Recognition Policy for vendors.

**7.20** Any safety violations will be addressed according to the consequence management policy.

**7.21** The Vendor shall submit a weekly safety report, including man-days worked, safety training records, and incident statistics, to Tata Power by the 5th of each month.

**7.22** The Vendor shall provide drinking water to their workforce throughout the workday, and submit a monthly water quality test report to Tata Power.

**7.23** The Vendor shall ensure the availability of a first aid box and fire extinguisher (type ABC 5kg) on-site.

**7.24** The Vendor shall conduct an emergency mock drill at the site once every fortnight and submit the mock drill report to Tata Power. The Vendor must also comply with any additional safety instructions provided by Tata Power from time to time.

**7.25** The Vendor shall ensure compliance with safety items such as rubber mats, fire extinguishers, respiratory protection charts, respiratory artificial equipment, display boards (Do's

& Don'ts), Energy Flow Diagrams (EFD), Single Line Diagrams (SLD), VMS, safety hand gloves, safety jackets, face shields, etc.

## **8. MEASUREMENT OF WORK:**

The Vendor and Tata Power shall jointly measure the actual quantities of work executed for each line item as per the Bill of Quantities (BOQ), using the standard mode of measurements. This measurement shall be completed within one week of the work's completion, and field measurements must be approved by Tata Power.

Orders related to this contract will be issued by the Corporate Contracts Department or the respective department. All future correspondence regarding this order should be directed to the relevant contact person mentioned above.

Invoices and bills must be submitted to the concerned Site Engineer or Project Manager for processing

## **9. WARRANTY/GUARANTEE PERIOD:**

1. Bidder shall stand guarantee towards design, materials, workmanship & quality of process / manufacturing of items under this contract for due and intended performance of the same, as an integrated product delivered under this contract. In the event any defect is found by the TATA POWER COMPANY up to a period of at least 12 months from the date of commissioning or 24 months from the date of last supplies made under the contract whichever is later, (the time scale of 12/24 months could be enhanced subject to mutual agreements) Bidder shall be liable to undertake to replace/rectify such defects at its own costs, within mutually agreed time frame, and to the entire satisfaction of the Purchaser, failing which the TATA POWER COMPANY will be at liberty to get it replaced/rectified at Bidder's risks and costs and recover all such expenses plus the Purchaser's own charges (@ 20% of expenses incurred), from the Bidder or from the " Security cum Performance Deposit" as the case may be.

2. Bidder shall further be responsible for 'free replacement' for another period of THREE years from the end of the guarantee period for any 'Latent Defects' if noticed and reported by the Purchaser.

## **10. PAYMENT TERMS:**

The payment terms will be as per the guidelines set by the Contracts Department, following negotiations with the Vendor.

## **11. BANK GUARANTEE:**

The Bank Guarantee (BG) requirements will be in accordance with the guidelines of the Contracts Department, after negotiations with the Vendor. Submission of the BG is mandatory

## **12. SPECIAL CONDITIONS OF CONTRACT FOR ELECTRICAL SERVICES:**

1. The Vendor shall be prepared to work 24/7 depending on the nature of the job, as instructed by the Site Engineer.
2. Payment will be made based on the exact quantities of work carried out, which will be verified by Tata Power Company (TPC) Engineer.
3. The rates quoted shall be exclusive of GST and other taxes. The Vendor must indicate the GST component separately in the bid and invoice for statutory compliance when submitting quotes and invoices.
4. The quoted rates shall cover all charges for materials (as applicable), services, supervision, labor, tools, transportation, and all taxes except GST and Service Tax, including but not limited to Octroi, Work Contract Tax, Excise, and any other applicable taxes. The rates quoted should be for the complete, finished work as specified.
5. The Vendor shall ensure that all employees are paid a minimum wage rate of 10% above the minimum wage specified by the Uttar Pradesh State Government, as updated from time to time.
6. No additional payment will be made for work performed during night time.
7. The Vendor must comply with the requirements of any other organizations whose premises are involved in the work. No extra payment will be made for such compliance. Any financial penalties imposed by such organizations for safety breaches will be deducted from the Vendor's bills.
8. The Vendor must fulfill all statutory requirements related to Provident Fund, ESIC/Workmen's Compensation (for both factory premises and areas outside factory premises, as applicable), payment of bonus, leave, etc., in line with the prevailing government norms.
9. The Vendor must have a minimum of 3 years' experience in working with utilities in metro cities, with experience in jobs such as installation and commissioning of RMUs/Transformers, laying of LT & HT cables, constructing civil foundations for switchgear, building Discom Meter Rooms, constructing sheds, providing services for cable laying, trenching, excavation at consumer premises, utilities, on public roads and highways, installation of MCCBs/Distribution Boxes, earthing, earth pit execution, etc.
10. The Vendor shall provide appropriate and adequate PPE to all employees. Additional instructions from the Site Engineer regarding the use of specific PPE must be followed.
11. The Vendor shall possess IMS certification covering ISO standards for Quality Management Systems (QMS), Environmental Management Systems (EMS), and OHSAS for Occupational Health and Safety.
12. The Vendor must adhere to all safety guidelines and advisories issued by Tata Power Safety from time to time.
13. Tata Power has developed work instructions and procedures for carrying out activities safely. The Vendor's supervisor must review these instructions and follow them during site activities. Any required deviations due to site conditions must be communicated to Tata Power's Engineer before commencing the activity.
14. The Vendor must provide performance reports for jobs executed with other utilities.
15. The Vendor must submit test reports and guarantee cards for items brought to the site. If units like Board Wiring DB are fabricated in a workshop, type test reports must be submitted.

16. After erection, the Vendor shall assist the Site Engineer regarding manpower for quality inspections of the installation, third-party inspections, Electrical Inspector visits, and charging of the installation.
17. All materials and services shall comply with the relevant specifications and BIS codes. The decision of the Site Engineer shall be final and binding on the Vendor.
18. Upon receipt of materials at the site or from Tata Power's store, the Vendor's supervisor shall inspect the materials for damages or missing items and communicate any discrepancies to Tata Power's Engineer within 24 hours. Failure to do so will mean that the materials provided by TPC are considered "fit for use at site."
19. The Vendor shall ensure the provision of drinking water for the workforce at the site.
20. The Vendor shall issue photo ID cards to all employees working on the site.
21. The Vendor shall provide an undertaking that they will comply with all statutory norms required for the work to be executed with Tata Power.
22. The Vendor shall adhere to the time schedule provided by Tata Power.
23. The Vendor must arrange a portable DG set for electrical installation work that requires electricity.
24. The Vendor must arrange sufficient portable lighting for night time work.
25. The Vendor shall arrange the required water for construction, ensuring that the TDS (Total Dissolved Solids) does not exceed 2000 PPM.

### **13. MANPOWER DEPLOYMENT:**

Manpower deployment will be as per the project schedule. However, a minimum of 1 Project Manager, 1 Site Supervisor, 2 Site Engineers, and 1 Safety/Quality Officer must be allocated to the project site.

### **14. PROJECT COMPLETION SCHEDULE:**

Will be shared within 5 days of receipt of LOI or after site handover by Client.

### **15. VENDOR'S PERFORMANCE EVALUATION & PENALTIES:**

<b>SLA for Yamuna Expressway EV Project Execution Management</b>					
<b>For the Month</b>					
<b>Service Provider - M/s.</b>					
<b>Sr No</b>	<b>Description</b>	<b>Agreed Matrices</b>	<b>SQDCME</b>	<b>Marks</b>	<b>Score</b>
1	Submission of Project (incl Planning and execution) timeline	One week after issuance of PO	Delivery	4	
2	Deployment of sufficient Manpower and calibrated instrument /equipment required for job at site	As per agreed timeline	Delivery	4	

3	Timely Submission of Technical specification for approval after internal review for Utility / General usage Power Socket, Lighting, Earth Pit, LA and GI Strip ,M S Section , End Terminations, Joints, SPNDB/VTPNDB and auxiliary cable & etc.	As per agreed timeline	Delivery	4	
4	Review meeting a) Weekly review b) Monthly review	As per agreed day / date and time	Delivery	4	
5	Timely submission of project status report a) Daily, b) weekly and c) Monthly	As per agreed day / date and time	Delivery	5	
6	Weekly Project tracking plan Vs actual and submission of catch-up plan if any activities are off track	Within 2 days of meeting	Delivery	3	
7	On the basis of approved technical submittals, Material planning and submission of delivery schedule and further tracking of delivery wrt plan	As per agreed timeline	Delivery	3	
8	Ensure Zero accidents ( incl LTI, MTC, FAC ) by Safety Adherence for a) work Permit with JSA issued, b) LOTO issued, c) Electrical safety as per Vendor Safety Mgt. etc.	100% adherence	Safety	10	
9	Timely completion of work / activities and project as per agreed plan / timeline	100 % as per plan	Delivery	11	
10	Conduct weekly Quality Audit and submission of report	On schedule day	Quality	5	
11	Timely submission of Snag points ( from quality and safety audit ) reports and its closure	100% as per plan	Delivery	6	
12	Manning for Project as per agreement	100% adherence	Moral	11	
13	Statutory Compliance as per requirement	100% adherence	Delivery	6	
14	Timely JMR submission ones in two weeks	On schedule day	Delivery	5	
15	Timely submission of Running bills	Within 3 days of JMR certification	Delivery	5	
16	Prior approval of deviation if any	100% adherence	Delivery	3	
17	Preparation and Submission of as built drawing	100% adherence		5	
18	Monthly Compilation and Submission of Handing over documents	100% adherence	Delivery	6	
		Total		100	

<b>Payment would be made to the vendor as per the following criteria:</b>	
Total marks out of 100	Financial Penalty as % of bill amount
90 to 100 marks	NIL
85 to 89 marks	0.50%
80 to 84 marks	1%
70 to 79 marks	1.50%
60 to 69 marks	2%
Less Than 60	5 % & appropriate action will be taken as decided by Management

### **Bill of Material (BOM) Annexure – I**

#### **Electrical Work BOQ:**

<b>SR</b>	<b>Material &amp; service description</b>	<b>ACIVITY</b>	<b>MAKE</b>	<b>UO M</b>	<b>QUAN TITY</b>
1	<p><b>Supply and Transportation of Kiosk LT Panel Outdoor Double Door Type (IP55) with Aluminum Busbar Including MS Angle Stand, I/C and O/G - 800 Amp 50KA 4P MCCB with LSIG &amp; RYB Indicator Lamp, VAF Meter( 415 VAC, 500 Amp), 3PH, 4 wire, With RS 485 Port. Flush Mounting Acc Class -1 (Parameters-V,A ,KWh, KVA, KVAR, PF etc.) 500/5 A,Class-1(With Mod bus RTU /RJ-45),fault indication lamp</b></p> <p>Make of MCCB/MCB : L&amp;T, ABB, Siemens, Schneider,</p> <p><i>(Pl Refer Technical Specification Attached Separately )</i></p>	LT Panel	Dharia/Positronics/ Gaurav Enercon/ Accurate Industrial Controls Pvt. Ltd./ Arun Enterprise/ Munilec Electrical Pvt. Ltd./ Shilpam Power Controls/ Sunlight Power Systems	EA	4
2	<b>Supply and Transportation of LT Distribution Panel Outdoor Double</b>	DB	Dharia/Positronics/ Gaurav Enercon/	EA	4

	<p><b>Door Type (IP55) with Aluminium Busbar, with 3 Nos outgoing, VAF Meter ( 415 VAC, 800 Amp), 3PH, 4 wire, with RS 485 Port. Flush Mounting Acc Class -1 (Parameters-V,A ,KWh, KVA, KVAr, PF etc.) 800/5 A,Class-1 With Mod bus RTU /RJ-45 , RYB Indication and fault indicator</b></p> <p>Bus Bar Rating 500 A</p> <p>Incomer-500A MCCB 36 kA TM type (1 No.)</p> <p>Outgoing- 400 Amp MCCB 36 kA TM type (1No.), 125 Amp MCCB 25KA TM Type (2 No.), 25A MCB 4P 10KA (1 No.)</p> <p>Make of MCCB/MCB : L&amp;T, ABB, Siemens, Schneider,</p> <p><b><i>(Pl Refer Technical Specification Attached Separately )</i></b></p>		<p>Accurate Industrial Controls Pvt. Ltd./ Arun Enterprise/ Munilec Electrical Pvt. Ltd./ Shilpam Power Controls/ Sunlight Power Systems</p>		
3.	<p><b>Installation, Testing &amp; Commissioning of Kiosk LT Panel Outdoor Double Door Type (IP55) with Aluminum Busbar Including MS Angle Stand, I/C and O/G - 800 Amp 50KA 4P MCCB with LSIG &amp; RYB Indicator Lamp, VAF Meter( 415 VAC, 500 Amp), 3PH, 4 wire, With RS 485 Port. Flush Mounting Acc Class -1 (Parameters-V,A ,KWh, KVA, KVAr, PF etc.) 500/5 A,Class-1(With Mod bus RTU /RJ-45),fault indication lamp</b></p> <p>The rate includes fixing with fasteners, securing board to frame/foundation, fixing and connecting of all accessories and instruments, Nomenclature of incoming and outgoing circuits, etc. The erection rate include unloading of consignments, shifting of the same whenever required at designated place.</p>	For AC /DC charger	<p>Reputed Make (L&amp;T, Schneider, Siemens, Havells, ABB)</p>	EA	4

	The testing and commissioning will be carried out in the presence of TPC engineer and the test reports will be jointly signed before charging of the Switch board.					
4	<p><b>Installation, Testing &amp; Commissioning of LT Distribution Panel Outdoor Double Door Type (IP55) with Aluminium Busbar, with 3 Nos outgoing, VAF Meter ( 415 VAC, 800 Amp), 3PH, 4 wire, with RS 485 Port. Flush Mounting Acc Class -1 (Parameters-V,A ,KWh, KVA, KVAr, PF etc.) 800/5 A,Class-1 With Mod bus RTU /RJ-45 , RYB Indication and fault indicator</b></p> <p>The rate includes fixing with fasteners, securing board to frame/foundation, fixing and connecting of all accessories and instruments, Nomenclature of incoming and outgoing circuits, etc. The erection rate include unloading of consignments, shifting of the same whenever required at designated place. The testing and commissioning will be carried out in the presence of TPC engineer and the test reports will be jointly signed before charging of the Switch board.</p>			EA	4	
<b>( LT Cable )</b>						
5a.	Supply of 1.1KV 4C*300 SQ MM AL conductor, XLPE insulated armoured cable	From Transformer to LT Panel and DB Box	Polycab/KEI/Havells	Mtr	724	

5.b	Supply of 1.1KV 4C*185 SQ MM CU. conductor, XLPE insulated armoured cable	From LT DB Panel to 240 kW charger.	Polycab/KEI/Havells	Mtr	128
5.c	Supply of 1.1KV 4C*35 SQ MM AL conductor, XLPE insulated armoured cable	From LT DB Panel to 50/60 kW charger.		Mtr	115
5.d	Supply of 1.1KV 4C*16 SQ MM CU conductor, XLPE insulated armoured cable	AC Charger	KEI/Finolex /POLYCAB/KEC/Dynamic Cable/Apar/Gemscab/Zenium/Sterlite /Torrent Cables	Mtr	32
5.e	Supply of 1Core x 95 sqmm Copper Un Armoured Cable (use for SMAR Unit to 4 Nos or 6 nos X GUN MODULE ) (1+1) cable (Positive and Negative)	(use for SMAR UNIT to 4 Nos or 6 nos X GUN MODULE )	KEI/Finolex /POLYCAB/KEC/Dynamic Cable/Apar/Gemscab/Zenium/Sterlite /Torrent Cables	Mtr	600

5.f	Supply and Laying with termination of 1C*16 SQ MM Multi Strand Cu Cable	For Earthing of DC Charger	KEI/Finolex /POLYCAB/KEC/Dynamic Cable	Mtr	120
<b>Earth Pit and GI Strip</b>					
6	Supply & Erection/ installation/ Nomenclature of Earth Pit with Environment Friendly Maintenance Free Earthing System Consisting as per drawing	For Earthing of Equipment as per approved drawings	JEF/ABB//Newtrali zer Earthing/Ideal Engineers	EA	12
7	Supply & Laying and fabrication of GI strip 50*6 mm GI strip. The scope includes sup. of 50X6 GI strip, necessary hardware such as spacer, saddle, nut & bolts etc. The jointing of earthing strips to be welded & bolted as per requirement with overlapping of minimum 100 mm. The scope includes installation of earth strip in ground, hard soil, concrete, and wall. For laying of GI strip under floor cutting of minimum of 150mm with proper final finishing after laying of GI strip. In case of installation of GI strip on wall spacer, saddle to be placed at a distance of 500mm.	For Earthing of Equipment's	Reputed Make	Kg	120
<b>End Terminations, Joints &amp; etc.</b>					
8.a	Supply & End termination of cable size 1.1 KV 4C*300 SQ MM XLPE (E) insulated AL Armoured cable	Supply & Erection of Termination Kit	Braco/Dowels	EA	32
8.b	Supply & End termination of cable size 1.1 KV 4C*185 SQ MM XLPE (E) insulated CU Armoured Cable	Supply & Erection of	Braco/Dowels	EA	32

		Termination Kit			
8.c	Supply & End termination of cable size 1.1 KV 1C*95 SQ MM XLPE (E) insulated CU Un-Armoured Cable, (use for SMAR Unit for 4nos/6 nos X GUN MODULE ) (1+1) cable (Positive and Negative)	Supply & Erection of Termination Kit	Braco/Dowels	EA	96
8.d	Supply & End termination of cable size 1.1 KV 4C*35 SQ MM XLPE (E) insulated CU Armoured Cable.	Supply & Erection of Termination Kit	Braco/Dowels	EA	8
8.e	Supply & End termination of cable size 1.1 KV, 4C*16 SQ MM XLPE insulated CU armoured cable	Supply & Erection of Termination Kit	Braco/Dowels	EA	8
<b>Miscellaneous</b>					
9.a	Supply & Installation of Fire Extinguishers 5 KG with stand As per Applicable IE rule (CO2): Installation /Mounting with Bracket and required Hardware is in S&I Scope.			EA	8
9.b	Providing, fabrication and erection of MS Bollards made out of Structural steel, like hollow pipes, Square or rectangular hollow section etc embedding and filling with concrete PCC (1:2:4) - (1 cement : 2 coarse sand :4 20mm aggregate), including cutting, hoisting, welding, drilling holes and applying a shop coat of zinc chromate primer and two coats of Enamel paint at all			Kg	100

	levels and locations etc., complete all as per drawing and specifications.(concrete item will be paid seperately under respective item of BOQ)				
9.c	Rubber Wheel stoppers.			EA	24
9.d	Supply and installation of Electrical insulated Rubber mat (1x2 meter) Thickness- 2.5 mm near electrical Equipment's for LT Installation			Nos	8
<b>Installation</b>					
10.a	Unloading and Laying of 1.1KV 4C*300 Sq. mm FRLS and XLPE LT Al. Armoured cables through trench of size not less than 1000mm depth with, 1. 100 mm Sand cushioning and Protection tiles to be provided in between 2 layers of cable. 2. Required Test Reports & Test certificates to be submit by vendor with detailed cable route drawing. Cable laying Drawing and Guideline will be provided by TPC.			Mtr	724
10.b	Unloading and Laying of 1.1KV, 4C*185 SQ MM CU conductor, XLPE insulated Armoured cables through trench of size not less than 800mm depth with, 1. 100 mm Sand cushioning below and above the cable and Protection tiles every layer. 2. Required Test Reports & Test certificates to be submit by vendor with detailed cable route drawing.			Mtr	128

	<b>Cable laying Drawing and Guideline will be provided by TPC.</b>				
10.c	<p>Unloading and Laying of 1.1KV, 4C*35 SQ MM CU conductor, XLPE insulated Armoured cables through trench of size not less than 800mm depth with,</p> <ol style="list-style-type: none"> <li>1. 100 mm Sand cushioning below and above the cable and Protection tiles every layer.</li> <li>2. Required Test Reports &amp; Test certificates to be submit by vendor with detailed cable route drawing.</li> </ol> <p><b>Cable laying Drawing and Guideline will be provided by TPC.</b></p>			Mtr	115
10.d	<p>Unloading and Laying of 1.1 KV, 4C*16 SQ MM CU conductor Armored cables.</p> <p>Required Test Reports &amp; Test certificates to be submit by vendor with detailed cable route drawing.</p> <p><b>Cable laying Drawing and Guideline will be provided by TPC.</b></p>			Mtr	32
10.e	<p>Unloading and Laying of 1.1KV, 1C*95 SQ MM CU conductor, XLPE insulated Un-Armoured cables through trench of size not less than 800mm depth with,</p> <ol style="list-style-type: none"> <li>1. 100 mm Sand cushioning below and above the cable and Protection tiles every layer.</li> <li>2. Required Test Reports &amp; Test certificates to be submit by vendor with detailed cable route drawing.</li> </ol> <p><b>Cable laying Drawing and Guideline will be provided by TPC.</b></p>			Mtr	600

10.f	Unloading & Installation of 240 KW CCS2 Fast Charger with necessary cable termination. The rate includes fixing, Drilling, cutting, welding with fasteners/Bolt, fixing and connecting of all accessories and instruments, Nomenclature of incoming and outgoing circuits, etc.			EA	4
10.g	Unloading & Installation of 50/60 kW CCS-II Fast Charger with necessary cable termination. The rate includes fixing, Drilling, cutting, welding with fasteners/Bolt, fixing and connecting of all accessories and instruments, Nomenclature of incoming and outgoing circuits, etc.			EA	4
10.h	Unloading & Installation of 10 kW CCS-II Fast Charger with necessary cable termination. The rate includes fixing, Drilling, cutting, welding with fasteners/Bolt, fixing and connecting of all accessories and instruments, Nomenclature of incoming and outgoing circuits, etc.			EA	4

## **Bill of Material (BOM) Annexure – 2**

### **Civil Work BOQ:**

Sr no	Main Description	Sub Description	Unit	Qty
1	Earth work in excavation in all types of soil including soft disintegrated rock in foundation trenches or drains, Except Hard Rock by mechanical means (Hydraulic Excavator / manual means not exceeding 1.5m in width or 10 sqm on plan) including dressing of sides and ramming of bottom, getting out, stacking the excavated soil, filling the same in trenches, plinths, sides of foundations, basement and			

	<p>under floors, in layers not exceeding 200 mm in thickness, consolidating each deposited layer by ramming and watering ( the excavated soil shall be tested for meeting the COHESIVE NON SHRINKABLE AND NON SWELLING (CNS) PROPERTIES and shall be got approved from consultant before backfilling in plinth areas , and in foundations ) including necessary shoring, Strutting, dewatering of excess water if any in the excavated Trenches/foundations by pumps etc., including disposal of surplus/ Unserviceable excavated soil as directed INSIDE the site at the own arrangement of the contractor ,including loading, unloading and disposal of soil, the disposed soil to be neatly leveled and dressed etc., complete at all levels and locations and as directed.</p> <p>1. a) Lift up to 1.5 m</p> <p>2. b) Lift from 1.5 m to 3.0 m</p>		CUM	50
			CUM	20
2	<p>PLAIN &amp; REINFORCED CEMENT CONCRETE WORKS</p> <p>a)Providing and laying plain cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size) including necessary shuttering&amp; centering in leveling courses under foundations, pipelines, pits, under floors etc., complete at all levels and locations etc complete all as directed .</p>		CUM	4
	<p>b)Providing and laying plain cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) in ramps, hard standings and like</p>		CUM	8
3	<p>Providing and construction of brick work using M-35 grade bricks( with minimum compressive strength of 35kg/sq cm ) in cement mortar 1:5 (1 cement : 5 coarse sand) in substructure and below ground level works including scaffolding, staging ,curing etc., complete.</p>		CUM	10
4	<p>18 mm thick cement plastering on external surfaces of brick or concrete surfaces in two layers consisting of 6 mm thick cement mortar 1:4 (1 cement:4 fine sand) top coat mixed with integral water proofing compound over a base coat 12 mm thick cement mortar 1:6 (1 cement :6 coarse sand), Top coat of</p>		SQM	30

	plastering finished even and uniform with SPONGE finish including necessary scaffolding and curing etc., complete at all heights and level . .			
5	Providing and applying external weather shield paint of BERGER make or approved equivalent including surface preparation with base coat of primer and two coats of the painting etc complete at all heights and locations as per specifications .		SQM	30
6	Supply & Laying of 160 mm (dia) NB HDPE pipe 10 mm (thickness) PE-80,PN-6 and associated materials as per IS:4984-1995,instruction of the site Engineer		Meter	100
7	Supply & Laying of of 110 mm (dia) NB HDPE pipe 10 mm (thickness) PE-80,PN-6 and associated materials as per IS:4984-1995,instruction of the site Engineer, with Soil Excavation and backfilling of earth, compaction, levelling i.e re-instatement of the same.		Meter	100
8	GI PERFORATED TYPE CABLE TRAY with Cover(100x50x1.6) MM		Meter	50
9	GI PERFORATED TYPE CABLE TRAY with Cover(150x40x1.6) MM		Meter	50
10	Charger Dismantled, Packaging and transportation etc. complete for 7.4 /30/60 /240 KW		No	15
11	SUPPLY & INST. OF M.S.SECTIONS SUCH AS ANGLES / CHANNELS / FLATS / TUBES, ETC FOR MOUNTING FRAMES, SUPPORTS, BRACKETS, ETC. AS REQUIRED AT SITE. THE ERECTION RATE TO INCLUDE CUTTING / WELDING / DRILLING / WELDING / FINISHING / PAINTING WITH TWO COATS OF ANTI-CORROSIVE RED OXIDE PRIMER AND OIL PAINT THE ERECTION RATE TO INCLUDE FABRICATION ANDGROUTINGIN WALL/ FLOOR OR WELDING ON COLUMN, NECESSARY HARDWARES SUCH AS NUTS, BOLTS, WASHERS, ETC. AS REQUIRED.HOLDFASTS  SHALL BE PROVIDED WHILE GROUTING THE FRAME.		KG	150



**The Tata Power Company Ltd**



*Annexure to Reply to Prebid Queries*

*Tender Reference:*  
**4100038996/CC25ADO0019**

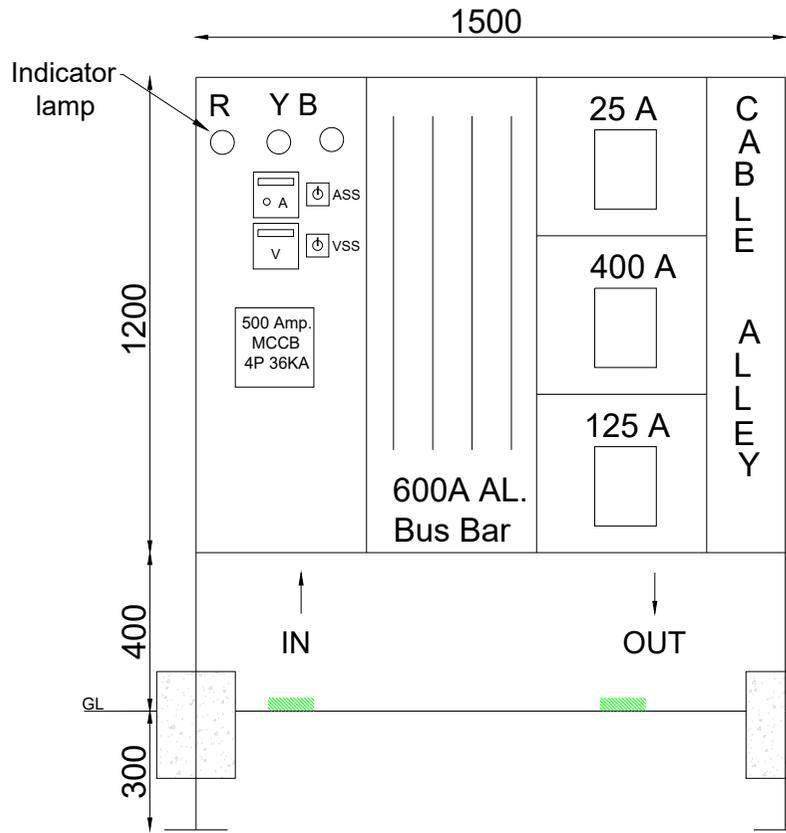
*Document Date: 2<sup>nd</sup> December 2024*

**PANEL DRAWING**

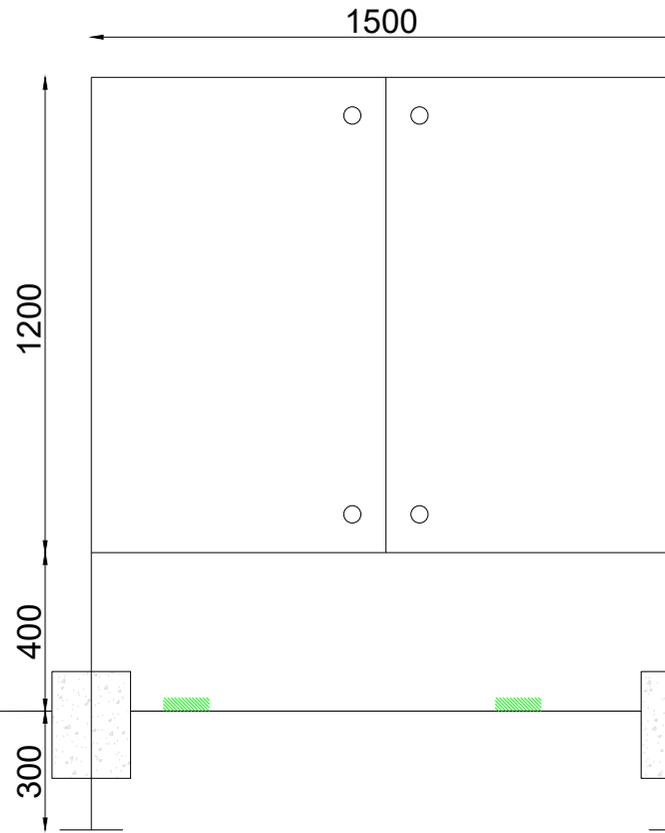
**500A Distribution Panel-Model**

CONFIDENTIAL

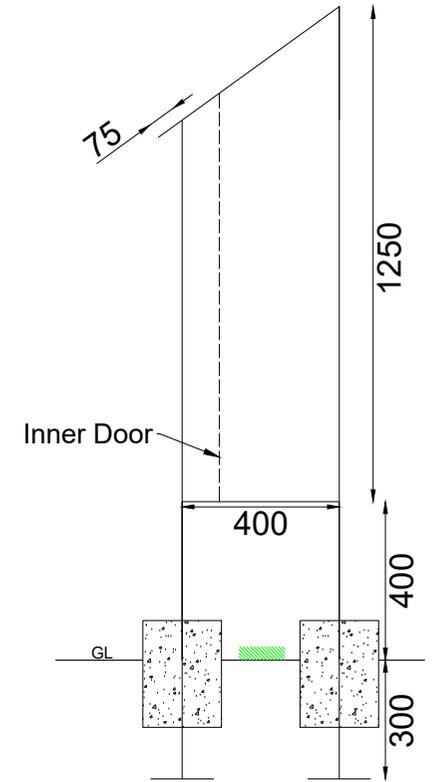
# 500A Distribution Panel



Inner View



Front View



Side View

NOTE - ALL DIMENSION ARE IN MILLIMETER

TITLE		500A Distribution Panel				
CLIENT		YUMUNA EXPRESSWAY PROJECT				
ADDRESS		YUMUNA EXPRESSWAY PROJECT				
EPC CONTRACTOR		TATA POWER EV CHARGER SOLUTION LIMITED				
DRN. BY-	SIGN.	DATE	REVISION	DATE	DRG.NO. SLD/001	SIGNATURE
CHD. BY-						
APP. BY-						

**The Tata Power Company Ltd**



*Annexure to Reply to Prebid Queries*

*Tender Reference:*  
**4100038996/CC25ADO0019**

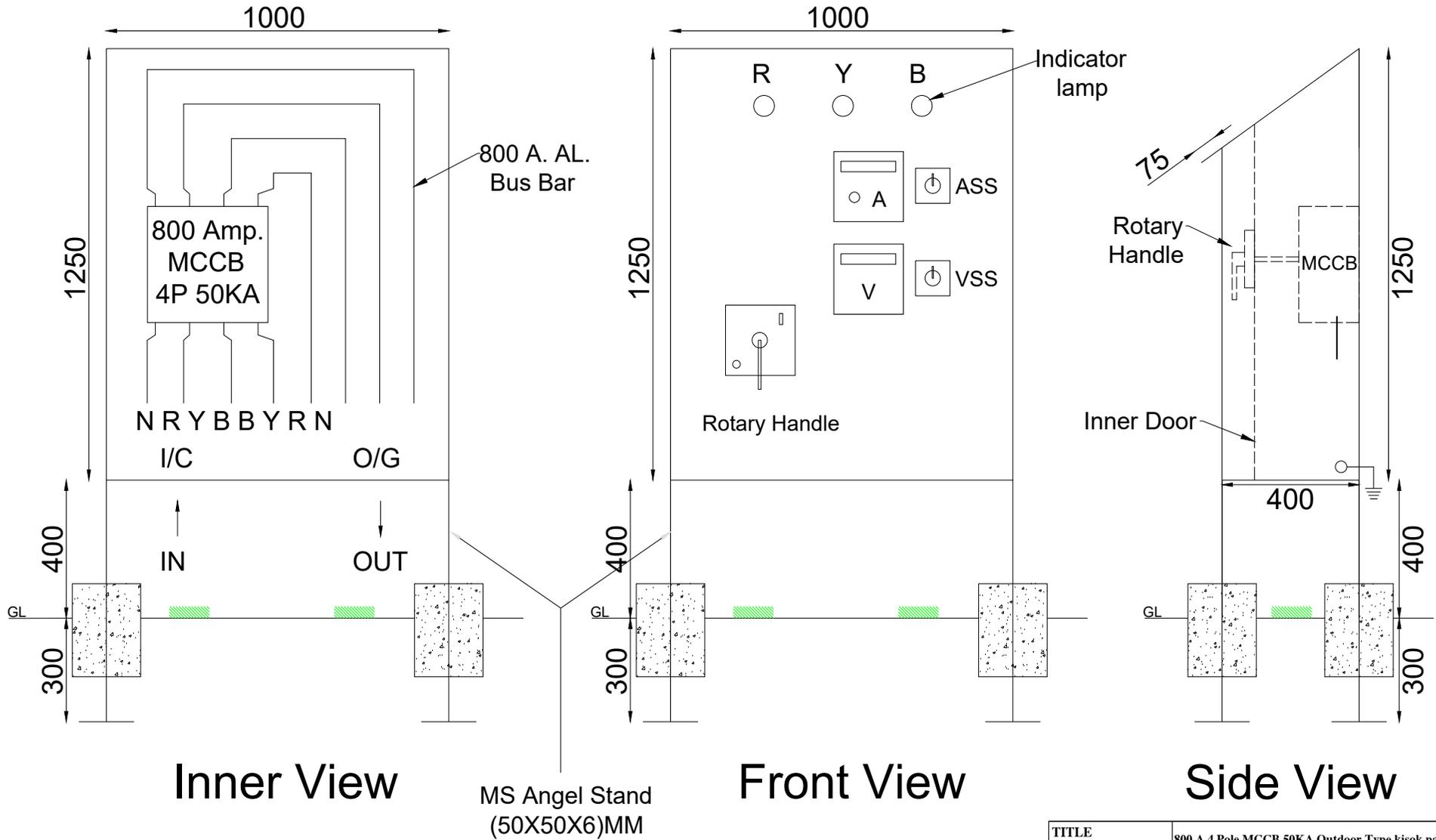
*Document Date: 2<sup>nd</sup> December 2024*

**PANEL DRAWING**

**800 A 4 Pole MCCB 50KA Outdoor Type kiosk panel-Model**

CONFIDENTIAL

# 800 A 4 Pole MCCB 50KA Outdoor Type kisok panel



TITLE		800 A 4 Pole MCCB 50KA Outdoor Type kisok panel				
CLIENT						
ADDRESS		YUMUNA EXPRESSWAY PROJECT				
EPC CONTRACTOR		TATA POWER EV CHARGER SOLUTION LIMITED				
	SIGN.	DATE	REVISION	DATE	DRG.NO.	SIGNATURE
DRN. BY-					SLD/001	
CHD. BY-						
APP. BY-						

**The Tata Power Company Ltd**



*Annexure to Reply to Prebid Queries*

*Tender Reference:*  
**4100038996/CC25ADO0019**

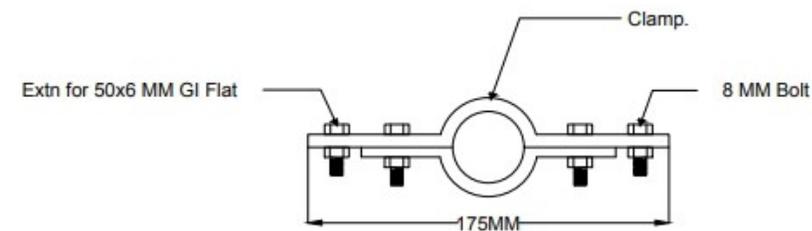
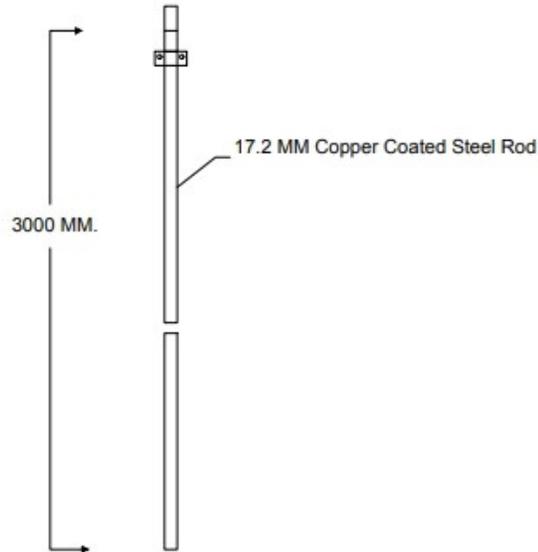
*Document Date: 2<sup>nd</sup> December 2024*

## **CHEMICAL EARTHING DRAWING**

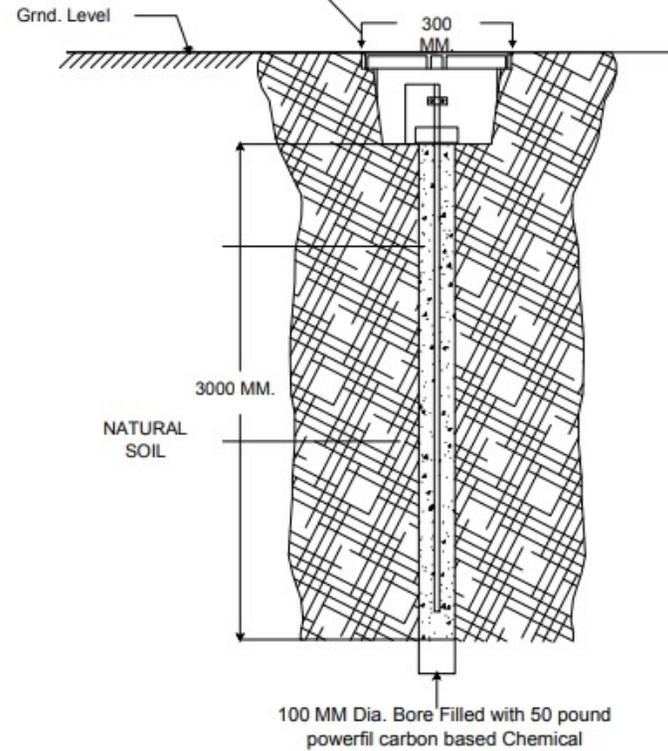
CONFIDENTIAL

## CHEMICAL EARTH PIT FOR EV CHARGING STATION

R.	Length	Diameter
1.	3000 MM.	17.2 MM.



LIGHT WEIGHT INSPECTION PIT WITH POLYMER LID (PT205)



**NOTES:-**

1. PLEASE ALLOW THE EARTH PIT TO SETTLE FOR 7 DAYS BEFORE USE.
2. DO NOT USE WOOD, CEMENT OR BRICKS AS BASIC FILLING.
3. MIN. MIDPOINT DISTANCE BETWEEN EARTH PITS SHOULD BE MAINTAINED AS 3 METERS.
4. RESISTANCE MEASUREMENT OF EARTH PIT SHOULD BE MEASURED AND SUBMITTED TO THE CLIENT.
5. EARTHING SHOULD BE IN ACCORDANCE WITH ISIRI STANDARDS.
6. Hand operated tools should be used to make the bore.
7. Earthpit value should be painted on the cover with yellow background and black text.

Procedure:

1. 50 pound compound bag to be split into two half.
2. 1s half 25 pound chemical to be soaked in water to form highly viscosity paste and same to be poured into the bore surrounding the electrode.
3. Same process to be followed for the other half 25 pound of chemical and to be poured in the same process.
4. 17.2MM MS Copper coated rod 3M in length with 175MM length and 17.2MM dia. fixing clamp 50 pound carbon based chemical compound polycarbonate earth pit chamber with proper lid arrangement.
5. Earthpit cover to have details as,
6. Earth pit No: 01No.
7. Value: -- Ohms
8. Tested on: --
9. Next Due on: --

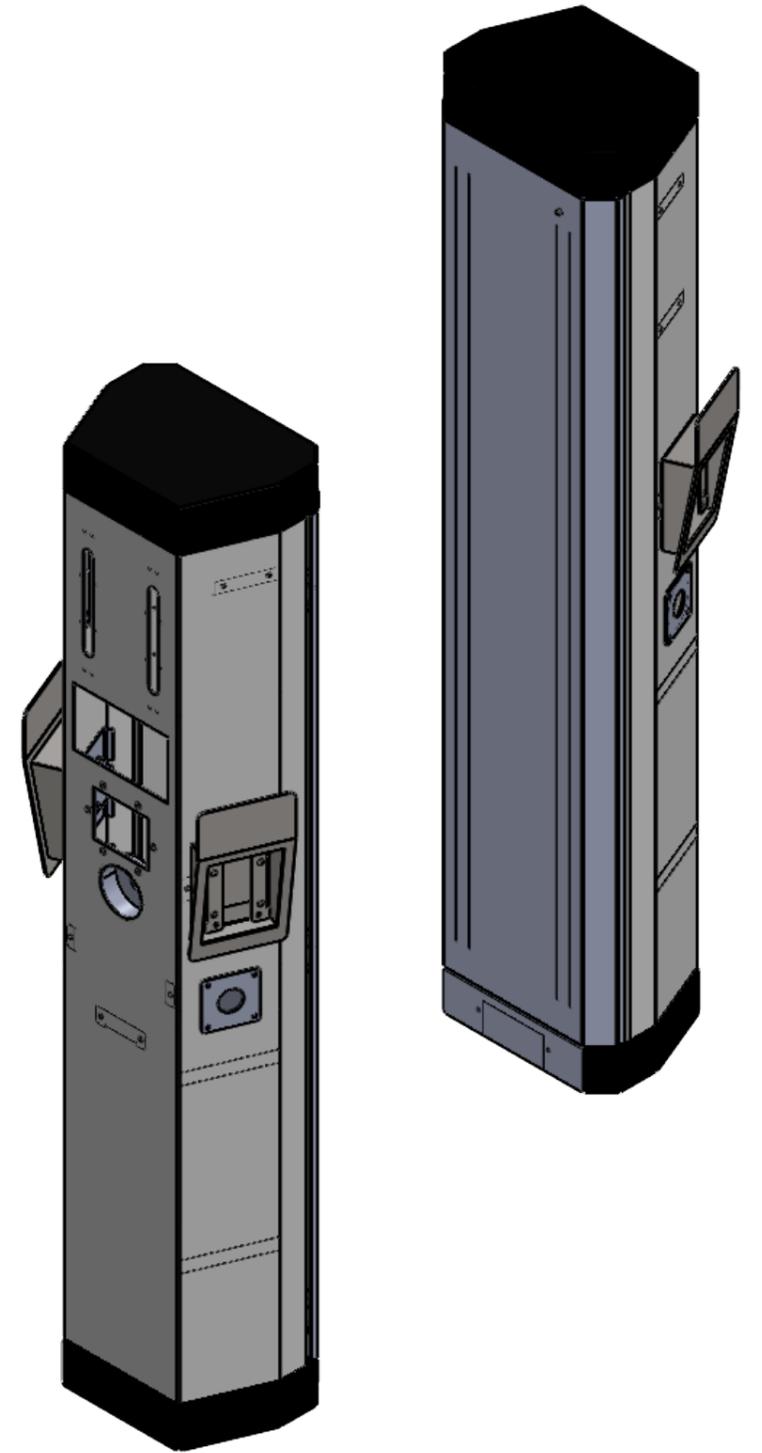
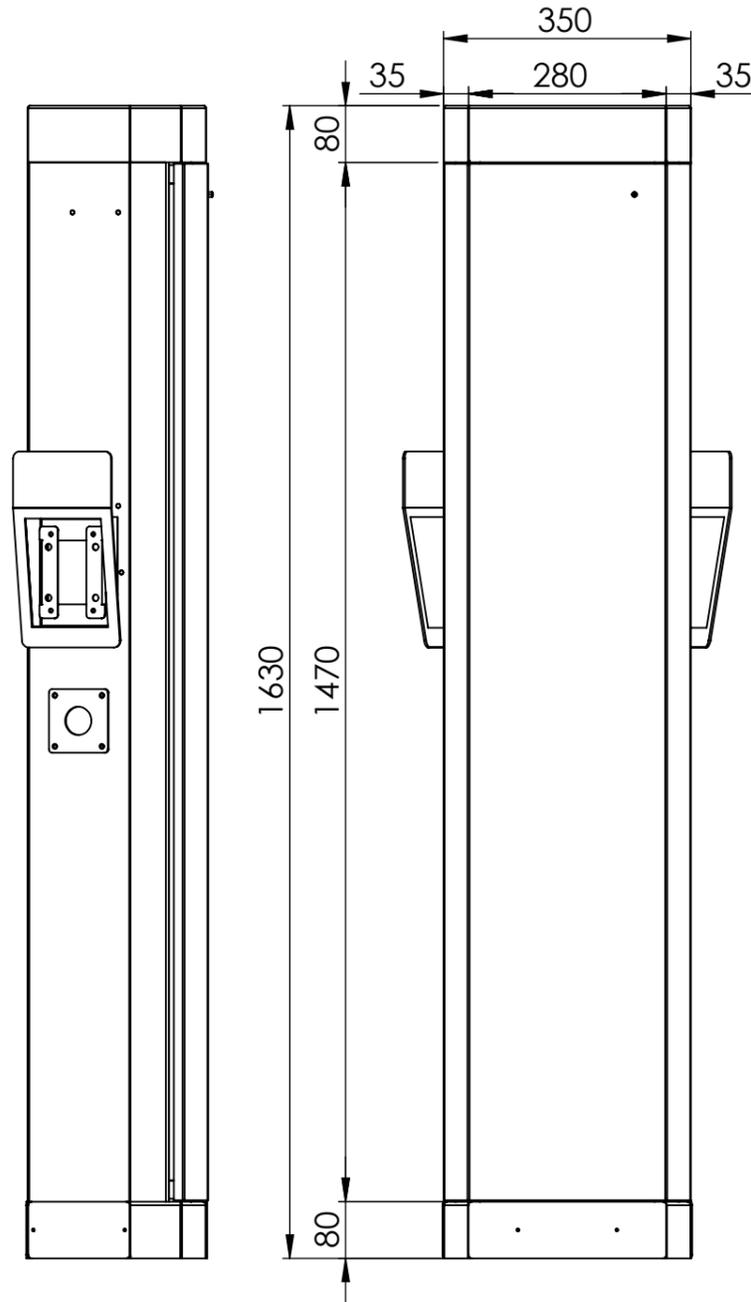
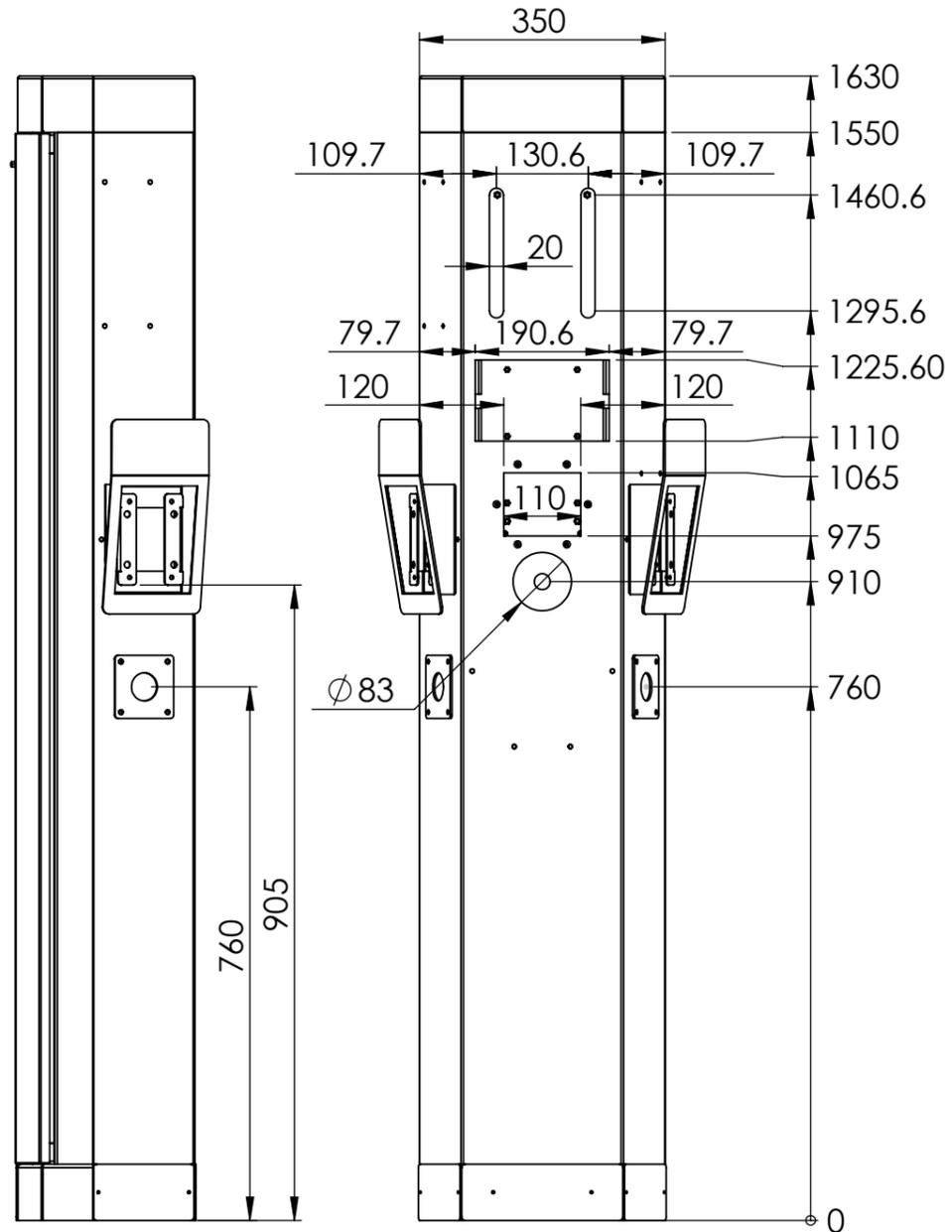
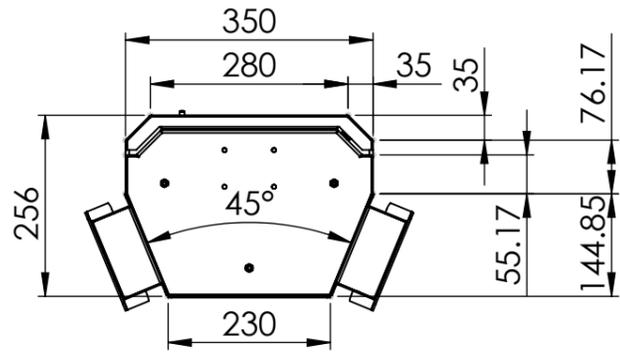
PROJECT:	EV CHARGING DEPOT AT DELHI.
CLIENT:	TATA MOTOR
TITLE:	LA ARRANGEMENT
THE TATA POWER	

<b>The Tata Power Company Ltd</b>		<i>Annexure to Reply to Prebid Queries</i>
<i>Tender Reference:</i> <b>4100038996/CC25ADO0019</b>		<i>Document Date: 2<sup>nd</sup> December 2024</i>

**PANEL DRAWING**  
**CHARGER DISPENSER DRAWING**

CONFIDENTIAL

THIS DRAWING AND SPECIFICATIONS ARE THE PROPERTY OF COMPANY AND SHALL NOT BE REPRODUCED OR COPIED OR USED AS THE BASE FOR THE MANUFACTURE OR SALE OF APPARATUS OF DEVICES WITHOUT PRIOR PERMISSION



NEXT ASSEMBLY DRAWING		DO NOT SCALE THE DRAWING UNLESS OTHERWISE STATED. DIMENSION ARE IN mm. REMOVE SHARP EDGES & BURRS.		DESCRIPTION		SCALE: 1:10
DEVIATION FOR NON TOLERANCED DIMENSION [ISI : 2102 MEDIUM]						WEIGHT IN gm
DIAMETERS & LENGTH	LENGTH IN MM OF SHORTER SIDE OF ANGLE UPTO & INCL.	DRN	Dhruvang	07-11-2024		PROJECT
UPTO & INCL. 6 ± 0.1	6 ± 1°00'	CHD	Rutvik	07-11-2024		DRAWING NUMBER
30 120 ± 0.3	6-30 ± 0°30'	APD				MEENC000FB02
120 315 ± 0.5	30-120 ± 0°20'	A3	SIGN	DATE		SHEET 1
315 1000 ± 0.8	120-400 ± 0°10'					REV 0
1000 2000 ± 1.2						
2000 4000 ± 2.0						
4000 & ABOVE ± 3.0						
MACHINING FINISH IN MICRONS						
▽8-25   ▽▽1.6-8   ▽▽▽0.025-1.6   ▽▽▽▽<0.025						

49674.26MB

**The Tata Power Company Ltd**



*Annexure to Reply to Prebid Queries*

*Tender Reference:*  
**4100038996/CC25ADO0019**

*Document Date: 2<sup>nd</sup> December 2024*

## **TECHNICAL SPECIFICATION**

### **KIOSK LT PANEL AND LT DISTRIBUTION PANEL**

**(800A & 500A)**

The Tata Power Company Ltd		TECHNICAL SPECIFICATION FOR
		Doc Title. : Kiosk LT Panel and DB Panel (800A & 500A)
Date of Issue: 25/11/2024		Doc No. :TPEVCSL/EV-OPS/SPEC-0011

# TECHNICAL SPECIFICATION

## KIOSK LT PANEL AND LT DICTRIBUTION PANEL (800A & 500A)

The Tata Power Company Ltd.  
Dharavi Receiving Station, Near Shalimar Industrial Estate, Matunga,  
Mumbai-400019, Maharashtra

Rev No.	Prepared By	Reviewed By	Approved By	Issued By
R00	Jhantu Biswas, Tomar Vikram Singh	Nilesh Shivankar/Abhijit Bhagat	Ramkrishna Singh	Nilesh Shivankar/Abhijit Bhagat
Date	28.11.2024	28.11.2024	28.11.2024	28.11.2024

Document Title: **GUARANTEED TECHNICAL PARTICULARS OF**

**Technical specifications for Kiosk Outdoor Type LT Panel (800A)  
&  
Technical specifications for LT Distribution Panel (500A)**

*The Tata Power Company Ltd.  
Engineering Services (TPEVCSL),*

Dharavi Receiving Station, Near Shalimar Industrial Estate, Matunga,  
Mumbai-400019, Maharashtra

Rev No.	Prepared By	Reviewed By	Approved By	Issued By
R00	Jhantu Biswas, Tomar Vikram Singh	Nilesh Shivankar/Abhijit Bhagat	Ramkrishna Singh	Nilesh Shivankar/Abhijit Bhagat
Date	28.11.2024	28.11.2024	28.11.2024	28.11.2024

## CONTENTS

- 1.0 SCOPE
- 2.0 APPLICABLE STANDARDS
- 3.0 CLIMATIC CONDITIONS OF THE INSTALLATION
- 4.0 GENERAL TECHNICAL REQUIREMENTS
- 5.0 CONSTRUCTIONS FEATURES
- 6.0 NAME PLATE AND MARKING
- 7.0 TESTS
- 8.0 TYPE TEST CERTIFICATES
- 9.0 PRE-DESPATCH INSPECTION
- 10.0 INSPECTION AFTER RECEIPT AT STORE
- 11.0 GUARANTEE
- 12.0 PACKING
- 13.0 TENDER SAMPLE
- 14.0 QUALITY CONTROL
- 15.0 MINIMUM TESTING FACILITIES
- 16.0 MANUFACTURING ACTIVITIES
- 17.0 SPARES, ACCESSORIES AND TOOLS
- 18.0 DRAWING AND DOCUMENTS
- 19.0 SCHEDULE OF DEVIATIONS

Rev No.	Prepared By	Reviewed By	Approved By	Issued By
R00	Jhantu Biswas, Tomar Vikram Singh	Nilesh Shivankar/Abhijit Bhagat	Ramkrishna Singh	Nilesh Shivankar/Abhijit Bhagat
Date	28.11.2024	28.11.2024	28.11.2024	28.11.2024

1	<b>SCOPE</b>	<ol style="list-style-type: none"> <li>1. This specification covers design, engineering, manufacture; shop testing, inspection, painting, packing, and supply of 415V MCCB panel complete with all accessories for efficient and trouble-free operation of the distribution network for Tata Power Company Limited at Mumbai.</li> <li>2. It is not our intent to specify completely herein all details of design and construction of the equipment. However, the equipment shall conform in all respects to high standards of Engineering design and workmanship and shall can perform in a manner acceptable to the PURCHASER (TPC) who will interpret the meaning of drawings and specification and shall be entitled to reject any work or material which in his judgment is not in full accordance therewith.</li> <li>3. Supply, Installation, Testing &amp; Commissioning of Kiosk LT Panel Outdoor Double Door Type (IP55) with I/C and O/G - 800 Amp 50KA 4P MCCB with MS Stand</li> <li>4. Supply, Installation, Testing &amp; Commissioning of LT Distribution Panel Outdoor Double Door Type (IP55),Incomer-500A MCCB 36 kA TM type (1 No.),Outgoing- 400 Amp MCCB 36 kA TM type (1No.), 125 Amp MCCB 25KA TM Type (2 No.), 25A MCB 4P 10KA (1 No.)</li> </ol>												
2	<b>APPLICABLE STANDARDS</b>	<p>The equipment (and the materials used) covered by this specification shall unless otherwise stated, be designed, manufactured and tested in accordance with the latest editions of the following Indian, IEC / International standards , with latest amendment from time to time, thereof, some of which are listed below:</p> <table border="1" data-bbox="451 940 1484 1251"> <thead> <tr> <th>Indian Standards ( IS )</th> <th>Title</th> </tr> </thead> <tbody> <tr> <td>IS 13947 Part 1 &amp; 3</td> <td>Low-voltage switchgear and control gear - specification</td> </tr> <tr> <td>IS 60529</td> <td>Degrees of protection provided by enclosures (IP CODE)</td> </tr> <tr> <td>IS 5</td> <td>Colour of ready mixed paints</td> </tr> <tr> <td>IS 5082</td> <td>Wrought Aluminium &amp; Al alloy plates &amp; sheets for Electrical application.</td> </tr> <tr> <td>IS/IEC 60898</td> <td>Electrical Accessories - Circuit-Breakers for Overcurrent Protection for Household and Similar Installations</td> </tr> </tbody> </table> <p>Material conforming to other internationally accepted standards, which ensures equal or better quality than the standards mentioned above would be acceptable, subject to prior approval from Tata Power. In case the Bidders who wish to offer material conforming to the other standards, salient points of difference between the Standards adopted and the specific standards shall be clearly brought out in relevant schedule copy of such standards with authentic English Translation shall be furnished along with the offer. In the case of conflict the order of precedence shall be</p> <ol style="list-style-type: none"> <li>1) Indian Standards,</li> <li>2)IEC Standards</li> <li>3) Other alternative standards.</li> </ol>	Indian Standards ( IS )	Title	IS 13947 Part 1 & 3	Low-voltage switchgear and control gear - specification	IS 60529	Degrees of protection provided by enclosures (IP CODE)	IS 5	Colour of ready mixed paints	IS 5082	Wrought Aluminium & Al alloy plates & sheets for Electrical application.	IS/IEC 60898	Electrical Accessories - Circuit-Breakers for Overcurrent Protection for Household and Similar Installations
Indian Standards ( IS )	Title													
IS 13947 Part 1 & 3	Low-voltage switchgear and control gear - specification													
IS 60529	Degrees of protection provided by enclosures (IP CODE)													
IS 5	Colour of ready mixed paints													
IS 5082	Wrought Aluminium & Al alloy plates & sheets for Electrical application.													
IS/IEC 60898	Electrical Accessories - Circuit-Breakers for Overcurrent Protection for Household and Similar Installations													

Rev No.	Prepared By	Reviewed By	Approved By	Issued By
R00	Jhantu Biswas, Tomar Vikram Singh	Nilesh Shivankar/Abhijit Bhagat	Ramkrishna Singh	Nilesh Shivankar/Abhijit Bhagat
Date	28.11.2024	28.11.2024	28.11.2024	28.11.2024

<b>3</b>	<b>CLIMATIC CONDITIONS OF THE INSTALLATION</b>	1	Maximum ambient temperature	50 deg.C
		2	Max. Daily average ambient temp	40 deg.C
		3	Min Ambient Temperature	07 deg.C
		4	Maximum Relative Humidity	100%
		5	Minimum Relative Humidity	40%
		6	Average No. of thunderstorm per annum	50
		7	Average Annual Rainfall	2380mm
		8	Average No. of rainy days per annum	115
		9	Rainy months	June to Oct.
		10	Altitude above MSL not exceeding	300 meters
		11	Average Air Pressure	29.6-inch Hg
		<p>The atmosphere is generally laden with mild acid and dust in suspension during the dry months and is subjected to fog in cold months. The design of equipment and accessories shall be suitable to withstand seismic forces corresponding to an acceleration of 0.3 g. For Mumbai the atmosphere is mainly humid across year.</p>		

4	GTPs for MCCB	500A MCCB	800A MCCB	Remarks
<b>A</b>	<b>Ratings</b>			
1	MCCB/MCB	500 A/400 A/125 A/ 25 A	800 A	
2	Maker's Name	L & T /Siemens / ABB / Schneider Electric	L & T /Siemens / ABB / Schneider Electric	
3	Maker's Type	Microprocessors with LSIG Protection	Microprocessors with LSIG Protection	
4	Applicable Standard	IS 8828	IS 8828	
5	Rated Voltage	415 V AC +/- 10%	415 V AC +/- 10%	
6	Rated Operating Duty	B3 min-MB-3 min-MB	B3 min-MB-3 min-MB	
7	Rated Current (Ampere)	500A	800A	
8	Rated Short Time Withstand(for 1 sec & 3 sec)	36 KA & /25 KA/10 KA ,AC for 1 sec	50 KA,AC for 1 sec	
9	Overload Release Provided	Yes	Yes	
10	Phase	3 phases	3 phases	
11	Frequency ( Hz)	50Hz +/- 3%	50Hz +/- 3%	
12	Ambient Temp C/Relative Humidity	50 Dec	50 Dec	
13	Temp rise on full load	90 Degree	90 Degree	
14	Application	Outdoor	Outdoor	
15	Multifunction Meter	VAF Meter( 415 VAC, 500 Amp), 3PH, 4 wire, With RS 485 Port. Flush Mounting Acc Class -1	VAF Meter ( 415 VAC, 800 Amp), 3PH, 4 wire, with RS 485 Port. Flush Mounting Acc Class -1 (Parameters-V,A	Make : Selec /Schneider/Secure/ Rishab/ABB

Rev No.	Prepared By	Reviewed By	Approved By	Issued By
R00	Jhantu Biswas, Tomar Vikram Singh	Nilesh Shivankar/Abhijit Bhagat	Ramkrishna Singh	Nilesh Shivankar/Abhijit Bhagat
Date	28.11.2024	28.11.2024	28.11.2024	28.11.2024

		(Parameters-V,A ,KWh, KVA, KVAr, PF etc.) 500/5 A,Class-1(With Mod bus RTU /RJ-45)	,KWh, KVA, KVAr, PF etc.) 800/5 A,Class-1 With Mod bus RTU /RJ-45	
16	Phase/Fault Indication Lamp	Red, Yellow and Blue/Brown/Ambar LED	Red, Yellow and Blue/Brown/Ambar LED	
17	Phase Indication Lamp Make	Schneider/ C & S/L & T/Siemens/Mimic	Schneider/ C & S/L & T/Siemens/Mimic	
<b>B</b>	<b>Enclosure</b>			
1	Overall Limiting Dimensions L x W x H (mm)	Approximate Dimension: 1000mm *1400 MM *100MM	Approximate Dimension: 1500mm *1500 MM *100MM	Vendor should submit heat loss calculation along with Panel Size for verification prior to Start Manufacturing
2	Gauge and material	16 Gauge M.S Sheet	16 Gauge M.S Sheet	
3	Thickness	1.6 mm	1.6 mm	
4	Colour of Body	Powder Coated with Siemens Gray Shade No. 7032	Powder Coated with Siemens Gray Shade No. 7032	
5	Protection grade of enclosure	IP55	IP55	
6	Caution Board	As per Standard	As per Standard	
7	Panel Lifting Hook	As per Standard	As per Standard	
8	Single Front	Single Front	Single Front	
9	Applicable Standard	IS 8623	IS 8623	
10	Mounting arrangements	Floor	Floor	
<b>C</b>	<b>Bus Bar Size</b>			
1	Phase Material Aluminium	1 X 40 X 20 mm	2 X 50 X 12 mm	Bus bar size calculation reports to be submitted
2	Neutral Material Aluminium	1 X 40 X 20 mm	2 X 50 X 12 mm	do
3	Earth Material GI	1 X 50 X 6 mm	1 X 50 X 6 mm	do
<b>D</b>	<b>MCCB/MCB</b>			
1	Voltage, frequency & Phases	4P, 3 phase, 415V, 50Hz, MCCB-36KA, 500A with MP based LSIG, & 36 KA,400A & 25KA, 125A & MCB 10KA, 25A with Standard Protection	4P, 3 phase, 415V, 50Hz, 50KA, 800A MCCB with MP based LSIG Release.	
2	Rated breaking capacity KA (RMS)	36kA	50kA	

Rev No.	Prepared By	Reviewed By	Approved By	Issued By
R00	Jhantu Biswas, Tomar Vikram Singh	Nilesh Shivankar/Abhijit Bhagat	Ramkrishna Singh	Nilesh Shivankar/Abhijit Bhagat
Date	28.11.2024	28.11.2024	28.11.2024	28.11.2024

5	<b>CONSTRUCTIONAL FEATURES</b>	<ol style="list-style-type: none"> <li>1. Panel Metal Box: <ol style="list-style-type: none"> <li>a. The MCCB panel shall be Metal enclosed with access from Front side.</li> <li>b. The MCCB panel shall be of Dust &amp; Vermin proof construction having IP 55 protection and adequate louvers for cooling.</li> <li>c. Surface preparation for painting- Sand blasting or 7 tank process.</li> <li>d. Painting - Power coated grade a polyester paint with min thickness 80 micron on inside and outside.</li> <li>e. Cable entry facilities at bottom of panel and removable gland plates of size suitable to accommodate incoming &amp; outgoing cables with desired cable sizes.</li> <li>f. R,Y,B phase indicating LED's to be provided on the incoming side.</li> <li>g. Suitable floor mounting arrangement to be provided..</li> <li>h. The panel shall be provided with two separate earthing terminals connected to earth bus one each on either side</li> <li>i. Flat earth bus should be protruded out for connecting of external earth.</li> </ol> </li> <li>2. Bus Bar: <ol style="list-style-type: none"> <li>a. Busbars shall be made of Electrolytic Grade Aluminium alloy and of suitable size to withstand the specified circuit rating.</li> <li>b. The busbars will be supported with epoxy insulators and insulated with colour code sleeves.</li> </ol> </li> </ol>
6.0	<b>NAME PLATE AND MARKING</b>	<ol style="list-style-type: none"> <li>1. Name plate- On front door top left side-showing <ol style="list-style-type: none"> <li>a) Purchaser name, PO number &amp; SAP code</li> <li>b) Manufacturer name</li> <li>c) Month / year of manufacturing</li> <li>d) 'Property of Tata Power'</li> </ol> </li> <li>2. Marking for panel earth stud- Black letter 'E', on riveted Al label</li> <li>3. Danger board in English &amp; local language, riveted on doors- White colour background with Red lettering on 1.6mm thick metal plate.</li> <li>4. Panel serial number to be provided.</li> </ol>

Rev No.	Prepared By	Reviewed By	Approved By	Issued By
R00	Jhantu Biswas, Tomar Vikram Singh	Nilesh Shivankar/Abhijit Bhagat	Ramkrishna Singh	Nilesh Shivankar/Abhijit Bhagat
Date	28.11.2024	28.11.2024	28.11.2024	28.11.2024

		<p><b>Logo</b> Size – 300mm X 300mm.</p> <div style="border: 1px solid black; padding: 10px;"> <p><b>Relationship between the two marks- size</b></p> <p>The Tata and Tata Power Marks are always used in conjunction with each other, never appearing in isolation on Tata Power communication.</p> <p>The height of the letter T of Tata (T-height) is the basic measure for all sizes and proportions.</p> <p>The rounded measure 2T in height, is separated from the Tata lettering by a distance of 1/2T.</p> <p>The T height of both, the Tata and the Tata Power Marks is to be the same, except in exceptional cases on approval from the Corporate Communications team.</p>  <p style="text-align: right;">Centre aligned - Stacked (Preferred)</p> <p><b>Relationship between the two marks- positioning</b></p> <p>The two marks can appear stacked, which is the preferred placement, or linear, by the side of one another.</p>  </div>
7.0	<b>TESTS</b>	Only type tested components – MCCB, MCB, and Insulators & Aluminum bus bar shall be accepted.
7.2	<b>TYPE TEST</b>	<p>Following Tests should be carried out as per IS 13947 Part1 as per clause no. 8.1.2</p> <p>The verification of,</p> <ol style="list-style-type: none"> <li>a) Constructional Requirements</li> <li>b) Temperature rise Test</li> <li>c) Dielectric properties</li> <li>d) Making &amp; Breaking capacity &amp; short circuit Test</li> <li>e) Operating Limits</li> <li>f) Operational performance</li> <li>g) Degree of protection of enclosed equipment</li> </ol>
7.2	<b>ROUTINE TEST</b>	<p>Routine test- (Inspection test witness by purchaser)</p> <ol style="list-style-type: none"> <li>1) Visual inspection, dimension checks &amp; paint thickness check.</li> <li>2) Bill of material check</li> <li>3) Insulation resistance test/ Dielectric Test</li> <li>4) High voltage test</li> </ol>

Rev No.	Prepared By	Reviewed By	Approved By	Issued By
R00	Jhantu Biswas, Tomar Vikram Singh	Nilesh Shivankar/Abhijit Bhagat	Ramkrishna Singh	Nilesh Shivankar/Abhijit Bhagat
Date	28.11.2024	28.11.2024	28.11.2024	28.11.2024

		5) Operational check/Functional Check
7.3	<b>ACCEPTANCE TEST</b>	1) Tolerances on panel dimensions- Maximum +/- 10 mm (As per approved Drawing by Tata power) 2) No negative tolerance on bus bar dimensions & bus bar clearances 3) Test shall be carried out as per IS and routine test
8.0	<b>TYPE TEST CERTIFICATES</b>	The Bidder shall furnish the type test certificates of the Panel for the tests as mentioned above as per the corresponding standards. All the tests shall be conducted at CPRI / ERDA/ NABL Lab as per the relevant standards. Type tests should have been conducted in certified Test laboratories during the period not exceeding 10 years from the date of opening the bid. In the event of any discrepancy in the test reports, i.e. any test report not acceptable or any/all type tests (including additional type tests, if any) not carried out, same shall be carried out without any cost implication to TATA POWER.
9.0	<b>PRE-DESPATCH INSPECTION</b>	Equipment shall be subject to inspection by a duly authorized representative of the TATA POWER. Inspection may be made at any stage of manufacture at the option of the purchaser and the equipment if found unsatisfactory as to workmanship or material, the same is liable to rejection. 1. Bidder shall always grant free access to the places of manufacture to TATA POWER's representatives when the work is in progress. Inspection by the TATA POWER or its authorized representatives shall not relieve the supplier of his obligation of furnishing equipment in accordance with the specifications. 2. Material shall be dispatched after specific MDCC (Material Dispatch Clearance Certificate) is issued by TATA POWER. following documents shall be sent along with material: 1. Test reports 2. MDCC issued by TATA POWER 3. Invoice in duplicate 4. Packing list 5. Drawings & catalogue 6. Guarantee / Warrantee card 7. Delivery Challan. 8. Other Documents (as applicable)
10.0	<b>INSPECTION AFTER RECEIPT AT STORE</b>	The materials received at the store will be inspected for acceptance and may differ from the pre-dispatch inspection reports. A copy of the inspection report will be sent to TATA POWER COMPANY

Rev No.	Prepared By	Reviewed By	Approved By	Issued By
R00	Jhantu Biswas, Tomar Vikram Singh	Nilesh Shivankar/Abhijit Bhagat	Ramkrishna Singh	Nilesh Shivankar/Abhijit Bhagat
Date	28.11.2024	28.11.2024	28.11.2024	28.11.2024

11.0	<b>GUARANTEE:</b>	<ol style="list-style-type: none"> <li>Bidder shall stand guarantee towards design, materials, workmanship &amp; quality of process / manufacturing of items under this contract for due and intended performance of the same, as an integrated product delivered under this contract. In the event any defect is found by the TATA POWER COMPANY up to a period of at least 12 months from the date of commissioning or 24 months from the date of last supplies made under the contract whichever is later, (the time scale of 12/24 months could be enhanced subject to mutual agreements) Bidder shall be liable to undertake to replace/rectify such defects at its own costs, within mutually agreed time frame, and to the entire satisfaction of the Purchaser, failing which the TATA POWER COMPANY will be at liberty to get it replaced/rectified at Bidder's risks and costs and recover all such expenses plus the Purchaser's own charges (@ 20% of expenses incurred), from the Bidder or from the " Security cum Performance Deposit" as the case may be.</li> <li>Bidder shall further be responsible for 'free replacement' for another period of THREE years from the end of the guarantee period for any 'Latent Defects' if noticed and reported by the Purchaser</li> </ol>
12.0	<b>PACKING</b>	<ol style="list-style-type: none"> <li>Packing shall be such that it shall protect equipment against shocks, vibration corrosion, etc. or avoid any damages during transportation</li> <li>Packing identification labels- To show purchaser name, PO number, quantity of panels,</li> <li>Panel type, Manufacturer serial number.</li> <li>Handling instruction- To be marked on packing boxes.</li> <li>All packaging material should be environmental friendly and ensure that no single use plastic is used</li> </ol>
13.0	<b>TENDER SAMPLE</b>	NA
14.0	<b>QUALITY CONTROL</b>	<p>The bidder shall submit with the offer Quality assurance plan indicating the various stages of inspection, the tests and checks which will be carried out on the material of construction, components during manufacture and bought out items and fully assembled component and equipment after finishing. As part of the plan, a schedule for stage and final inspection within the parameters of the delivery schedule shall be furnished. TATA POWER's engineer or its nominated representative shall have free access to the manufacturer's/sub-supplier's works to carry out inspections.</p> <p>The following information shall necessarily be submitted with the bid:</p> <ol style="list-style-type: none"> <li>List of important raw materials, names of sub-suppliers for raw materials, standards to which raw material is tested and the copies of test reports of the tests carried out on raw materials in presence of Bidder's representatives.</li> <li>List of manufacturing facilities available, level of automation achieved and the areas where manual process exists.</li> <li>List of areas in manufacturing process where stage inspections are normally carried out for quality control and details of these tests and inspections</li> <li>List of testing equipment for final testing with valid calibration reports. Manufacturer shall possess 0.1 class instruments for measurement of losses.</li> <li>QAP withhold points for Tata Power inspection.</li> </ol>
15.0	<b>MINIMUM TESTING FACILITIES</b>	Bidder shall have adequate in house testing facilities for carrying out all routine tests, acceptance tests and pre-dispatch inspection as per relevant International / Indian standards.

Rev No.	Prepared By	Reviewed By	Approved By	Issued By
R00	Jhantu Biswas, Tomar Vikram Singh	Nilesh Shivankar/Abhijit Bhagat	Ramkrishna Singh	Nilesh Shivankar/Abhijit Bhagat
Date	28.11.2024	28.11.2024	28.11.2024	28.11.2024

16.0	<b>MANUFACTURING ACTIVITIES</b>	The successful bidder will have to submit GTP & Drawing within 7 days from placement of order/OLA/LOI for approval. The date of Code -2/ Code-1 approval given by TATA Power will be treated as first day for assessment of LD (if applicable).						
17.0	<b>SPARES, ACCESSORIES AND TOOLS</b>	Keys of door be provided as spares.						
18.0	<b>DRAWINGS AND DOCUMENTS</b>	<p>Following drawings and documents shall be prepared based on TATA POWER COMPANY specifications and statutory requirements and shall be submitted with the bid:</p> <p>a) Filled in Technical Particulars and compliance to the specification  b) General description of the equipment and all components including brochures.  c) General arrangement drawing.  d) Bill of material  e) Experience List  f) Type test certificates</p> <p>Soft copy of all the drawing, GTP, Test certificates shall be submitted after the final approval of the same to purchaser.</p> <p>All the documents &amp; drawings shall be in English language.</p> <p>Instruction Manuals: Bidder shall furnish softcopies of manuals (In English language) covering erection and maintenance instructions and all relevant information and drawings pertaining to the main equipment as well as auxiliary devices.</p>						
19.0	<b>SCHEDULE OF DEVIATIONS</b>							
<p style="text-align: center;"><b><u>(TO BE ENCLOSED WITH THE BID)</u></b></p> <p>All deviations from this specification shall be set out by the Bidders, clause by Clause in this schedule. Unless specifically mentioned in this Schedule, the tender shall be deemed to confirm the purchaser's specifications:</p> <table border="1" data-bbox="237 1066 1401 1119"> <thead> <tr> <th data-bbox="237 1066 378 1094">Sr. No.</th> <th data-bbox="378 1066 623 1094">Clause No.</th> <th data-bbox="623 1066 1401 1094">Details of deviation with justifications</th> </tr> </thead> <tbody> <tr> <td data-bbox="237 1094 378 1119"> </td> <td data-bbox="378 1094 623 1119"> </td> <td data-bbox="623 1094 1401 1119"> </td> </tr> </tbody> </table> <p>We confirm that there are no deviations apart from those detailed above.</p> <p>Seal of the Company: _____ Signature _____</p> <p style="text-align: right;">Designation _____</p>			Sr. No.	Clause No.	Details of deviation with justifications			
Sr. No.	Clause No.	Details of deviation with justifications						

Rev No.	Prepared By	Reviewed By	Approved By	Issued By
R00	Jhantu Biswas, Tomar Vikram Singh	Nilesh Shivankar/Abhijit Bhagat	Ramkrishna Singh	Nilesh Shivankar/Abhijit Bhagat
Date	28.11.2024	28.11.2024	28.11.2024	28.11.2024

**The Tata Power Company Ltd**



*Annexure to Reply to Prebid Queries*

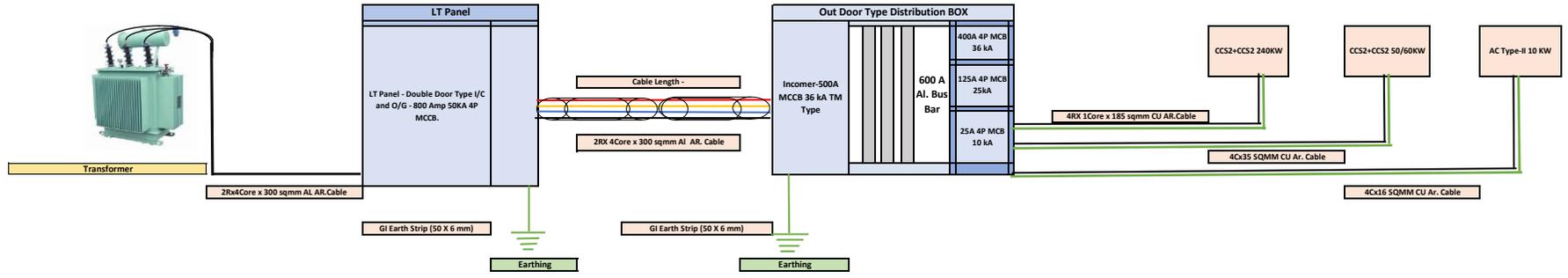
*Tender Reference:*  
**4100038996/CC25ADO0019**

*Document Date: 2<sup>nd</sup> December 2024*

**Proposed SLD for Yamuna Expressway**

CONFIDENTIAL

DLF Cyber Hub, Cyber City, Gurugram



Cables Details.		
Cable Size	Length	Location
4Core x 300 sqmm Al. AR. Cable		From transformer to LT panel.
4Core x 300 sqmm Al. AR. Cable		From LT panel to Distribution B
1Core x 185 sqmm CU AR. Cable		From DB to 240 kW charger
4Cx35 SQMM CU Ar. Cable		From DB to 60 kW charger
4Cx16 SQMM CU Ar. Cable		From DB to 10 kW charger
Earth Cable -1C x 16SQMM CU		For charger

\* GREEN COLOR IS EARTH CABLE- 1C x 16SQMM CU  
 \* ENSURE N-E VOLTAGE < 5V