

Tender No: TPCODL/CCG/1000001733/2024-25					
Tender Name: RFQ for Transportation, Erection, Testing and Commissioning of Grid-Connected Rooftop Solar Plant with capacity of 1 KWp per Households in the Service area of TP DISCOMs Odisha					
Replies to Pre-Bid Query					
Sr No	Page No	Clause No	RFP Clause	Query/ Clarification Sought	TPCODL Response
1	15	4	door to door survey	there may be multiple time of visit require for doing the survey and paper work , so can we charge per visit wise /	As per Tender Document
2	6	1.7	Bidder should be an Empaneled Vendor in National Portal of PM-Surya Ghar or should have cumulative experience of executing > = 50 kWp Off- grid/ Grid connected SPV Power Plants/Systems in Last three Years. Bidder must submit the Order Copy or required necessary document in this regards	We have installed 55kw containing 21 households but we don't have work order. No individual consumers given work order.	Accepted. Joint Commissioning Report for Each Household to be submitted.
3	12	7.2	After the issuance of LOI, Business Associate needs to submit a Security Deposit of Rs. 2,50,000 /- in favour of TPCODL with validity till 31 March 2026 + 6 Months Claim Period for further empanelment in all 4 DISCOM.	We have empanelle vendor and given Rs.2.50 lakhs to TPCODL. Again we will give another Rs.2.50 lakhs.	Yes. Nature of Tender/SOW is different from PMSGY.
4	15	1	ITC of Solar Panel (1 KWh) Including handling of concrete ballast, Panel , Module & installation at customer site)	Who will purchase the materials	Supply of Materials is in the Scope of TP DISCOM. Rest terms and conditions shall be as per tender document.
5	15	2d	more than 150 KMs (To & Fro)	Please rectify more than 150km (To & From) as per KM. Because 200KM is more than 150km and 1000 km is mor than 150km	Distance is limited to service area of each TP DISCOMs
6	15	3d	more than 150 KMs (To & Fro)	Please rectify more than 150km (To & From) as per KM. Because 200KM is more than 150KM and 1000 km is mor than 150km	Distance is limited to service area of each TP DISCOMs
7	22		Insurance	Is all the asociated employee to be insured? If Yes what I the insurance amount	Field Employees to be Insured and GPA Policy of Rs. 15 Lacs shall be applicable
8			EPF/ESIC	Is EPF & ESIC deduction mandatory?	Yes as applicable
9			Safety	What is the Safety Criteria?	As per Tender Document
10	8	3.1	SECOND PART: "TECHNICAL BID"	Which document exactly required to attach (point a to i)	As per Tender Document. Kindly also follow the attachment list mentioned in ARIBA Portal.
11	8		THIRD PART	ANNEXURE- I How to fill the format, with example, calculation procedure	You have to submit the Unit Rates in ANNEXURE-I as mentioned in Corrigendum-I. Excel file for ANNEXURE-I is available for download in ARIBA Portal.
12	20		CHECKLIST	what are the exact documents required against (Sl No-5, 8, 9, 12, 13, 17)	As per Tender Document
13	12	4.6	Reverse Auction	Reverse Auction applicable or not, please clarify . Because We found Annexure VI and clause no 4.6 as different.	Reverse Auction Not Applicable for this tender.
14	22			Can we quote for solar panel of Exide Brand ? In Annexure VII you have metioned 1 Kw TPREL Panel in scope of work section.	Supply of Materials is in the Scope of TP DISCOM. Rest terms and conditions shall be as per tender document.
15	31			Safety Category Qualification Form- This form will be submitted at the time of bidding on the letter head of the bidders.?	As per Tender Document
16	8			OEM test report and Manufactured authorization form will be submitted at the time of bidding?	Supply of Materials is in the Scope of TP DISCOM. Rest terms and conditions shall be as per tender document.
17	20	sl no-14/15		Performance certificates: This form will be submitted bidders letter head??	Performance Certificate issued from your client to be submitted as it is.
18	20	sl no-13		Project/supply Completion certificates	For Sl. No 13- Not Applicable For Sl. No 14 - Performance Certificate issued from your client to be submitted as it is.
19				Is there any extra document or annexure in GCC AND TENDER DOCUMENT that to be filled and submitted in the technical bid, which are not asked in ARIBA.	As per Tender Document
20				Kindly share the complete ITC Process for the Panel and Installation Kit Supplied by TP DISCOMs	ITC Process attached as ANNEXURE-I

ANNEXURE-I

INSTALLATION, TESTING & COMMISSIONING PROCESS

1. Project Outline

This document outlines the requirements of Installation, Testing and Commissioning of PV Solar System being executed by TP DISCOMS

The scope includes but is not limited to the following activities

1. Arrangement of all necessary PPE's for the execution of the project for I&C team.
2. Arrangement of manpower, tools, instruments and machinery as required for the project.
3. Transportation of manpower, tools, instruments and machinery to the customer premises (project site).
4. Site Survey of customer premises.
5. Shipment of material from TP DISCOMS warehouse to the customer premises (project site).
6. Unpacking of the system and discarding of the packing material.
7. Checking of contents of the package.
8. Installation of the system.
9. Testing and commissioning of the PV System.
10. Setting up remote monitoring of plant.
11. Preparing I&C documentation.
12. Obtaining Sign off on documentation from the customer and the DISCOM.
13. Overall commissioning and customer education on the system Operation , Maintenance and Safety

This document contains Installation and Commissioning (I&C) Guidelines for Solar Rooftop Systems to ensure that solar installation is carried out effectively, efficiently, and safely.

2. Safety First

- a) TP DISCOMS Safety guidelines are mandatory during all times during the project.
- b) I&C vendor and his installation team shall be completely acquainted with all the requirements of TP DISCOMS safety guidelines for successfully carrying out this project.
- c) I&C vendor shall arrange for all necessary PPE's as required in the safety guidelines of TP DISCOMS.

- d) Any lapse in safety will be viewed seriously and is liable for penalization as per final decisions taken up by TP DISCOMS.

3. Site Assessment

a) Roof Evaluation:

- Conduct a visual assessment of the RCC roof to ensure it can handle the load of the solar panels and associated equipment. This includes checking the roof's age, structural integrity, and load-bearing capacity. Customer has to give NOC stating that the load bearing capacity for RCC is at least 60kg/m².
- The roof should be free of cracks, leaks, and other forms of damage. The installation I&C vendor has to take note of the pre-existent damages with photographic evidence. In case of non-feasible roof the same shall be informed to the customer. I&C Vendor may verify the pre-existing leaks in the roof by pouring water over the proposed area and inspecting for leakages on the lower side of the roof.
- I&C Vendor shall check if there are points of water stagnation and flooding in the area where PV System is proposed to be installed. Such areas will be deemed as unfit for installation of PV modules. Customer shall do the necessary modification to make the areas fit for installation purpose.
- **Orientation and Tilt:** The solar panels should be installed facing towards south at the angle of tilt as per the mounting structure.
- **Identification of Shadow areas :** I&C Vendor shall physically identify the areas of shadow formation due to Paraphet Walls , Trees , Walls , Rooms , Water Tanks , Pillars , Cloth Lines , Towers , Adjacent Buildings and any other similar obstructions which could form visible shadows on the modules. The areas which form shadows shall be deem unfit for installation and same shall be informed to the customer. Areas which are partially shading the modules shall also be deemed unfit for installation.

4. Mounting System Installation

- a) **Mounting System:** Mounting ballast structure system which is designed for RCC roofs.
Ballasted systems are common for RCC roofs as they don't require penetration of the roof, reducing the risk of leaks. Check if the roof has a slope, the ballasts are designed for installation over flat roofs only. If the roof is found to have a slope more than 3 degrees then it shall be deemed as unfit for installation. The ballast shall not be laid on glazed ceramic tiles. Care should be taken to ensure that the customer roof is not damaged and the leak proofing layer is also not damaged during shifting and installation of the ballasts.
- b) **Ballasted Mounting:** The foundation of the PV System comprises of dead weight ballast. The ballast has been split into 2 parts (for each leg) for easy handling and movement over the roof for installation purpose. Care should be taken to ensure that the ballasts are not separated at any condition after the installation process. Ensure the ballast weight is evenly distributed to avoid damaging the roof. The ballast shall be laid down carefully over the roof without impacting the roof. A temporary soft rubber mat can be used for laying the ballasts during installation.
- c) **Modifications and retrofits :** I&C Vendor shall not try to carryout and modifications of the structure provided. The structure is galvanized for long life and any welding or machining will results in permanent damage to the galvanic coating of the structure. Any retrofits or modifications will deem the system warranty as void.

5. Electrical and Inverter Installation

- a) **DC Wiring:** Ensure that the DC cables from the solar panels to the inverter are installed in a safe, organized manner. The DC MC4 connector shall be properly crimped into the metal thimble inside the plastic housing of the MC4 connector. Crimping shall be done only with a correct size of crimping tool only. Do not attempt to crimp the DC cables with hammer or pliers. This will result in damage to the MC-4 housing and the connector itself.

To avoid loose connections and fire incidents it is strictly recommended to use only Crimping tools for this purpose. Any deviation will result in warranties being void.

Care should be taken to ensure that the male and female polarities are not reversed. Ensure that the both male and female MC4 connectors are thoroughly pushed into each other. These connectors are rated as IP65 only when properly mated else any loose mating will result in water ingress and DC side shorting. DC side shorting in turn will result in Inverter damages and such conditions will not be entertained for warranty claims.

- b) **Inverter & ACDB Location:** To ensure efficient operation of the inverter, it is recommended that the inverter and ACDB should be installed on the ballast structure only. Mounting holes are provided on the L angles of the structure to accommodate both the devices. Do not attempt to lengthen the cables provided.
- c) **Earthing:** Properly ground the system to avoid any electrical hazards. Module to module earthing to be done with 6mm² cable. Inverter earthing shall be also done with a 6 mm² cable and in turn this cable shall be connected to the structure, further the LA point shall be earthed with a 10mm² conductor leading to the earth pit. ACDB earthing connection has to be carried out with 10 mm² cable

Earth Pits: 2 earthing kits have been provided with the system. These shall be installed at a minimum distance of 2 m from each other. For good earthing connection , a resistance of 5 ohms is recommended. This can be checked using a Wenner device by the I&C Vendor. For good results it is recommended that the area selected for installing the pits are non-gravel type with fine clay type soil. Soil shall also not be dry to ensure proper conductivity for earthing purposes.

- d) **AC Wiring:** Connect the AC output from the inverter to the ACDB and from ACDB to the customer LT panel. Do not extend the wires beyond the recommended length supplied. The wiring shall be routed through the supplied conduits only. Care should be taken to ensure that the conduits are properly press fitted into the sockets provided in the bends and tee joints. Ensure that there is no gap left for water to enter into the conduits. Conduits shall be laid in places where there is no over burden weight like manual stamping , vehicular movement, live stock movement etc.

Considering that the system contains lethal voltages upto 230V AC. It is recommend that through electrical safety guidelines laid down by TP DISCOMS shall be followed while installing the system. Ensure that there are no joints in between the cabling. The electrical cable shall be kept at positions which are out of reach of children and water ingress.

6. Action on Faulty material and Fault identification

- a)** If any material is found to be damaged or has some workmanship defect. The such material shall be immediately reported to TP DISCOMS in writing. It is recommended that the I&C vendor inspects the material stock during pickup from the TP DISCOMS warehouse. Photo evidence of material shall be maintained by the I&C vendor for future references.
- b)** Material which has been found damaged due to any reason at site, shall be replaced by the I&C vendor at his own cost..
- c)** I&C vendor shall maintain an in depth details of equipment being installed for future tracking and warranty purposes. The I&C vendor shall collect the following information but not limited to this list only, any other information related to the installation deemed necessary for future references may also be stored by the vendor :
 - i. Make, Model Number and Serial number of the solar PV Modules.
 - ii. Make, Model Number and Serial Number of the inverter
 - iii. Make, Model Number and Serial Number of the Inverter Wi-fi dongle.
 - iv. Make Model Number and Serial Number of the Wi-fi dongle Power Supply Adaptor
 - v. Login credentials of the App which were set for the customer.
 - vi. Make of the ACDB box
 - vii. Pictures of the complete installation, cabling and termination at LT panel or metering box.
 - viii. Make, serial number and model of the meter.
 - ix. Earth Pit resistance measurement.
 - x. Earthing kit make.