NIT No.: TPCODL/P&S/1000001301/2024-25

Procedure to Participate in Tender

Tender Enquiry No- TPCODL/P&S/1000001301/2024-25

Tender Enquiry No.	Work Description	EMD* (Rs.)	Tender Fee** (Rs.)	Last Date for payment of Tender Fee
TPCODL/P&S/ 1000001301/ 24-25	Rate Contract for Electrification of the un-electrified households (UEHHs) identified under PM-JANMAN scheme in Off-grid mode by solar standalone system	Rs. 50,000	5,000	28.10.2024

* EMD is exempted for MSME Bidders registered in the State of Odisha. However, MSME Bidder shall be barred to participate in the tendering process for a period of 2 years in case it backs out post award of the contract. MSME BAs needs to submit Bid Security Declaration.
** MSMEs registered in the State of Odisha shall pay tender fee of Rs. 1,000/- including GST.

Please note that corresponding details mentioned in this document will supersede any other details mentioned anywhere else in the Tender Document.

Procedure to Participate in Tender.

Following steps are to be followed before "Last date for Payment of Tender Fee":

1. Eligible and Interested Bidders to submit duly signed and stamped letter on Bidder's letter head indicating
   a. Tender Enquiry number
   b. Name of authorized person
   c. Contact number
   d. E-mail id
   e. Details of submission of Tender Fee
   f. GST Registration No
   g. Details of submission of Tender Fee
   h. MSME Certificate, wherever applicable
   i. Details of Bank Account for refund of EMD
   j. Postal Address for refund of EMD
2. Non-Refundable Tender Fee, as indicated in table above, to be submitted in the form of Direct Deposit in the following bank account and submit the receipt along with a covering letter clearly indicating the Tender Reference/ Enquiry Number –

   Beneficiary Name: TP Central Odisha Distribution Ltd.
   Bank Name: STATE BANK OF INDIA
   Branch Name: IDCO Towers, Bhubaneshwar
   Address: P.O. - Sahidnagar, Janapath, Bhubaneswar.
   Branch Code: 7891
   Account No: 10835304915

IFSC Code: SBIN0007891

E-mail with necessary attachment of 1 and 2 above to be sent to arijeet.choudhury@tpcentralodisha.com , and sony.jha@tpcentralodisha.com before last date and time for payment of Tender Fee.

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

Please note that all future correspondence regarding the tender, bid submission, due date extension, Pre-bid query, etc. will take place through TPCODL E-Tender system (Ariba) only. User manual to guide the bidders to submit the bid through E-Tender system (Ariba) is enclosed.

All communication shall be held only with the bidders who have carried out the above steps to participate in the Tender.

It is to be noted that once date of “Last date and time for Payment of Tender Participation Fee” is lapsed, no Bidder will be sent link from TPCODL E-Tender System (Ariba). Without this link, bidder will not be able to participate in the tender. Any last moment request to participate in tender will not be considered.

Further, all future corrigendum to the said tender will be uploaded in the Tender section on website https://www.tpcentralodisha.com.

NIT No.: TPCODL/P&S/1000001301/2024-25

OPEN TENDER NOTIFICATION

FOR

RATE CONTRACT FOR ELECTRIFICATION OF THE UN-ELECTRIFIED HOUSEHOLDS (UEHHs) IDENTIFIED UNDER PM-JANMAN SCHEME IN OFF-GRID MODE BY SOLAR STANDALONE SYSTEM

Tender Enquiry No.: TPCODL/P&S/1000001301/2024-25

Due Date for Bid Submission: 11.11.2024 [15:00 Hours]

TP Central Odisha Distribution Limited
1st Floor, Anuj Building, Plot No.29, Satya Nagar,
Bhubaneswar, Odisha 751007

CONTENTS OF THE ENQUIRY

1.0 Event Information

1.1. Scope of work

Open Tenders are invited from interested Bidders entering into a Contract for the following:

S. No.	Description	Estimated Value (Rs. Cr.)	EMD Amount (Rs.)	Tender Fee (Rs.)
1.	Rate Contract for Electrification of the un-electrified households (UEHHs) identified under PM-JANMAN scheme in Off-grid mode by solar standalone system	Rs. 0.72 Cr.	Rs. 50,000	5,000

Note: Tender Fee is inclusive of GST

1.2. Availability of Tender Documents

Please refer “Procedure to participate in the e-tender”.

1.3. Calendar of Events

(a)	Date of sale/ availability of tender documents from TPCODL Website	From 22.10.2024 onwards
(b)	Date by which Interested and Eligible Bidder to pay Tender Fee and confirm participation as mentioned in “Procedure to Participate in Tender”	28.10.2024
(c)	Last Date of receipt of pre-bid queries, if any	31.10.2024
(d)	Pre-Bid Meeting*	01.11.2024
(e)	Last Date of Posting Consolidated replies to all the pre-bid queries as received	04.11.2024
(f)	Last date and time of receipt of Bids	11.11.2024; 15:00 Hours
(g)	Date & Time of opening technical bids & EMD (Envelope-1 & 2)	Participating Bidders will get mail intimation from TPCODL E-Tender system (Ariba) when their Technical Bids are opened.
(h)	Date & Time of opening of Price bid of qualified bidders	Bidders will get mail intimation from TPCODL E-tender system (Ariba) when their Price Bids are opened

**Pre-Bid Meeting Time and Venue details shall be shared later*

Note :- In the event of last date specified for submission of bids and date of opening of bids is declared as a closed holiday for TPCODL’s office, the last date of submission of bids and date of opening of bids will be the day following working day at appointed times.

1.4 Mandatory documents required along with the Bid

1.4.1 EMD of requisite value and validity
1.4.2 Tender Fee of requisite amount
1.4.3 Requisite Documents for compliance to Qualification Criteria mentioned in Clause 1.7.

1.4.4 Drawing, Type Test details along with a sample of each item as specified at Annexure I (as applicable)
1.4.5 Duly signed and stamped 'Schedule of Deviations' as per Annexure III on bidder's letter head.
1.4.6 Duly signed and stamped 'Schedule of Commercial Specifications' as per Annexure IV on bidder's letter head.
1.4.7 Proper authorization letter/ Power of Attorney to sign the tender on the behalf of bidder.
1.4.8 Copy of PAN, GST, PF and ESI Registration (In case any of these documents is not available with the bidder, same to be explicitly mentioned in the 'Schedule of Deviations')
1.4.9 Documents for safety bid evaluation as per Appendix 13: CSM-F-9 Safety Bid Evaluation Criteria

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

1.5. Deviation from Tender

Normally, the deviations to tender terms are not admissible and the bids with deviation are liable for rejection. Hence, the bidders are advised to refrain from taking any deviations on this Tender. Still in case of any deviations, all such deviations shall be set out by the Bidders, clause by clause in the 'Annexure III - Schedule of Deviations' and same shall be submitted as a part of the Technical Bid.

1.6. Right of Acceptance/Rejection

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

i. EMD of requisite value and validity
ii. Tender fee of requisite value
iii. Price Bid as per the Price Schedule mentioned in Annexure I (BOQ)
iv. Necessary documents against compliance to Qualification Requirements mentioned at Clause 1.7 of this Tender Document
v. Filled in Schedule of Deviations as per Annexure III
vi. Filled in Schedule of Commercial Specifications as per Annexure IV
vii. Receipt of Bid within the due date and time

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

1.7 Qualification Requirement / Eligibility Criteria

1. The bidder should have average annual turnover of Rs. 1 Cr. in last three financial years from (FY 20-21, FY 21-22 & FY 23-24). **(CA Audited balance sheet and profit & loss account statements to be submitted.)**
2. The prospective Bidder(s) should be a registered Sole Proprietor Firm / Partnership Firm/ Company and should possess all Statutory Compliance. **Bidder must submit the copy of all these Registration certificates like Valid PAN, ESI registration, EPF registration, GSTN Registration etc.**
3. OEM Registered in India of SPV Cells /Modules / PV System Electronics or their sole authorized distributor / channel partner or PV System Integrators are eligible to bid. **Authorization letter in the prescribed format from Original Equipment Manufacturer (OEM) in favor of authorized distributor / channel partner to bid / conclude the order against this tender, must be provided with technical bid. PV System integrators shall also be required to submit the MAF from OEM.**

4. Bidder should have experience of successful erection, testing and commissioning of renewable energy solar off-grid/grid project in single contract (during last 5 years) whose generation capacity shall be 10 KWp and the system so created must be in satisfactory operation for at least three (3) years as on date of opening of bid. Copy of these Purchase orders along with completion certificates must be attached with technical bid. **One Performance certificate for satisfactory operation of works completed / executed is required to be submitted.**
5. The bidder 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.**
6. Declaration on bidder's letterhead for Non blacklisting from any Government Department/ PSU/ SEB's/ Power Utility/OREDA.
7. Joint Ventures (JV) are not allowed and no sub-contracting is also allowed with regard to supply, installation, commissioning, and warranty maintenance and after sales service. This is the sole responsibility of Bidder. **(Self-Declaration on Bidders Letter Head to be submitted)**

1.8. Marketing Integrity

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

- Failure to honor prices submitted to the marketplace
- Breach of terms as published in TENDER/NIT

1.9. Supplier Confidentiality

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

2.0 Evaluation Criteria

- The bids will be evaluated technically on the compliance to tender terms and conditions
- The bids will be evaluated commercially on all-inclusive lowest cost for overall tender BOQ as calculated in Schedule of Items *[Annexure I].* **Order shall be awarded to Single Business Associate.** Hence, all bidders are advised to quote their most competitive rates against each line item.
- Bidder has to mandatorily quote against each item of Schedule of Items *[Annexure I].* Failing to do so, TPCODL may reject the bids.

NOTE: *In case a new bidder is not registered with TPCODL, factory inspection and evaluation shall be carried out to ascertain bidder's manufacturing capability and quality procedures. However TPCODL reserves the right to carry out factory inspection and evaluation for any bidder prior to technical qualification.*

In case a bidder is found as Disqualified in the factory evaluation, their bid shall not be evaluated any further and shall be summarily rejected. The decision of TPCODL shall be final and binding on the bidder in this regard.

2.1 Price Variation Clause: The prices shall remain FIRM during the entire contract period.

2.2 Quantity Variation clause:

3.0 Submission of Bid Documents

3.1 Bid Submission

Bidders are requested to submit their offer in line with this Tender document. TPCODL shall respond to the clarification raised by various bidders and the replies will be sent to all participating bidders through TPCODL e-tender system (Ariba).

Bids shall be submitted in 3 (three) parts:

FIRST PART: "EMD" as applicable shall be submitted. The EMD shall be valid for 210 days from the due date of bid submission in the form of BG / Bank Draft / Bankers Pay Order (issued from a Scheduled Bank) online NEFT/ RTGS transfer favoring 'TP Central Odisha Distribution Limited' payable at Bhubaneswar. The EMD has to be strictly in the format as mentioned in General Condition of Contract, failing which it shall not be accepted by TPCODL and the bid as submitted shall be liable for rejection. A separate non-refundable tender fee of stipulated amount also needs to be transferred online through NEFT/ RTGS in case the tender document is downloaded from our website.

TPCODL Bank Details for transferring Tender Fee and EMD is as below:

Account Name: TP CENTRAL ODISHA DISTRIBUTION LIMITED
Bank Name: SBI, IDCO Towers, Bhubaneswar
Bank Account No. : 10835304915
IFSC Code: SBIN0007891

For Tender Fee and EMD submitted via online transfer, bidder to ensure that the same are carried out through separate transactions.

The EMD in the form of Bank Draft / BG /Bankers Pay Order shall be delivered at the following address in sealed envelope clearly indicating the tender reference / enquiry number, name of tender and bidder name:

Chief (Procurement & Stores)
TP Central Odisha Distribution Limited
1st Floor, Anuj Building, Plot No.29, Satya Nagar, Bhubaneswar, Odisha 751007

SECOND PART: "TECHNICAL BID" shall contain the following documents:

a) Documentary evidence in support of qualifying criteria
b) Technical literature/GTP/Type test report etc. (if applicable)
c) Qualified manpower (if available)
d) Testing facilities (if applicable)
e) No Deviation Certificate as per the Annexure III – Schedule of Deviations
f) Acceptance to Commercial Terms and Conditions viz. Delivery schedule/period, payment terms etc. as per the Annexure IV – Schedule of Commercial Specifications.
g) Quality Assurance Plan/Inspection Test Plan for supply items (if applicable)
h) Project Implementation Plan including Level 2 Schedule for the project
i) Unpriced mentioning "Quoted/Not Quoted" against all line items (Prices should not be mentioned)

The technical bid shall be properly indexed and is to be submitted through TPCODL E-tender platform (Ariba) only. Hard copy of Technical Bids need not be submitted.

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

THIRD PART: "PRICE BID" shall contain only the price details and strictly in format as mentioned in Annexure I along with explicit break up of basic prices, Taxes & duties, Freight etc. In case any discrepancy is observed between the item description stated in Schedule of Items mentioned in the tender and the price bid submitted by the bidder, the item description as mentioned in the tender document (to the extent modified through Corrigendum issued if any) shall prevail. Price Bid is to be submitted in soft copy through TPCODL E-Tendering system (Ariba) only. Hard copy of Price Bid not be submitted.

SIGNING OF BID DOCUMENTS:

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

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

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

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

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

3.2 Contact Information

Please note all correspondence regarding the tender, bid submission, bid submission date extension, Pre-bid query etc. will happen through TPCODL E-Tender system (Ariba).

All communication will be done strictly with the bidder who have done the above step to participate in the Tender.

Communication Details:

Package Owner

Name: Arijeet Choudhury
Designation: Procurement (Commercial Services)
Contact No.: 9871432126
E-Mail ID: arijeet.choudhury@tpcentralodisha.com

Escalation Matrix

Name: Sony Jha (HoG Procurement)
Contact No.: 9031368904
E-Mail ID: sony.jha@tpcentralodisha.com

Name: Vipin Chauhan (Head – Contracts (CCG)
Contact No.: 9717393121
E-Mail ID: Vipin.Chauhan@tpnodl.com

Bidders are strictly advised to communicate with Package Owner through TPCODL E-tender System (ARIBA) only. They need to pay Tender Participation Fee to receive the ARIBA Log-in.

3.3 Bid Prices

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

Applicable GST to be specified clearly.

The quantity break up shown else-where other than Price Schedule is tentative. The bidder shall ascertain himself regarding material required for completeness of the entire work. Any items not indicated in the price schedule but which are required to complete the job as per the Technical Specifications/ Scope of Work/ SLA mentioned in the tender, shall be deemed to be included in prices quoted.

3.4 Bid Currencies

Prices shall be quoted in Indian Rupees Only.

3.5 Period of Validity of Bids

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

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

3.6 Alternative Bids

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

3.7 Modifications and Withdrawal of Bids

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

3.8 Earnest Money Deposit (EMD)

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

The EMD shall be denominated in any of the following form:

- Banker's Cheque/ Demand Draft/ Pay order drawn in favor of TP Central Odisha Distribution Limited payable at Bhubaneswar.
- Online transfer of requisite amount through NEFT/ RTGS.
- Bank Guarantee valid for 210 days after due date of submission.

The EMD shall be forfeited in case:

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

Or

b) The successful Bidder does not
   a) accept the Purchase Order, or
   b) furnish the required Performance Security Bank Guarantee

4 Bid Opening & Evaluation process

4.1. Process to be confidential

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

4.2. Technical Bid Opening

Bids will be opened at TPCODL Office, Bhubaneswar. All tender bids shall be opened internally by TPCODL. Presence of any bidder will not be allowed during bid opening process. Technical bid must not contain any cost information whatsoever.

First the envelope marked "EMD" will be opened. Bids without EMD/cost of tender (if applicable) of required amount/ validity in prescribed format, shall be rejected.

Next, the technical bid of the bidders who have furnished the requisite EMD will be opened, one by one.

4.3. Preliminary Examination of Bids/Responsiveness

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

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

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

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

4.4. Techno Commercial Clarifications

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

4.5. Price Bid Opening

Price bids will be opened internally without the presence of any bidder representative. The EMD of the bidder withdrawing or substantially altering his offer at any stage after the technical bid opening will be forfeited at the sole discretion of TPCODL without any further correspondence in this regard.

4.6. Reverse Auctions

TPCODL reserves the right to conduct the reverse auction (instead of public opening of price bids) for the products/ services being asked for in the tender. The terms and conditions for such reverse auction events shall be as per the Acceptance Form attached as Annexure VI of this document. The bidders along with the tender document shall mandatorily submit a duly signed copy of the Acceptance Form attached as Annexure VI as a token of acceptance for the same.

Reverse Auction shall be as per the below approach:

No of bidders allowed to participate in RA process shall be: Total No of bidders on whom tender would be split **PLUS 2** more bidders

Illustrative example: Total no of qualified bidders is 10 & tender needs to split amongst 2 bidders.

PLUS 2 means (02 + 02 = 04) means lowest 4 bidders i.e., L1 to L4 bidders would be allowed in the RA process. Balance, H1 to H6 bidders would not be allowed in the RA process.

In case – Total no of qualified bidders is equal to or less than the PLUS 2 number, all qualified bidders shall be allowed in the RA process.

Illustrative example: Total no of qualified bidders is 6 & tender needs to split amongst 2 bidders. PLUS 2 means (02 + 02 = 04), so all 4 qualified bidders would be allowed in the RA process

5 Award Decision

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

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

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

6 Order of Preference/Contradiction

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

1. Schedule of Items (Annexure I)
2. Post Award Contract Administration (Clause 7.0)
3. Submission of Bid Documents (Clause 3.0)
4. Scope of Work and SLA (Annexure VII)
5. Technical Specifications (Annexure II)
6. Acceptance Form for Participation in Reverse Auction (Annexure VI)
7. General Conditions of Contract (Annexure VIII)

7 Post Award Contract Administration

7.1. Special Conditions of Contract

1. After finalization of tender, TPCODL shall place an Order on successful bidder(s). Order shall be valid for a period of ONE year from the placement of Contract.
2. All the costs pertaining to ROW/or any other expenses for execution of work is included in the scope of BA. Accordingly, the BA needs to consider this cost while submitting their Price Bids.
3. As per Ministry of Finance DoE Guidelines, 70% of Project cost (supply) attracts GST @ 12% & balance 30% of Project Cost (Installation) attracts GST@ 18%.
4. Before commencement of work, BA may be required to conduct the detail survey for allotted work for further submission of the Survey Report to the Engineer-in-Charge for approval. Since such survey is in the scope of BA, the bidder may consider this while offering its Price Bid.
5. BA shall deploy resources within 15 days from date of placement of Release Order.
6. TPCODL reserves the right to make changes to the scope of work with a view to optimize on the overall cost to TPCODL. BA shall fully cooperate with TPCODL in making such changes with an aim for overall cost optimization. The revised charges for Contract shall be jointly agreed upon between TPCODL and BA in such case.
7. Business Associate (BA) shall submit applicable Performance Bank Guarantee as per GCC within 15 days of issuance of order. PBG applicable shall be 5% of Order Value. PBG shall be valid until end of applicable Guarantee period (5 Years Guarantee and O&M Period from the date of completion of scope) plus six months claim period.
8. Any change in statutory taxes, duties and levies during the contract period shall be borne by TPCODL. However, in case of delay in work execution owing to reasons not attributable to TPCODL, any increase in total liability shall be passed on the Bidder, whereas any benefits arising owing to such statutory variation in taxes and duties shall be passed on TPCODL.
9. TPCODL reserves the rights to short close the issued Release Order / Rate contract, in case of any quality issues.
10. All the terms and conditions of TPCODL General Conditions of Contract for Composite Orders shall be applicable.

7.2 Drawing Submission and Approval (If Applicable)

The relevant drawings and GTPs need to be submitted by BA within two weeks of receipt of Rate Contract. In case, re-submission of drawings is required on request of TPCODL, same needs to be submitted back to TPCODL within 5 days of such request.

Wherever TPCODL specifications are not available, relevant IS/IEC to be followed. All Drawings mentioned in the Tender Specification and other required for the completeness of the tender shall be submitted. Drawing submission process shall not be deemed complete of all the requirements are not complied during the submission of the same

7.3 Delivery Timelines

Business Associate shall ensure completion of the electrification works including Supply and Installation within 90 days from the issue of Release Order.

7.4 Warranty Period

The supplier shall give Guarantee for the satisfactory functioning of the material / equipment as per specification, for a minimum period of 12 months from the last date of receipt of material in good condition at designated store for each consignment. The bidder shall be liable to undertake the replacement or rectify defects of the material failed during the guarantee period at his own cost within mutually agreed timeframe.

7.5 Payment Terms

1. BA will submit bills on monthly basis of all completed Supply and Installation work with certification from the consumer and certified bills of handing over of Installation from engineer-in-charge for payment. Payment shall be released within 30 days from the date of submission of certified bill after completion of work in all respect.

2. 10% of the amount will be hold for Annualized Comprehensive maintenance cost (CMC)

3. 20% of the total Annualized Comprehensive Maintenance Cost will be paid after end of each year (i.e for a period of 5 years) on submission of successful completion of Annual Maintenance certificate from the engineer-in-charge.

7.6 Climate Change

Significant quantities of waste are generated during the execution of project and an integrated approach for effective handling, storage, transportation and disposal of the same shall be adopted. This would ensure the minimization of environmental and social impact in order to combat the climate change. Please refer attached Environment Policy and Sustainability Policy, Annexure-XI for more details.

7.7 Ethics

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

TPCODL work practices are governed by the Tata Code of Conduct which emphasizes on the following:

- We shall select our suppliers and service providers fairly and transparently.
- We seek to work with suppliers and service providers who can demonstrate that they share similar values. We expect them to adopt ethical standards comparable to our own.
- Our suppliers and service providers shall represent our company only with duly authorized written permission from our company. They are expected to abide by the Code in their

interactions with, and on behalf of us, including respecting the confidentiality of information shared with them.

- We shall ensure that any gifts or hospitality received from, or given to, our suppliers or service providers comply with our company's gifts and hospitality policy.
- We respect our obligations on the use of third party intellectual property and data.

Bidder is advised to refer Tata Code of Conduct (TCOC) attached at Annexure X for more information.

Any ethical concerns with respect to this tender can be reported to Chief Ethics Counselor to the following e-mail ID: Chief Ethics Counselor Ethics@tpcentralodisha.com

8 Specification and standards

As per Annexure.

9 General Condition of Contract

Any condition not mentioned above shall be applicable as per GCC attached along with this tender.

10 Safety

All jobs are this tender have to be executed strictly in compliance to the Safety terms and Conditions of TP Central Odisha Distribution Limited. Please refer attached Safety terms and conditions, Annexure-IX, for details. Violation of Safety norms will result in Penalty as mentioned in the above document.

NIT No.: TPCODL/P&S/1000001301/2024-25

ANNEXURE I

SCHEDULE FOR ITEMS

Electrification of the Un-Electrified Households (UEHHs) identified under PM-JANMAN Scheme									
TPCODL/P&S/1000001301/2024-25									
S. No.	Item Description	UoM	Qty.	Unite Rate (Rs.)	GST @ 12% on 70% of Unit Rate Rs.	GST @ 18% on 30% of Unit Rate Rs.	Total GST (Rs.)	All Incl. unit rate (Rs.)	All incl. BOQ Price (Rs.)
(A)	(B)	(D)	(E)	(F)	(G=Fx70%x12%)	(H=Fx30%x18%)	(I=G+H)	(J=F+I)	(K=JxE)
1	**Supply** 1. Supply of Solar PV Panels 200 Wp 48 Volt as per technical specification, approved drawings and scope of work.- 1 Nos. 2. Supply of Solar DC charge controller with junction box, single pole & double pole MCBs, AC input option etc as per technical specification, approved drawings and scope of work.- 1 Nos. 3. Supply of corrosion resistant mounting structure including GI pipe, metallic frame, cross arm, pedastal, anchor fasteners, nuts, bolts, sign board etc as per technical specification, approved drawings and scope of work.- 1 Nos. 4. Supply of battery bank with battery enclosure and stand of suitable size as per technical specification, approved drawings and scope of work for 48 V, 42 A-hr, (Appr. 2000 watt-hour) with Sealed maintenance free VRLA battery with 50% DoD.- 1 Nos. 5. Supply of 5 watts LED 48 V DC lamp, holders and other mounting accessories as per detailed technical specifications, scope of work- 3 Nos. 6. Supply of 18 Watts 48 V DC LED tube light fixture with variable illumination features operating with remote controller. Tube light fixture to be supplied with mounting accessories and remote control switch etc as required as per technical specification and scope of the work.- 1 Nos. 7. Supply of 48 V DC Permanent Magnet Brush Less Direct Current (PM BLDC) 1200mm sweep, white in colour, DC ceiling fan. Fan to be supplied	SET	145		-	-	-	-	-

	with mounting accessories and remote control switch etc as required as per technical specification and scope of the work.- 1 Nos. **Installation** Installation & commissioning of the system (Supply of house wiring as well as system wiring materials including flexible multistrand 2 core copper conductor cables, rigid non-metallic 12 mm dia conduit, mounting accessories, USB Charging point/port, remote control switch& manual switch etc as required as per technical specifications and scope of work including Erection, testing and commissioning of 3 Nos. WLED lamps (5 W), 1 No. W-LED tube light (18 W) & 1 No. 1200 mm sweep DC ceiling fan (30 W +/- 10 %) with remote control switches, stationary battery bank (for 48V supply), power socket (25 W), USB port, sign board, user instruction manual including erection, testing & commissioning of Solar PV system containing 48 V Panels, Solar DC charge controller, mounting Structure with foundation, hardware etc as per technical specification, approved drawings and scope of work).								
	TOTAL							-	-

Signature & Seal of the Bidder

NOTE:

- The bidders are advised to quote prices strictly in the format attached.
- The bidder must fill each and every column of the format attached. ***Mentioning "extra/inclusive" in any of the column may lead for rejection of the price bid.***
- No cutting/ overwriting in the prices is permissible.
- The unit price should be exclusive of taxes & duties which are to be indicated in separate columns meant for the purpose.
- The bids will be evaluated commercially on the overall lowest cost in total BoQ basis.
- The prices shall be FOR TPCODL Locations.

ANNEXURE II
TECHNICAL SPECIFICATIONS

Attached

ANNEXURE III

SCHEDULE OF DEVIATIONS

Bidders are advised to refrain from taking any deviations on this TENDER. Still in case of any deviations, all such deviations from this tender document shall be set out by the Bidders, Clause by Clause in this schedule and submit the same as a part of the ***Technical Bid.***

Unless specifically mentioned in this schedule, the tender shall be deemed to confirm the* TPCODL*'s specifications:

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

By signing this document we hereby withdraw all the deviations whatsoever taken anywhere in this bid document and comply to all the terms and conditions, technical specifications, scope of work etc. as mentioned in the standard document except those as mentioned above.

Seal of the Bidder:

Signature:

Name:

ANNEXURE IV

SCHEDULE OF COMMERCIAL SPECIFICATIONS

(The bidders shall mandatorily fill in this schedule and enclose it with the offer Part I: Technical Bid. In the absence of all these details, the offer may not be acceptable.)

S. No.	Particulars	Remarks
1.	Prices firm or subject to variation (If variable indicate the price variation clause with the ceiling if applicable)	Firm / Variable
1a.	If variable price variation on clause given	Yes / No
1b.	Ceiling	--------- %
1c.	Inclusive of GST	Yes / No (If Yes, indicate % rate)
1d.	Inclusive of transit insurance	Yes / No
2.	Delivery	Weeks / months
3.	Guarantee clause acceptable	Yes / No
4.	Terms of payment acceptable	Yes / No
5.	Performance Bank Guarantee acceptable	Yes / No
6.	Liquidated damages clause acceptable	Yes / No
7.	Validity (180 days) (From the date of opening of bid)	Yes / No
8.	Inspection during stage of manufacture	Yes / No
9.	Rebate for increased quantity	Yes / No (If Yes, indicate value)
10.	Change in price for reduced quantity	Yes / No (If Yes, indicate value)
11.	Covered under Small Scale and Ancillary Industrial Undertaking Act 1992	Yes / No (If Yes, indicate, SSI Reg'n No.)

Seal of the Bidder:

Signature:

Name:

ANNEXURE V

CHECKLIST OF ALL THE DOCUMENTS TO BE SUBMITTED WITH THE BID

Bidder has to mandatorily fill in the checklist mentioned below:-

S. No.	Documents attached	Yes / No / Not Applicable
1	EMD of required value	
2	Tender Fee as mentioned in this tender	
3	Signed copy of this tender as an unconditional acceptance	
5	Duly filled schedule of commercial specifications (Annexure IV)	
6	Sheet of commercial/technical deviation if any (Annexure III)	
7	Balance sheet for the last completed three financial years; mandatorily enclosing Profit & loss account statement	
8	Acknowledgement for Testing facilities if available (duly mentioned on bidder letter head)	
9	List of Machine/tools with updated calibration certificates if applicable	
10	Details of order copy (duly mentioned on bidder letter head)	
11	Order copies as a proof of quantity executed	
12	Details of Type Tests if applicable (duly mentioned on bidder letter head)	
13	All the relevant Type test certificates as per relevant IS/IEC (CPRI/ERDA/other certified agency) if applicable	
14	Project/supply Completion certificates	
15	Performance certificates	
16	Client Testimonial/Performance Certificates	
17	Credit rating/solvency certificate	
18	Undertaking regarding non blacklisting (On company letter head)	
19	List of trained/untrained Manpower	

Seal of the Bidder:

Signature:

Name

NIT No.: TPCODL/P&S/1000001301/2024-25

ANNEXURE VI

ACCEPTANCE FORM FOR PARTICIPATION IN REVERSE AUCTION EVENT

(To be signed and stamped by the bidder)

In a bid to make our entire procurement process more fair and transparent, TPCODL intends to use the reverse auctions as an integral part of the entire tendering process. All the bidders who are found as technically qualified based on the tender requirements shall be eligible to participate in the reverse auction event.

The following terms and conditions are deemed as accepted by the bidder on participation in the bid event:

1. TPCODL shall provide the user id and password to the authorized representative of the bidder. *(Authorization Letter in lieu of the same shall be submitted along with the signed and stamped Acceptance Form).*
2. TPCODL will make every effort to make the bid process transparent. However, the award decision by TPCODL would be final and binding on the supplier.
3. The bidder agrees to non-disclosure of trade information regarding the purchase, identity of TPCODL, bid process, bid technology, bid documentation and bid details.
4. The bidder is advised to understand the auto bid process to safeguard themselves against any possibility of non-participation in the auction event.
5. In case of bidding through Internet medium, bidders are further advised to ensure availability of the entire infrastructure as required at their end to participate in the auction event. Inability to bid due to telephone line glitch, internet response issues, software or hardware hangs, power failure or any other reason shall not be the responsibility of TPCODL.
6. In case of intranet medium, TPCODL shall provide the infrastructure to bidders. Further, TPCODL has sole discretion to extend or restart the auction event in case of any glitches in infrastructure observed which has restricted the bidders to submit the bids to ensure fair & transparent competitive bidding. In case of an auction event is restarted, the best bid as already available in the system shall become the start price for the new auction.
7. In case the bidder fails to participate in the auction event due any reason whatsoever, it shall be presumed that the bidder has no further discounts to offer and the initial bid as submitted by the bidder as a part of the tender shall be considered as the bidder's final no regret offer. Any offline price bids received from a bidder in lieu of non-participation in the auction event shall be out-rightly rejected by TPCODL.
8. The bidder shall be prepared with competitive price quotes on the day of the bidding event.
9. The prices as quoted by the bidder during the auction event shall be inclusive of all the applicable taxes, duties and levies and shall be FOR at TPCODL site.
10. The prices submitted by a bidder during the auction event shall be binding on the bidder.
11. No requests for time extension of auction event shall be considered by TPCODL.
12. The original price bids of the bidders shall be reduced on pro-rata basis against each line item based on the final all-inclusive prices offered during conclusion of the auction event for arriving at Contract amount.

Signature & Seal of the Bidder

ANNEXURE VII

SCOPE OF WORK

Not Applicable

ANNEXURE VIIa

PREFERENTIAL NORMS FOR PROCUREMENT FROM MSMES REGISTERED IN THE STATE OF ODISHA

1. Tender Fees

To participate in the tender, MSMEs registered in the State of Odisha shall pay Rs.1,000/- including GST towards cost of tender paper.

2. Earnest Money Deposit (EMD)

EMD shall be exempted for MSME registered in the State of Odisha. However, Bidder shall be barred to participate in the tendering process for a period of 2 years in case it backs out post award of the contract.

3. Qualification Requirement for Open Tenders

Qualification Requirement of Financial Turnover for MSME registered in the State of Odisha shall be reduced to 20% of the existing criteria.

For past experience, instead of relying on the volumes / value of earlier Supplies / Projects, assessment of the Bidder shall be done on the basis of feedback from Customers. Past performance experience at Tata Power and its Group Companies shall supersede feedback from other Customers.

4. Reservation for MSME

It shall be mandatory to procure at least 20% of the total volume of the procurement from MSME registered in the State of Odisha (however, it shall not apply where goods/services are not available with the MSME), subject to matching L1 discovered prices and meeting technical specifications including quality requirements.

5. Performance Bank Guarantees

Performance Bank Guarantee for MSME registered in the State of Odisha shall be 25% of the value normally prescribed.

ANNEXURE VIII
GENERAL CONDITIONS OF CONTRACT

Attached: General Conditions of Contract for Composite Orders

ANNEXURE IX

SAFETY POLICY AND SAFETY TERMS AND CONDITIONS

1. Objective

The Tata Power engages contractor workforce to execute, run and maintain various operating sites and facilities across locations for various business verticals including Generation, Transmission, Distribution and Renewable. The activities range from project execution, operation, maintenance to facilities management.

The management of contractor safety represents a significant challenge for management. Tata Power has a responsibility to ensure that contractors are provided with enough information and support to enable them to conduct their roles safely and without endangering health and safety of their own workforce or that of our staff.

To ensure reduction in reportable injuries and achieve goal of zero accidents, first edition of contractor safety code of conduct was launched successfully in the year 2014. Since last four years after the launch of CSCC, Tata Power could achieve the objective of reduction in reportable injuries and fatalities.

Over the period, as the system was being matured, a need was felt to make second revision of the CSCC process. Objective of second revision is improve existing CSCC system and make it user friendly.

2. **Scope:** This procedure applies to all operating and project sites of The Tata Power Company Ltd and Group companies including new businesses like EV charging, Home Automation etc.

3. **Definitions**

3.1. **Order Manager:** Order Manager is the Tata Power representative, who has the ownership of the given job.

3.2. **Site Safety Management Plan**: It is the safety plan agreed between Contractor and Tata Power. It will contain the entire job specific safety requirement and will be signed by the contractor.

3.3. **Contractor**: An individual or a company that provides services to Tata Power under a signed contract.

3.4. **Emergency:** a serious, unexpected or dangerous situation requiring immediate action, which may result in loss of revenue/property, business discontinuity. In case of Emergency*, services may be procured by selecting the qualified vendor based on the vendor category without the safety bid evaluation. It must be approved by MB level and above.

3.5. **Expert Service jobs:** Jobs which needs expert services of contractor which does not involve direct exposure to the potential risk or work which involves only supervisory work such as expert for turbine overhaul, expert for boiler overhaul, expert for pump and motor, expert for compressor overhaul.

3.6. **Head of the Division:** Business in charge of the division who is overall custodian of the generating station or transmission division or distribution division.

3.7. **Category A Vendor: Vendor** eligible to carry out Very High & High risk (as per Tata Power Hazard Identification and Risk Analysis Procedure) and /or Long-Term Contract related to operation and maintenance (O&M) of plant. Vendors must fulfil the requirement specified for Category A in Appendix 12-CSMF-5 of this document.

3.8. **Category B Vendor:** Vendors eligible to carry out technical jobs, that are classified under Medium /low risk. Vendors must fulfil the requirement specified for Category B in Appendix 12-CSMF-5 of this document.

3.9. **Category C Vendor:** Vendors eligible for to carry out low or very low risk administrative and office jobs. For this he must fulfil the requirement specified for Category C in Appendix 12-CSMF-5 of this document.

3.10. **Category D Vendor: All** Consultants, Medical Practitioners or vendors taking job from Tata Power and working from their own premises (e.g. motor rewinding at vendor's shop floor, equipment sent for repair to vendor's works etc.) are classified as Category D Vendor

3.11. **High Risk Jobs: A Job or its activities are considered as Very High or High Risk when Order manager apply the "Tata Power Hazard Identification and Risk Analysis" procedure and found safety risk associated with are under Very High or High category. Indicative lists of jobs are given in appendix 15 of this document.**

3.12. **Medium Risk Jobs: Jobs or its activities are considered as medium risk when Order manager apply "Tata Power Hazard Identification and Risk Analysis" procedure and found the same as Medium Risk.**

3.13. **Low Risk Jobs: Any job or its activities are considered as Low or Very low risk while Order manager, calculate it by applying "Tata Power Hazard Identification and Risk Analysis" procedure and found it under Low or Very Low category.**

3.14. Long Duration Jobs: When the duration of job is 12 months or more, it is considered as Long duration job

3.15. High Value Jobs: When the value of the job contract is Rs. One Crore or more it will be considered as High value job**.**

4. Responsibilities

4.1 Order Manager: Order Manager is the Tata Power representative, who is responsible for:

4.1.1 Finalizing the Site Safety Management Plan along with Contractor, Safety Concurrences Group, Divisional Safety Head and Expert (External or Internal) if required.
4.1.2 Supervise and ensure work is carried out as per the Site Safety Management Plan including agreed Risk Assessment (HIRA/JSA) and Method Statement.
4.1.3 Conduct audit and evaluate Safety Performance of contractor.
4.1.4 Ensure contractors adhere to all statutory provisions.
4.1.5 In case any deviation is needed in agreed safety management plan or in CSCC process for execution of job, Management of Change procedure will be applicable, and approval may be obtained from divisional head /Cluster head.

4.2 Contractor: The person, entity or organisation who is executing the job for Tata Power under a contractual agreement and will be responsible for the following

4.2.1 To follow all Tata Power Critical Safety Procedure, Rules and guidelines given in Safety Terms and Conditions
4.2.2 Undertake job as per Site Safety Management Plan CSM-F10 and method statements agreed with Tata Power.
4.2.3 Raise any concerns with regard to their work and its safety with the Tata Power Order Manager.
4.2.4 Report all injuries, near misses, unsafe acts/conditions, and occurrences to the Tata Power Order Manager immediately.
4.2.5 Ensure that all sub-contractors follow the Tata Power Safety Procedure and agreed Site Safety Management Plan CSM-F10.
4.2.6 To follow all statutory requirements as per the laws of the land.
4.2.7 All vendors applying for A category jobs or submitting quote for high risk jobs shall obtain certificates of ISO 9001, ISO14001 and ISO45001 before submitting quote for high risk Jobs.

4.3 Safety Concurrence Group: It is Cross Functional Team constituted by Corporate Safety Team, which will have representatives from Execution department, Divisional safety and Corporate / Divisional contracts. SCG will be responsible for the following
4.3.1 Assessment of Safety Potential of new vendor before registration as per CSM-F1-Safety Category Qualification Form.
4.3.2 Safety Evaluation of the bids as per evaluation format CSM-F-9 Safety Bid Evaluation Criteria
4.3.3 Finalization of the Site Safety Management Plan CSM-F-10 submitted by the contractor.
4.3.4 Corporate Safety Team / Cluster Safety Head will be part of SCG during Safety Bid Evaluation for following types of jobs
4.3.4.1 High-Risk jobs to be carried out in Annual Overhaul / Major Shutdowns and Outages.
4.3.4.2 Capex jobs of High-Risk Category

5.1 Vendor Registration

For Vendor Registration, Corporate Contract will issue following documents for evaluation of contractor's safety capability

1) CSM-F1 –Safety Category Qualification Form

2) Safety Terms and Conditions

The document Safety Terms and Conditions provides the information about Tata Power safety System to the contractor. Contractor will submit the CSM-F1- Safety Category Qualification Form with all relevant details and documents to Vendor Registration Initiator, which will in turn forward it to Safety Concurrence Group (SCG) for evaluation. The SCG will evaluate the details submitted by the contractor based on a predetermined criteria CSM-F-5 Safety Potential Evaluation Criteria for Vendor Registration and will determine the category (Category A/B/C/D) for which the contractor will be registered. As mentioned in the above criteria, a site visit may also be organized by SCG prior to registration under Category A and B. In case, the contractor does not qualify the safety criteria, the contractor will not be registered. However, he may apply afresh for registration after 6 months. Please refer Appendix 1: Process Flow Chart for Vendor Registration.

5.2 Bid evaluation

At the time of placing the Purchase Requisition (PR), Order Manager is required to declare the risk involved in the of the job (i.e. High Risk / Medium Risk / Low Risk jobs, based on the RPN in HIRA. If the Job is “High Risk” or “Long Duration”, then RFQ will be attached with following documents:

1) CSM-F7- Blank Safety Competency Form
2) CSM-F8 PPE requirements
3) Safety Terms and Conditions
4) Job Specific Safety Requirement (Educational and Professional Qualification, Skill & Experience Manpower, Tools and Tackles (e.g. man lifter, use of drone, use & availability of rescue kit), Work Methodology etc.)

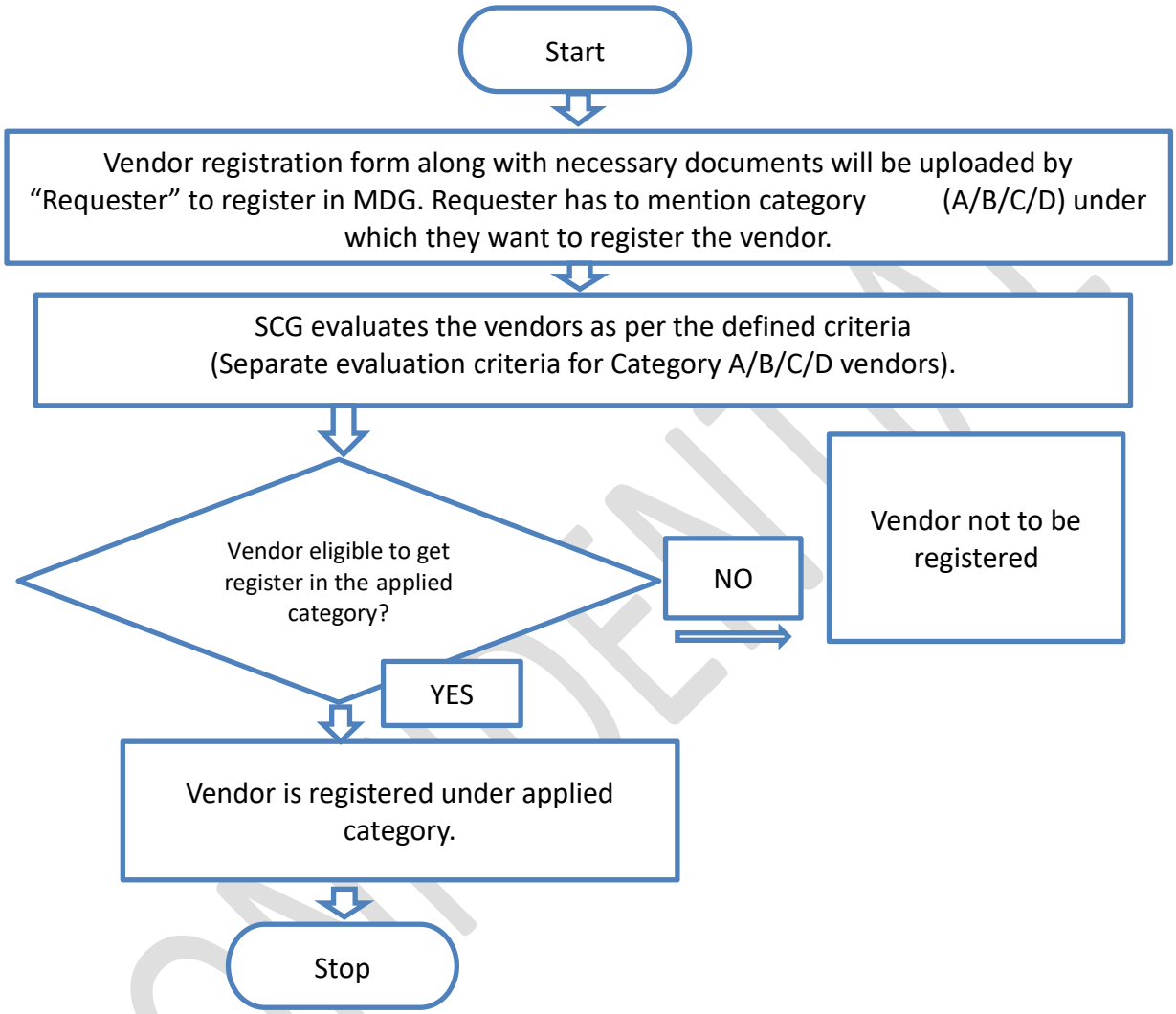
Otherwise the RFQ will be attached only with Safety Terms and Conditions. Long term and low value jobs (see definition) are exempted from the CSCC process.
Corporate Contracts will collect duly filledCSM-F7 Safety Competency Form along with the bid. All other stakeholders will also put their efforts to get all relevant safety data during meeting / discussions with the vendor. SCG will evaluate the document as per the CSM-F9 Safety bid evaluation criteria. If any specific condition related to Contract is required to convey to contractor, Site safety team will attach the same as Annexure for specific conditions of job and submit it to contract team along with safety bid evaluation form. Commercial bid of contractor will be considered for evaluation by contract team only if contractor is qualified in safety bid. Site Safety Management Plan, defining the complete procedure of executing the job at site will be signed by the contractor and SCG after mutual agreement. CC will attach a copy of site safety Management Plan and any specific condition of contract along with PO to the successful bidder. Please refer Appendix 6: Process Flow Chart for issuing RFQ and PO significant health and safety risk associated with it.

5.3 Safety Performance Evaluation

During the time of job execution, regular site inspection will be carried out by the Tata Power officials and violations will be dealt as per CSM–F4 Safety Violation Penalty Criteria. Apart from this, monthly safety performance of the contractor will be evaluated based on the

predetermined criteria as per CSM-F11 safety Performance Score and monthly score will be maintained by the Order Manager. Certain percentage of each running bill will be retained as Safety Retention amount and will be released on the basis of Safety Performance Score at certain intervals as defined in CSM- F-3- Safety Performance Evaluation Criteria. Please refer Appendix 10: Process Flow Chart for Safety Performance Evaluation. Percentage of retention amount is mentioned in safety terms and conditions.

Appendix 1: Process Flow Chart for Vendor Registration



Appendix 2: CSM-F-1 Safety Category Qualification form

1. "**Safety Category Qualification Form**" is part of vendor registration form. It needs to be filled by the contractor at the time of Registration and should submitted to Requester / order manager with all relevant documents.
2. The same will be evaluated by Safety Concurrence Group of the Division (SCG) as per the criteria given in CSM-F-5.
3. Information provided by contractor will be verified during site visit.

Safety Category Qualification Form

Please consider my application for

Category A Vendor: Vendor eligible to carry out Very High- and High-risk O&M jobs
Category B Vendor: Vendors eligible to carry out technical jobs, classified as Medium / low ris
Category C Vendor: Vendors eligible for to carry out low or very low risk administrative and office job
Category D vendor: All Consultants, Medical Practitioners or vendors taking job from Tata Power and working from their own premises.

Name of the Vendor:			
Sr. No	**Safety Information**	Remarks	Attachment
1	Certified for i. OHSAS 18001/ ISO 45001, ii. ISO: 14001 iii. ISO: 9001 (ISO certificates to be issued from reputed accreditation agencies specified by Tata Power)	i. Y/ N ii. Y/ N iii. Y/ N	Attach copy of the certification
2	Safety Statistics for Last Three (3) Years - LTIFR - LTISR	Yes/No	Year 1 (Last FY) / Year 2 / Year 3 LTIFR LTISR
3	Do you have Safety Policy?	Yes/No	Attach copy of the safety policy.
4	Do you have Safety training process?	Yes/No	Attach safety training process.
5	Do you have Safety organization structure e.g. Safety Officers and Safety Committees?	Yes/No	Attach copy of the safety organization structure.
6	Name and address of sites where work is in progress or worked earlier	Yes/No	Site details to be attached for inspection by Officials.

Signature :
Name and Designation :
Stamp of Organization :

Appendix 3: Safety Terms and Conditions

Please refer the attached document Safety Terms and Conditions.

Appendix 4: CSM- F-3- Safety Performance Evaluation Criteria

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

Contract Value	Retention Amount (%)
Up to 10 Lakhs	2.5
10 – 50 lakhs	2
0.5 to 10 Cr	1.5
>10 Cr	1

2. The evaluation criteria include Lead Indicators such as CFSA (Contractor Field safety Audit) score, percentage of workers trained in TPSDI, inspection of critical equipment. Lag indicators such as Fatalities, LWDC and man days lost.
3. The retention amount saved will go to a separate Safety Improvement Fund.
4. For the contract value of more than Rs 1 Cr or contract duration more than 12 months, the retention amount shall be released half yearly based on safety performance. For all remaining contracts, the retention amount will be released with the final bill.
5. Long term jobs with low value (Less than Rs. 1 Cr.) are exempted from the safety retention. Invoice of these type of jobs can be cleared without safety retention.
6. In case of job stoppage due to safety violations / unsafe observations at the site, no time extension shall be given to the contractor, if such delays are attributable to contractor.
7. In case of fatality, limb loss or loss of property, vendor must pay for liability, legal, statutory and additional mutually agreed settlement charges imposed by the appointed committee. This charge is over and above the retention amount.
8. The committee will finalize an amount between 5 -50 lakhs based on factors such as advise by statutory authorities, contract value and impact of accident etc.
9. Safety performance bonus 1% (limiting to 50 lakhs) of the invoice value will be considered at the end of the job if the contractual safety performance score 100%.
10. During the progress of the work, concerned Supervisor/Engineer will visit and inspect the work site regularly and evaluate the safety performance of the contractor based on matrix attached herewith and apply the Consequence management policy as applicable.
11. Order Manager, divisional chief and SBU head have the authority to terminate the contract in case of three consecutive serious violations.

Safety Performance Evaluation report- CSM-F-3

	Lead Indicators	**Unit Of measurement**	**Target**	**weight age**
1	% of Employee certified in TPSDI/Authorized agency	%	50%	10
2	CFSA score (Annexure 6.1)	Average Severity of Violations	1.49	20
3	Monthly inspection completed by contractor for Critical Equipment, lifting Tools & Tackles and hand tools used at site as per Tata Power Checklist	%	80	5
4	Revalidation of Condition of tools, tackles and equipment by Order Manger.	%	100	15
	Lag Indicators			
1	Number of Fatalities	No.	0	30
2	Number of Lost workday case (LWDC)	No.	0	10
3	Man-days Lost	No.	0	10

Appendix 5: CSM- F-4 Safety Violation Penalty Criteria

Penalty shall be imposed on the contractors under the following circumstances for breaching the contractual agreements:

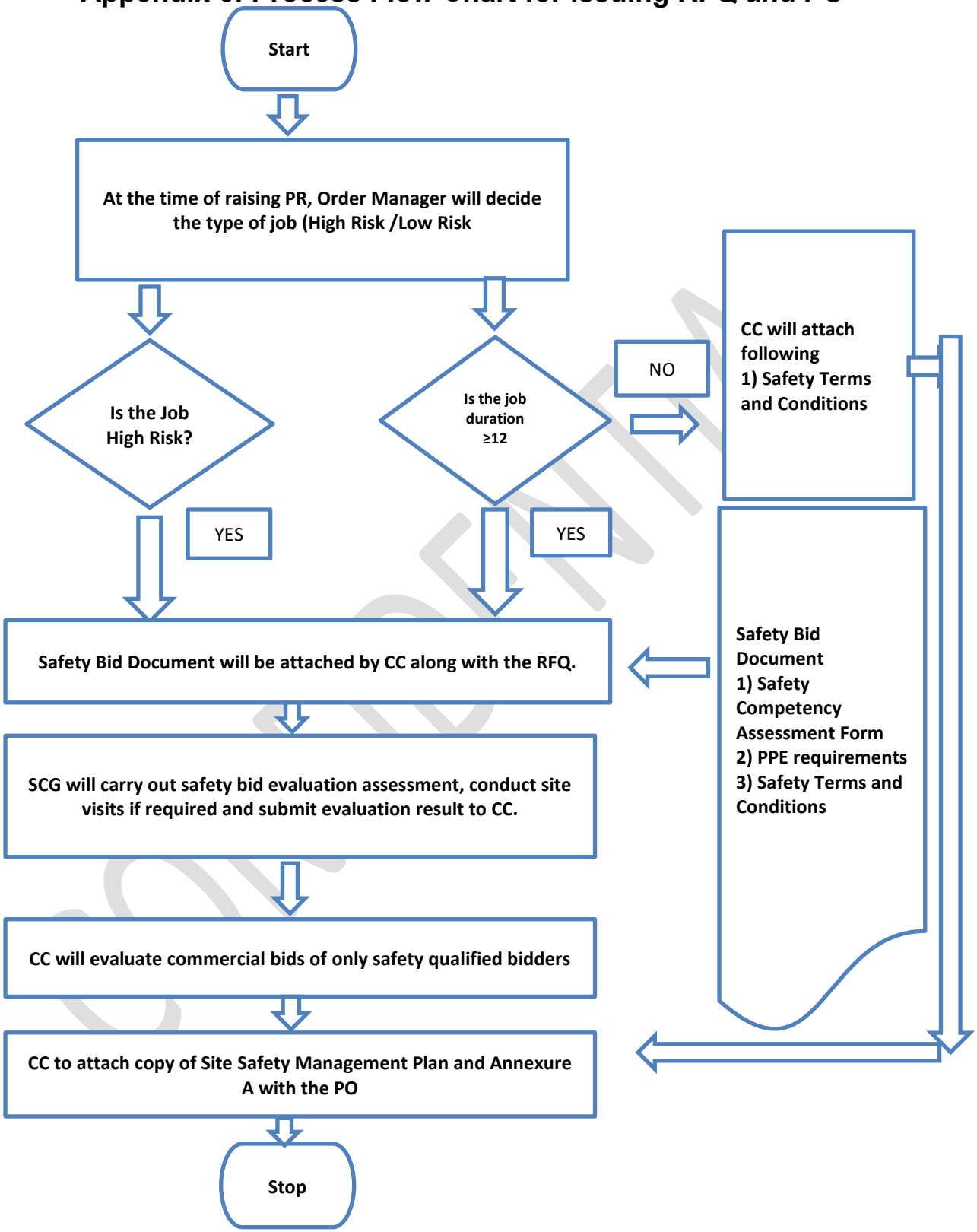
S No	Description of violation	Severit	Penalty
1.	Working without Permit	5	5000/-
2.	Untrained (TPSDI) worker on high-risk jobs.	5	5000/-
3.	Unhygienic/Bad condition of PPE	2	250/-
4.	Not following Tata Power Procedure & Standard	4	2000/-
5.	Unsafe Act/Condition of Severity 4	4	2000/-
6.	Unsafe Act/Condition of Severity 5	5	5000/-
7.	No Earthling of Electrical equipment	5	5000/-
8.	Damaged welding cable	5	5000/
9.	Violation of Positive Isolation Procedure (LOTO Not followed)	5	5000/
10.	ELCB of more than 30 mA/ELCB not working	5	5000/
11.	On/Off switch of welding m/c not working	5	5000/
12.	Electric cable tied with metal wire	5	5000/
13.	Leakage found DA hose / cylinder	5	5000/
14.	Use of LPG	5	5000/
15.	Use of IC engine based Three-wheeler at the work site.	5	5000/
16.	Starting the job without Toolbox Talk	5	5000/
17.	Spatter falling on DA hose / Gas-line/ pathways / Equipment	5	5000/
18.	No safety latch in crane hook	5	5000/
19.	Load raised or swung over people or occupied areas of buildings	5	5000/
20.	Persons standing in swing area of construction equipment.	5	5000/
21.	Using damaged slings.	5	5000/
22.	Unstable scaffolding/nonstandard Scaffolding in use	5	5000/
23.	Handrails and mid-rails are missing	5	5000/
24.	Safety Harness not anchored with lifeline/fixed structure	5	5000/
25.	Fall arrestor not provided/ Not being used.	5	5000/
26.	Double lifeline not used for working at height	5	5000/
27.	No rubber mat in Electrical Distribution (DB) room	4	2000/-
28.	Water found accumulated in Electrical Distribution room/near welding machine.	4	2000/
29.	Inserting electric cables into socket, without using plug.	4	2000/
30.	Use of damaged electrical cable/two core cables.	4	2000/
31.	Inflammable material found in Distribution Room / welding areas.	4	2000/
32.	Loose material falling into excavated pit	4	2000/
33.	Water logging into excavated pit /trenches	4	2000/
34.	No / inadequate Barricade	4	2000/
35.	Undercut / cave-in found on sides of excavated pits	4	2000/
36.	Grinding wheel/ Coupling/ Piling winch/other rotating parts without guard	4	2000/

37.	The HMV/Mobile Crane operator does not have a valid HMV driving license.	4	2000/
38.	The loading area is not leveled properly.	4	2000/
39.	Ladder not anchored at top	4	2000/
40.	Opening found in working platform of scaffolding/floor	4	2000/
41.	Inadequate illumination at the working area	4	2000/
42.	Loose material lying on Gantry, platform	4	2000/
43.	Cleaning with Compressed Air.	3	500/-
44.	Gas Cylinders using without cap.	3	500/
45.	Gas Cylinders stored without securing	3	500/
46.	Bringing inside any other chemicals, apart from approved by Safety dept.	3	500/
47.	Using drum for sitting or accessing height.	3	500/
48.	Misusing emergency facilities like fire hydrant line/ hose box/ spray system/ eye wash etc.	3	500/
49.	No provision of Safety net where falling materials or tools may occurs	3	500/
50.	Taking electrical supply from non-designated outlet (other than socket).	3	500/
51.	Restricted gangways due to unwanted materials.	3	500/
52.	Not reporting incident.	3	500/
53.	Entering into restricted area like switch yard/ hazardous storage	3	500/
54.	Work without supervision	3	500/
55.	Parking of vehicle without applying wheel choke at right front-front and left rear-rear wheels other than passenger cars.	3	500/
56.	Heavy Vehicle without helper or co-driver.	3	500/
57.	Not wearing florescent safety jacket at site.	3	500/
58.	People travelling in load body of vehicle.	3	500/
59.	Parking of vehicles at non designated area.	3	500/
60.	Shifting heavy materials without guide ropes.	3	500/
61.	Using other than 24V lamp inside the confined space/Use of other than 24V lamps.	3	500/
62.	Angular loading/ lifting with Crane or hoist.	3	500/
63.	By passing the limit switch/ Safety Interlock.	3	500/
64.	Housekeeping activities on road without proper barricade.	3	500/
65.	Trying to board or alit from running vehicle.	3	500/
66.	Cylinder Valves of Gas cylinders not closed when not in use.	3	500/
67.	Flash-back arrester not used.	3	500/
68.	Hand Trolley wheel found damaged.	3	500/
69.	Guy ropes of required length on both sides of object are not used during movement with load.	3	5/ 00/
70.	Scotch block/wedge not provided, when the vehicle is parked.	3	500/

71.	Suitable Trolley not provided to hold the cylinders.	3	500/
72.	Locked First Aid box	3	500/
73.	Caution boards, danger signs (luminescent /red) along with emergency contact number are not found displayed.	3	500/
74.	Person found jumping barricading tape	3	500/
75.	Stacking of pipes, pile casing, drums without chock blocks/wedges	3	500/
76.	The terrain on which Heavy Equipment/Machinery moves is not reasonably hard.	3	500/
77.	Without Safety Helmet at working sites	4	250/-
78.	Without Crash Helmet (on bikes)	4	500/-
79.	Without Full body double lanyard Safety Harness (for work at height)	5	5000/-
80.	Without Hand gloves - Material Handling, Welding, Cutting,	4	100/-
81.	Without Safety goggles/ face shield - Welding/Cutting /Grinding	5	5000/-
82.	Handling Chemical without PVC Apron	5	5000/-
83.	Smoking in prohibited area (Closed Go-downs, Storage of flammable material, Storage of Gas cylinders)	5	1000/-
84.	Sleeping at Workplace	3	100/-
85.	Driving beyond speed limit	3	1000/-
86.	Seat Belt While Driving (for front seat passengers and driver)	3	500/-
87.	Driving without license	4	1000/-
88.	Heavy Commercial vehicles without reverse horn	3	500/-
89.	Nonfunctional Head light/ taillight and side indicators	3	100/-
90.	Using Mobile Phone During Driving	5	5000/-
91.	Poor visibility of registration number/ without registration number	3	100/-
92.	Broken/ without Side view mirror	3	100/-
93.	Over speeding above specified limit	3	500/-
94.	Broken/ Without Pressure gauge on Oxygen/ LPG / Acetylene cylinder.	3	500/-
95.	Without Flash back arrestor on Industrial Acetylene & Oxygen cylinders.	5	5000/-
96.	Spillage of hazardous material/chemicals during transportation	4	2000/-
97.	Electrical equipment without Earthing/ ELCB/ Double Insulation Cable.	5	5000/-
98.	Lifting Tools & Tackles used without/ expired Test Certificates.	5	5000/-
99.	Housekeeping repeatedly not maintained		
100.	• First Time	3	Warning
101.	• Second Time	4	1000/-
102.	• Third Time	5	5000/-

103.	Serious Violation of House Keeping (after 1st or 2nd warning to be decided by Project Manager depending on the severity)	5	Rs.10000/- and above
104.	Repeat Violation of same nature	5	5 X Penalty for Violation
105.	Appointment of subcontractor without his Safety Bid Evaluation and/or without the permission of engineer in charge or Order manager.	5	5% of Contract Value

Appendix 6: Process Flow Chart for issuing RFQ and PO



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

Name of the Vendor/Bidder : -

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

Description of the Job : -

Request for Quotation (RFQ) No. :-

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

1. Proposed Manpower Deployment Schedule: -

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

Instructions to Bidder to fill:

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

Direct bidder employee
Partly Direct / Partly sub-contracted
Sub-Contracted

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

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

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

Sr. No.	Description of Tools / Tackles	Capacity / Rating	Quantity	Make	Remarks
1					
2					
3					
4					
5					
6					
7					
...					

3. Safety Records:

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

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

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

4. Job Safety Plan/ Method Statement:

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

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

5. Management System Certification: -

Sr.	Certification	Yes / No	If Yes, ar of Certification	If No, et date for Certification
	ISO 9001			
	ISO 14001			
	OSHAS 18001 / ISO 45001			
	Any other (please specify……..)			
Note: Please attach certificates to support above. In case not accredited for above but applied for, application letters may be attached.				

Appendix 8: CSM-F-8 PPE requirements

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

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

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

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

Site Safety Plan / Method Statement (Template)

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

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

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

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

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

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

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

6.1 Pre-Working Checks

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

Tools required for work:

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

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

Sr.No	Activity	Details of job sequence	Risk Involved	Control Checks
1.				

2.				
3				
4				
5.				

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

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

Attachment: - Specific Risk Assessment

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

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

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

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

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

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

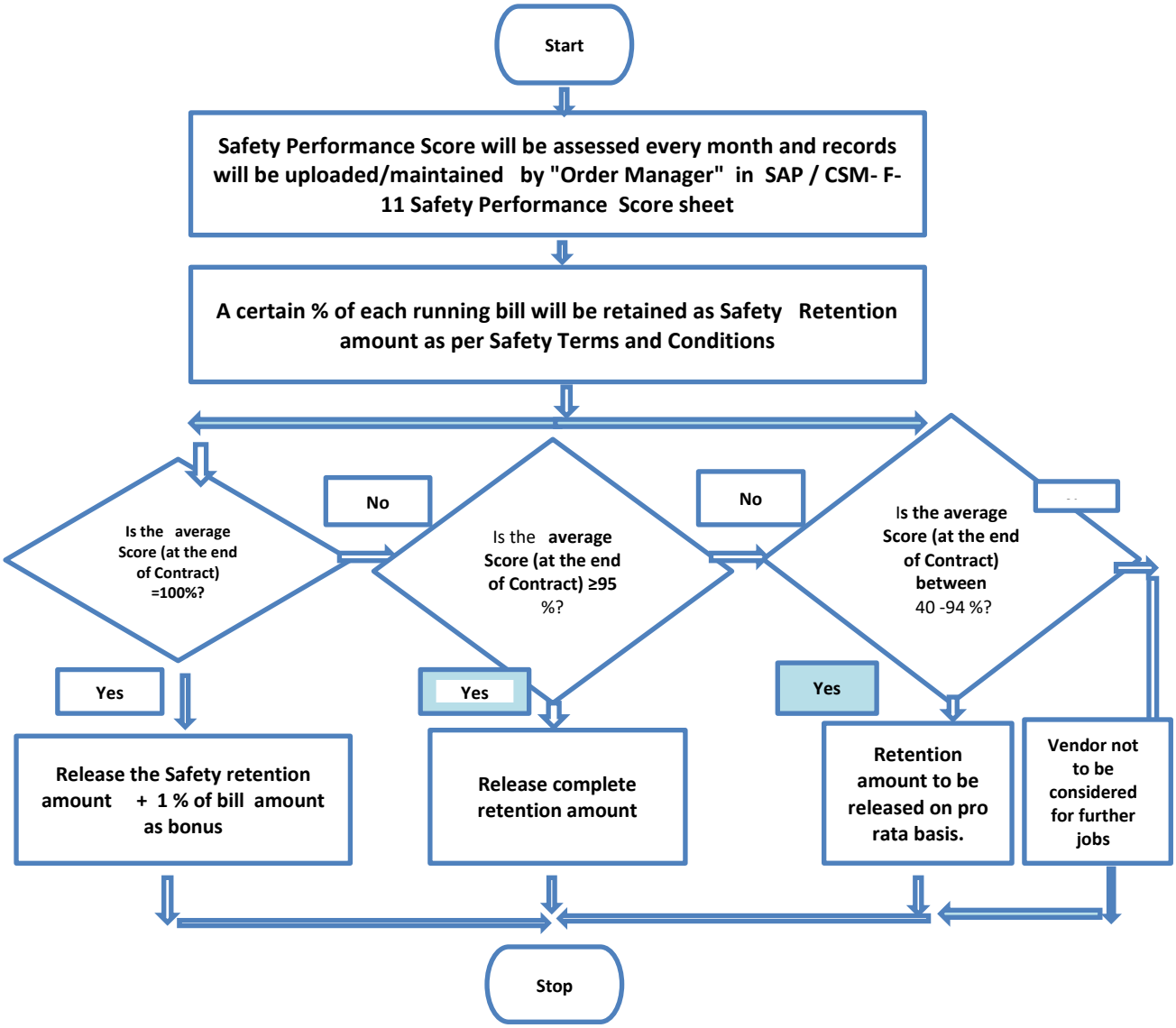
10.0 First Aid facilities and Nearby Hospitals Details

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

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

1. Please give a brief writeup / methodology of your organization planned to avoid impact of the COVID-19 pandemic at Tata Power working site. 2. Please give brief details of occupational health and hygiene related interventions planned by your organisation to ensure good health and fitness of workforce at Tata Power site.

Appendix 10: Process Flow Chart for Safety Performance Evaluation



Appendix 11: CSM- F-11 Safety Performance Score

S. No	Parameter	Unit of Measurement	Target	Weightage	Actual Performance	Actual Score
Lead Indicator						
1	% of Employee certified in TPSDI/Authorized agency	Number	50%	10		
2	CFSA score (Annexure 6.1)	Average Severity of Violations	1.49	20		
3	Monthly inspection completed for Critical Equipment, lifting Tools & Tackles and hand tools used at site	Number	80%	10		
4	Condition of critical tools, tackles and equipment	Number	100%	10		
Lag Indicator						
1	Number of Fatalities	No	0	30		
2	Number of Lost workday case (LWDC) (reportable)	No	0	10		
3	Man-days Lost	Man-days	0	10		
					Final Score	
					Invoice Value	
					Amount to be released	

Safety Performance Evaluation Criteria

Lead Indicators

	Target			
% of Employee certified in TPSDI/Authorized agency	50%	100%	Less than 100%	
Score		10	5	
	Target			
CFSA score	<=1.49	1.5 to 2.5	2.51 to 3.5	>=3.51
Score	20	15	10	0
	Target			
Monthly inspection completed for Critical Equipment, lifting Tools & Tackles and hand tools used at site	>=80%	79 to 50%	<50%	
Score	10	7	0	
	Target			
Condition of critical tools, tackles and equipment	100%	<100%		
Score	10	0		

Lag Indicators

Number of Fatalities	0	>0	
Score	30	0	
Number of LWDC (reportable)	0	>0	
Score	10	0	
Number of man days lost	0	1 to 5	>5
Score	10	5	0

Appendix 12: CSM-F-5 Safety Potential Evaluation Criteria for Vendor Registration

At the time of vendor registration, vendor will be registered under 3 categories

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

For vendors to be registered under **Category A**, a safety potential evaluation will be carried out based on following parameters.

Sr. No	Description	Weightage (%)	Actual Score	Remarks
1	Does the contractor have a valid ISO 45001/ OHSAS 18001/ Certification?	30		
2	During site visit check for safety adequacy at site	30		Annexure - 12.1
3	Check the Safety statistics of Contractor	10		Annexure - 12.2
4	Check the Safety orientation & training process of Contractor	15		Annexure 12.3
5	Check the organizational structure for safety professionals & engineers / supervisors.	10		Annexure - 12.4
6	Certified/skilled workers as a percentage of overall workforce	5		
	Total	100		

Evaluation Criteria for Category B

Sr. No	Description	Weightage (%)	Actual Score	Remarks
1	Does the contractor have a valid ISO 9001 certification?	30		
2	During site visit check for safety adequacy at site	30		Annexure -12.1
3	Check the Safety statistics of Contractor	10		Annexure -12.2
4	Check the Safety orientation & training process of Contractor	15		Annexure -12.3
5	Check the organizational structure for safety professionals & engineers / supervisors.	10		Annexure -12.4

6	Certified/skilled workers as a percentage of overall workforce	5		
	Total	100		

Evaluation Criteria for Category C

Sr. No	Description	Weightage (%)	Actual Score	Remarks
1	Does the contractor have a valid ISO 9001 certification?	40		
2	Check the Safety statistics of Contractor	40		Annexure - 12.2
3	Check the Safety orientation & training process of Contractor	20		Annexure - 12.3
	Total	100		

Annexure 12.1: Evaluation Criteria for Category D:

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

Annexure 12.2

Check List – Adequacy of Safety Statistics of Service Provider			Actual Marks obtained	Remarks
1	Check the safety statistics for last 3 years (LTIFR and LTISR)	Statistics available: Marks 5; Statistics not available: 0		
2	Check the trend LTIFR for last 3 years	LTIFR value / Marks: 0 to 0.2 / 5; 0.21 to 0.3 / 2.5; >0.3 / 0		
3	Check the trend of LTISR last 3 years	LTISR value / Marks: 0 to 2 / 5; 2 to 3 / 2.5; >3 / 0		
4	Has there been any Prosecution/Conviction for any contravention with regard to Safety & Health provisions under the Factories Act /Electricity Act/ BOCW Act and Rules framed there under?	Marks: No Prosecution 10; Prosecution 0. To be provided in written on letter head		
	Total	**25**		

Annexure 12.3

Check List – Adequacy of Safety orientation & training process of Service provider			Actual Marks obtained
1	Records of safety trainings provided to safety officer/supervisor/workmen during last 1 year as percentage(%) of total employed by service provider	**Safety Officer** / Marks ≥80% of employees / 5 50 to 79 % of employee / 2.5 <50% / 0 **Safety Supervisor** / Marks ≥80% of employees / 10 50 to 79 % of employee / 6 <50% / 0 **Workmen** / Marks ≥80% of employees / 10 50 to 79 % of employee / 6 <50% / 0	
	Total	25	

Annexure 12.4

Check List – Adequacy of organizational structure for safety professionals & engineers / supervisors.			Actual Marks obtained
1	Check availability of number of safety officers from government recognized institute as per workforce strength.	Marks 1 in 50 employees / 10 1 in 100 employee / 6 Any other / 0	
3	Check availability of qualified workforce from government recognized institute/TPSDI.	Marks 100% of safety officers qualified / 5 50 – 99% of safety officers qualified / 3 <50 / 0	
	Total	15	

Appendix 13: CSM-F-9 Safety Bid Evaluation Criteria

The User has to select whether the job is high risk/ long duration at time of raising the PR.

1) The decision whether job is "**high risk** "or not has to be made by order manager on the basis of Risk involved (Risk Priority Number in HIRA) of the Jobs. An indicative list of high-risk jobs is attached as annexure
2) If a technical job is of low risk with estimated duration of the contract is 1 year or more the job should be treated as "**long duration**".
3) All Safety bids will be evaluated by Safety Concurrence Group. Structure of SCG will be declared by Corporate safety. Corporate safety team will audit bid evaluation process of a few selected jobs and Quality of evaluated safety Bids.
4) Records of jobs sent by for Safety Bid evaluation shall be maintained by Corporate Contract team in existing tracing sheet along with other jobs.
5) For Safety Bid Evaluation will be based on following parameters.

		Minimum Requirement	Weightage (%)	Score Obtained
Manpower	**Safety Officer (1 per 500 workers)**	**Qualification-** Officer shall possess Advance Diploma In Industrial Safety by state technical board. **Experience**- Minimum 1-year experience in relevant field as mentioned in the job in PR.	5	
	Safety Supervisor (1 per work site up to max. 50 workers)	**Qualification-** Supervisor shall possess ITI/ Diploma in relevant field. **Experience**- Minimum 2-year experience in relevant field as mentioned in the job in PR. **Training** – Trained and certified by TPSDI or equivalent institute in relevant safety procedures. **Note:** On request of the contractor/Users -TPDSI should vet & certify the skilled & experienced Technician if Technical Qualification is not adequate.	5	
	Technician (Skilled workers as electrician, rigger, fitter, welder, cable jointer, line men etc)	**Experience**- Minimum 2 year experience in relevant field as mentioned in the job in PR. **Training** – Trained and certified by TPSDI or equivalent institute in relevant safety procedures.	5	

Tools & Tackles	Equipment / Machines/ Tools & Tackles(lifting and shifting tools)	The list of Equipment /Machines / Tools and tackles to be used for job to be submitted by the contractor. Evaluation of the list will be carried out based on 1) Suitability as per the relevant job 2) Make and age of the tools from authorized agencies defined by the user. 3) Certification by the competent authority of respective state.	30	
Safety Records	Safety Records	Safety Records for last 3 years (as per vendor or as per our knowledge) – Recommendation?	15	
Safety Plan	HIRA/Contract Job Safety Plan	Adequacy of HIRA and Job Safety Plan with respect to relevant job. More weight age will be given to vendor for using mechanized work and advanced tools and equipment	20	
Accredited Bodies certificate	ISO-9001	ISO-9001	2	
	ISO-14001	ISO-14001	3	
	OHSAS 18001 ISO 45000	OHSAS 18001/ISO 45000	15	
		Total Score		

6) Vendor entitled to carry out the job only when qualified for the safety evaluation as follows:
   Contractor is qualified in safety bid only if his total score is more than 70% in all category 1 jobs such as high risk/long duration.
7) The Corporate Contract has to ensure that the vendor provides the filled “Safety Competency Form” along with the quotation.
8) Corporate Contract will forward the Safety Competency Form received from the contractor to the Safety Concurrence Group for evaluation.
9) In case SCG wants to visit the site, the Safety Competency will be based on evaluation at the time of site visit Annexure 13.1

Annexure -13.1:

Checklist to be used: During site visit to check the adequacy Safety systems.			
		Observation	Score* (1-5)
1	Check the adequacy of safety policy and Safety Management system of the contractor.		
2	Does the contractor have written down safety procedures?		

3	Check the records of Near miss, unsafe act, unsafe conditions and incidents.		
4	Check the organization setup to implement the safety systems at site (safety officer, safety supervisor)		
5	Check whether safety meeting and toolbox talk carried out regularly and records maintained or not.		
6	Is the process of incident investigation adequate or not?		
7	Verify incident reporting and recording system		
8	Check the usage of equipment/tools and tackles.		
9	Check for housekeeping at site		
10	Check the use of PPEs and general behavior of workforce towards safety		
	Total Score		
	Site Visit Score		

Score*- rating on the scale of 1-5 to be given based on the observations on site. Score of 1 is the lowest and core of 5 is the highest.

Appendix 14: CSM-F-11.1 CFSA Format

CONTRACTOR FIELD SAFETY AUDIT						
Project Name :						
Date:						
Description of Severity rating:			**Audit Team:**			
	1 = Untidy area, minor issues, sets poor example					
	2 = Restricted access, unacceptable trash, disorderly					
	3 = Rule or procedure violation, potential injury					
	4 = Unsafe condition, serious injury potential					
	5 = Immediate serious injury potential, stop activity immediately and correct		**Audit Time:**			10:00hrs -11:30 hrs
			Weather:			cloudy
	Description	**Responsible**	**Number Personnel Observed**	**Violations**	**Remarks**	Leading Indicators

		Engineer	Contractors	Good Citizens	Violators	Number of Violations	Severity	Violations x Severity		4 & 5	PPE	Unsafe Act	Unsafe Condition
Area													
1													
	Sub Totals			**0**	**0**	**0**	**0**	**0**		**0**	**0**	**0**	**0**
	% of Observed People Working Safely												
	Number of Violations												
	Average Severity of Violations												
	Number of Severity 4 & 5 Violations												
	% of 4 & 5 Violations												
	Approximate Number of Workers Observed												
	Number of People on Site												
	% of Workers Observed												

Appendix 15: Indicative List of High-Risk Jobs

To access the exhaustive list of High-risk jobs, please refer the following documents

1) High Risk Jobs- Generation
2) High Risk Jobs- T&D
3) High Risk Jobs- Renewable

Indicative List of High-Risk Jobs -Generation Cluster						
Sl. No.	**Jobs**					
1	Demolition / Painting of Chimney					
2	Survey Sounding Jobs in Sea					
3	Dredging at Coal Birth Jetty					
4	Maintenance / Testing and Replacement of Extra High Voltage (132 KV etc.) Switchyard equipment					
5	Maintenance of EOT Cranes					
6	Deep excavation (5 feet or more) near existing buildings /Structure s					
7	Working inside confined spaces (entry through manhole)					
8	Operation Maintenance of elevators					
9	Working on Live control Circuits for identification of faults					
10	Cable laying and termination Jobs					

Indicative List of High-Risk Jobs - T&D Cluster						
Sl. No.	**Jobs**					
1	Transmission Line Tower Erection on columns, near live lines, In congested areas, In creeks, In the Sea					
2	Conductor Stringing on Tower Using Tensioner & Puller in the area such as Line Crossing, Near Live lines, Congested Areas, Road Crossing, Bridge Crossing, Railway line Crossing, In creeks ,In the Sea					
3	Cable Pulling by Using winch Machine in City and Rural Areas					
4	Hot Washing of HT and Extra HT lines, Towers and switchyards equipment					
5	Installation of Lifts					
6	Installation of EOT Cranes					
7	Tower Dismantling					
8	Working on H Frame /Pole mounted Transformers					
9	Excavation in operational Area heaving power cables in receiving station					
10	Identification and spiking of cable / disconnection of cables from poles					

Indicative List of High-Risk Jobs - Renewable Cluster						
Sl. No.	**Jobs**					
1	Working on Electrical Panels					
2	Hi Potting of Equipment					
3	Battery commissioning and maintenance					
4	Working on the nasal of Wind Turbine					
5	Working on live electrical switchyard, material Handling and Equipment installation					
6	Roof Top Solar Panels Installation and maintenance					
7	Working in live Electrical Switchyard, Material Handling, equipment installation					
8	All maintenance activities that requires climbing on Towers /Structures / Transformer/ GODs					
9	Loading and Unloading of Solar Panels on trucks					
10	Structural Repair /Dismantling work at height.					

ANNEXURE X
TATA CODE OF CONDUCT

The Owner abides by the Tata Code of Conduct in all its dealing with stake holders and the same shall be binding on the Owner and the Contractor for dealings under this Order/ Contract. A copy of the Tata Code of Conduct is available a tour website:

https://www.tatapower.com/pdf/aboutus/Tata-Code-of-Conduct.pdf

The Contractor is requested to bring any concerns regarding this to the notice of our Chief Procurement & Stores e-mail ID: Pourush Garg <Pourush.Garg@tpcentralodisha.com>

ANNEXURE XI
ENVIRONMENT & SUSTAINABILITY POLICY

TPCODL
TP CENTRAL ODISHA
DISTRIBUTION LIMITED
(A Joint Venture of Tata Power and Government of Odisha)

IMS
WE DREAM WE DO
PEOPLE · PROCESS · PROFIT

Integrated Management System Policy

Quality, Safety, Occupational Health, Environment

We at TP Central Odisha Distribution Limited are committed to deliver world class service and reliable power through an energised workforce leading to ever increasing satisfaction of its customers, environmental protection and safe and healthy working condition.

This will be achieved by:

- Complying with all the requirements of ISO-9001, ISO-14001 and ISO-45001 management system standards through engaged workforce
- Complying with applicable Legal requirements
- Continually improving Quality, Environment and Occupational Health & Safety Performance
- Ensuring Environmental protection through Prevention of Pollution
- Conservation of Natural Resources
- Creating a work environment which encourages team work, safe work practices, learning and innovation
- Providing safe and healthy conditions that prevents work related injury and illness
- Eliminating hazards and reducing OH&S Risk
- Ensuring participation and consultation of workers

This policy will be made available to interested parties.

Date: 1st June, 2023

Arvind Singh
Chief Executive Officer

CORPORATE SUSTAINABILITY POLICY

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

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

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

(Praveer Sinha)
CEO & Managing Director

Date: 15th June, 2018

TATA POWER
Lighting up Lives!

Technical Specification of Solar Photo Voltaic Stand Alone System under PM-JANMAN Scheme

CONTENTS

1. Solar Photo Voltaic (PV) module

1.1 The design, engineering, manufacture, assembly, stage inspection, final inspection and testing before dispatch, packing and delivery at destination stores by road transport, transit insurance of Solar PV Module, complete with all fittings, accessories, associated equipment's, spares, etc. Required for its satisfactory operation shall conform to IEC 61215:2005 and IS 14286:2010 (with latest amendments).

1.2 The scope of supply includes the provision of type test. The equipment offered should have been successfully type tested within five years from date of tender and the designs should have been in satisfactory operation for a period not less than three years as on the date of order. Compliance shall be demonstrated by submitting, (i) authenticated copies of the type test reports and (ii) performance certificates from the users, preferably from Central Govt./State Govt. or their undertakings.

1.3 The Solar PV Module shall conform in all respects to highest standards of engineering, design, workmanship, this specification and the latest revisions of relevant standards at the time of offer and the employer shall have the power to reject any work or material, which, in his judgment, is not in full accordance therewith. The PV Module offered, shall be complete with all components, necessary for their effective and trouble-free operation. Such components shall be deemed to be within the scope of supply, irrespective of whether those are specifically brought out in this specification and / or the commercial order or not.

1.4 The Engineer reserves the right to reject the material if on testing the efficiency of panels is lower than the declared efficiency beyond tolerance limit as per IS /IEC or specified in technical particular from the guaranteed value including tolerance as per this specification and if any of the test results do not match with the values, given in the guaranteed technical particulars and as per technical specification.

1.5 Indigenously manufactured PV modules should be used.

1.6 The PV modules must conform to the latest edition of the following IEC/ equivalent BIS Standards for PV module design qualification. and type approval:

Sl. No	Standard	Description
1.	IEC: 61215/IS: 14286	Crystalline silicon terrestrial photovoltaic modules - Design qualification and type approval
2.	IEC: 61730- Part 1	Photovoltaic (PV) module safety qualification - Requirements for construction
3.	IEC: 61730 - Part 2	Photovoltaic (PV) module safety qualification - Requirements for testing
4.	IEC: 61701/IS: 61701	Salt Mist Corrosion Testing of the module

1. 7 The general Technical Parameters are given hereunder:

1. SPV Module Capacity : 200 Wp as per state specific approval

2. The PV module s should be made up of crystalline silicon solar cells and must have a certificate of testing conforming to IEC 61215 Edition II/ BIS 14286 from NABL or IECQ accredited Lab.

3. The module efficiency should not be less than 14%

4. The terminal box on the module should have a provision for opening, for replacing the cable, if require

5. There should be a Nameplate fixed inside the module, which will give:

   a) Name of the manufacturer or Distinctive logo.
   b) Name of the Scheme (PM-JANMAN)
   c) Name of DISCOM/Power Department (TPCODL)
   d) Model Number
   e) Unique Serial Number
   f) Year of Manufacture
   g) A distinctive serial number starting with NSM will be engraved on the frame of the module or screen printed on the tedlar sheet of the module.

1.8 DRAWINGS

a) The contractor shall furnish, within fifteen days after issuing of Letter of Award, six copies each of the following drawings/documents incorporating the Solar PV module rating and efficiency for approval:

i. Detailed overall general arrangement drawing showing front and side elevations and plan of the Module and all accessories with details of dimensions, net weights and shipping weights, etc.
ii. Name plate drawing and connection diagrams.
iii. Interconnection diagrams.
iv. Technical leaflets of major components and fittings.
v. As built drawings of schematics, wiring diagram etc.
vi. Completed technical data sheets.

b) All drawings, documents, technical data sheets and test certificates, results calculations shall be furnished.

c) Any approval given to the detailed drawings by the Employer's shall not relieve the contractor of the responsibility for correctness of the drawing and in the manufacture of the equipment. The approval given by the employer shall be general with overall responsibility with contractor.

1.9 QUALITY AND WARRANTY

The PV module(S)) will be warranted for a minimum period of 25 years from the date of supply Modules used in Solar Home Lighting system must be warranted for their output peak watt capacity, which shall not be less than 90% at the end of Ten (10) years and 80% at the end of Twenty Five (25) years.

Warranty Card to be supplied with the system must contain the details of the system. The manufacturers can also provide additional information about the system and conditions of warranty as necessary.

1.10 Mounting Structure & Frame / Mechanical Components

The frames and leg assemble of the mounting structure is made of MS Hot Dip Galvanized of steel sections of 40x40x5 mm Angle, 3 mtr. long Pipe of 75 mm OD as per enclosed general arrangement drawings. The minimum thickness of galvanization shall be 610 gm/sqm complying with IS: 2629 and IS : 2633 (with latest amendments). Galvanizing shall be checked and tested in accordance with IS: 2633.AII nuts & bolts considered for fastening modules with this structure are of very good quality of Galvanized Steel. The structure is designed in such a way that it will occupy minimum space without sacrificing the output from SPV panels at the same time it will withstand severe wind speed up to maximum 200 kmph. The structure shall be designed to allow easy replacement of any module and shall be in line with site requirements. The structure shall be designed for simple mechanical and electrical installation. It shall support SPV modules at a given orientation, absorb and transfer the mechanical loads to the ground properly. The module mounting structure shall be designed such that it can be mounted on a 75 mm dia pipe support as per drawing.

The support pipe shall be erected in 600x600x450 mm with concrete mix l part cement, 3 part coarse sand, 6 part 20mm size aggregate stone chips (1:3:6) below ground level and couping of 300x300x200 mm above GL along with base plate of 150x150x8 mm as per enclosed general arrangement drawings. The bidder shall submit drawing for the mounting structure for approval by TPCODL.

While executing the work of installation of SPV system, care shall be taken to prevent any water leakages from the roof. In case a water leakage is found, suitable remedial action shall be taken by the contractor at no extra cost.

The frame structure should have provision to adjust its angle of inclination to the horizontal, so that it can be· installed at the specified tilt angle.

2. Battery (For Household)

1. The battery bank should be 48V, 42 AHr Battery array should be of Lead-Acid Sealed maintenance free VRLA with proper protection conforming to the latest BIS/ International Standards.
2. Battery sizing Should be @ 8V Ah/Wp (>1500 cycles with 50% DoD) for lead acid.

3. Technical Parameters

Sl No	Description	Parameter/Value (Applicable for only off - grid solar)
1.1	System Voltage (Nominal)	48VDC
1.2	Nominal energy	1 KWh for 200 Wp panel @ Cl0 rate @ 25degC
1.3	Solar Panel capacity	200Wp
	Load setting proposed in the controller	
1	Maximum permissible DOD for New battery	50% for Lead acid / 90% for Lithium Ferro phosphate
2	(a) Maximum Operating Load limited in Watts	80 watts
	(b) Max Allowable Emergency load in Watts	10 Watts
3	Allowable Energy out from battery - maximum per day	300Wh (4 Hrs x 80W or 5Hrs x 60W or 6Hrs x 50W…)
4	(a) Recommended normal load cuts off based on On-discharge voltage	1" Year :48.5V 3" Year: 46.0V 4" Year: 44.0V
	(b)Recommended emergency load cuts off based on On-discharge voltage	1 Year:47.5V 3" Year :45.0V 4" Year :43.0V
5	(a) Normal load Switch on (reconnect) based on ON-charge voltage	54.0V
	(b) Emergency load Switch on(reconnect) based on On-charge voltage	53.5V
6	Condition for full charge:	Once in 60 days, the battery should be in charge mode for 3 continuous days to allow the battery to fully charge. In case, the Battery Voltage during these 3 days period is not stayed at charge voltage of 56.8 for 5 consecutive hours, bring the battery to service station of contractor and charge fully.
7	Charge balance	120%
8	Warranty	5 Year

4. Solar DC Charge controller (For household) Features:

1. Advanced micro-controller technology with accurate voltage settings.
2. Nominal battery voltage 48 V
3. High efficiency regulation with three stage charging technique
4. Acoustic warning for faulty conditions

Protection:

1. Transient/ surge protection
2. Over- Charge & Deep Discharge Protection
3. Solar Reverse Polarity Protection
4. Electronic Overload Protection
5. Reverse Current Protection from battery at night
6. Fuse in the battery path for battery reverse polarity & short circuit in the controller.

PARAMETER	SPECIFICATIONS	REMARKS
Solar Input	Solar PV Panel -200 Wp, Vmp - 48 V	
AC Mains Input	180V-230VAC, upto500W	Option to be provided
Battery Bank	48 V, 42 Ah - Lead Acid (50% DoD)	
Battery Charge Control	MPPT integrated	
DC Output Options	Support up to 1 Homes As per Scope of Works	For both normal and emergency line, the maximum permissible load is limited to 125W
PARAMETER	**SPECIFICATIONS**	**REMARKS**
Type of DC loads	LED lamps, LED tube lights, DC fans and Cell phone USB Chargers, Power Socket as per scope of work"	DC Television optional
DC Power Output Ratings	125 W Max @45-51V	
Status LED Indicators	Input Availability, Load Availability and Battery Condition	
Protection features	Fuse for battery; Battery LV and HV cut-off; short-circuit protection, over voltage protection	
Communication	Bluetooth Low Energy Ver 4.0 or higher supporting SPP for communication with a handheld terminal (phone or tablet) for prepaid metering support and data logging including real time monitoring of solar/ grid/ battery power in / out. RS485 interface for grid to DC power module.	
User Input	Numeric Keypad for sequence entry (3x4) to support prepaid metering	

	feature	
Accuracy of BLE readings	+/- 5%	Inaccuracies are higher at lower DC Load levels
Ambient Operating Temperature	-20°C to +70°C	Temperature range is for OGH unit only and not applicable for Battery bank/ Solar panels
Type of Installation	Indoor with IP20 class protection	
Battery Backup time	Up to 4 hours on a load of 125W	

INDICATORS: The system should have following indicators:

a) When Solar power is available to the panel - LED is ON, or else LED OFF
b) The battery indicator should blink and indicate the charging under progress through sun-light
c) The battery indicator should blink and indicate the charging under progress through grid
d) The respective blinking of indicators (as per b & c above) should illuminate continuously ON when battery is fully charged.
e) When load is ON, an indicator must get switch ON
f) Red indicator should indicate the battery 'Load Cut Off' condition

5. 48 V DC powered ceiling fans with feature for remote

Technical Specifications

Parameter	Specifications
Type of fan	External rotor
Type of motor	Permanent Magnet Brush Less Direct Current (PM BLDC)
Fan size {Sweep)	1200 ±5 mm
Nominal Operating Voltage	48 V DC
Operating Voltage Range	45-52 V DC
Power input	30 W Max
Max Speed	300 - 320 RPM
Air delivery at max speed	200-210 m3/min
Motor controller	Sensor less control strategy
ON/OFF and speed control operation	With built - in remote Infra-Red Sensor for external remote control

Multiple speed settings	From 180 RPM to max speed in near equal steps from remote	
Starting	Fan shall start and run at 45V to 52 V DC	
Start up at all speeds	Smooth starting with a maximum of 180 degree (mechanical) reverse rotation, if any	
Memorising last set speed	Fan controller shall be capable of running at the last set speed, at the time of Power ON	
Insulation resistance	5 M Ohm @ 600 V DC	
Winding Temperature rise	70 ° C	
Type of blades	Aluminium sheet	
Protection features	Blocked Blade, Reverse polarity, Over voltage and Over Current	
Operating noise at full speed	65 dBA	
No load operating noise	52 dBA	
Motor construction	Totally enclosed type	
Corrosion resistance	Motor body and blades shall be corrosion resistant	
Safe operation temperature	50 ° C	
Max humidity	90% Rh	
Other fan accessories	Standard down rod, canopy and shackle clip Manual Switch and regulator to be provided along with the remote control pedestal fan operating on 48 V DC can be provided where ceiling fan can't be installed	
Safety features	Compliance to mechanical safety of fan suspension system (clamp and down rod)	
Remote control signals, commands and codes		
Communication Protocol	NEC derived custom protocol	
Carrier Frequency	38 ± 1 kHz	
Operating distance (line of sight)	5 m -.	
Feedback signal to user	Light signals to user for 2s whenever remote is operated	
Control signals	Command	Hex Codes
Fan ON or OFF	F _ON_OFF	0x00FF42BB
Fan speed increase	F _UP	0x00FF52AA
Fan speed decrease	F _DN	0x00FF7888

Code description				
Command	Hex Code	Binary Codes (32 bits)	Reversal of binary Decimal digits in Hex Code	Decimal notation of Hex Code the Code
F _ON_OFF	0x00FF42BB	0b 0000 0000 11111111 0100 0010 10111011	0042FFOO	3712155392
F _UP	0x00FF52AA	0b 0000 0000 11111111 0101 0010 1010 1010	554AFFOO	1430978304
F_DN	0x00FF7888	0b 0000 0000 11111111 01111000 1000 1000	111EFFOO	287244032
Data reception	As per NEC protocol for communication			

(i) Total length of the data reception in one cycle in 32 bits.

Logical '0'- a 562.5 µs high signal followed by a 562.5µs slow signal, with a total time of 1.125ms

Logical' 1'- a 562.5 µs high signal followed by a 1.6875ms low signal, with a total time of 2.25ms.

(ii) Start sequence: A high signal of 9ms followed by a low signal of 4.5ms and thus making a total time of 13.5ms; bit sequence is modulating signal.

6. Light Source

The light sources shall be white LED up to 5 W and Light Output should be Minimum 25 Lux when measured at the periphery of 2.5meter diameter from a height of 2.5 meter. The LED bulbs should be indigenously manufactured and should be of reputed make from PIA approved vendors. Each household shall be provided with 2 Nos. W-LED bulbs, 1Nos. W-LED emergency bulb, 1 Nos. 18 watts LED tube-light 4ft long fixture, a 25W DC power socket with in-built polarity protection. The W-LED bulbs should not emit ultraviolet lights. The light output must be constant throughout the duty cycle.

The light source should be either for wall mounted or ceiling mounted or can be hung from the ceiling in a stable manner, as per site requirements.

DC LED lamp (for Household): Technical Specification for DC powered LED bulb operating at 48V DC.

Parameter	Specifications
Wattage(@48VDC)	5W±5%
System Input Voltage	45 to51V DC
System Lumen Output @48VDC	>360lm
Color Rendering Index	>75
CCT	5100 Kto6700 K
LED luminous efficacy (typical)	130lm/W
System luminous efficacy (typical)	75 lm/W
Life Span for LED	L70>36000 hrs
Light Degradation Factor	<5%after6000 hrs
Chromaticity shift	<0.0025after6000Hrs
Quality of light output	Uniform and no visible LED spots
Operating temperature	0 to 45 ·c
Case Temperature	<75 0C
Operation Mode	External Switch
Bulb Casing	Aluminum Casting
Bayonet type	Standard B22typeBayonet
Diffuser material	Polycarbonate
IP Grade	40
Protection	Input Reverse Polarity, Input transients, Output Short Circuit and Thermal Shut Down
Certification	LM80
Design and Manufacturing	India

7. DC LED Tube light (For household):
Technical Specifications for DC powered DC LED Tube light operating at 48V DC and controlled by a specified remote

Parameter	Specifications
Input Wattage	< 18 W
DC Input Voltage	45 to 51 V
LED Driver Efficiency (@ high intensity level for the supply voltage range of 45-51V DC)	>94%
Driver Output Voltage	33 to 39 V
Driver Output Current	435 mA ± 5%
Total Lumen Output with diffuser	> 1380 at maximum brightness setting;> 150 at minimum brightness setting

Color Rendering Index	> 80
CCT	5600 K to 7000 K
LED luminous efficiency	> 130 lm/W
System luminous efficacy (typical)@ 48 V	> 90 lm/W
High frequency ripple at input	< 600 mVp-p
Life Span for LED	L70 > 36000hrs
Light Degradation Factor	< 5% after 6000 hrs
Quality of light output	Uniform and not visible LED spots
Operating temperature	0 to 45 °C
Case Temperature	< 60 C
External DC Driver	Must have built-in IR sensor. The driver cover must overlap> 5 mm (around 8 mm) into the tube light edge
Light ON/OFF and dimming operation	By an external IR Remote having three buttons (for ON/OFF, light intensity increase and light intensity decrease
Start-up mode options	Option 1: Comes on with about 50 % intensity level; Option 2: Comes on with last setting prior to shut-off
Dimming Method	PWM
Dimming lux levels of light (approx.) @48V	5 steps (10 %, 25 %, 50 %, 75% and 100%)
LED tube size and length	T8,(25.4 mm) and 1200 mm
Diffuser material	UV treated Polycarbonate
I P Grade	20
Operation of LED light	Trouble free and not to cause interference to other DC loads
Protections	I/P Reverse Polarity, O/P Open Circuit, Short Circuit, Thermal Shut Down and non-compatibility to AC tube light fixtures
Type of mounting	Wall Mounting (The required accessories shall be provided by the supplier)
Certification	LM80 for LED and LM79 (for product)
Design and Manufacturing	India

I R Remote operation, control signals, commands and codes				
Communication Protocol	NEC derived custom protocol			
Carrier Frequency	38±1 kHz			
Operating distance (line of sight)	3m			
Control Signals	Commands	Codes		
Light ON or OFF	L_ON_OFF	0x00FFBA47		
Light intensity increase	L_UP	0x00FFBF47		
Light intensity decrease	L_DN	0x00FFBE47		
Code Description				
Command	Hex Code	Binary Codes(32bits)	Reversal of binary digits in Hex Code	Decimal notation of the Code
L_ON_OFF	0x00FFBA47	0b00000000111111111010111010010001 11	E25DFF00	3797810944
L_UP	0x00FFBF47	0b00000000111111111010111111010001 11	E2FDFFO0	3808296704
L_DN	0x00FFBE47	0b00000000111111111011111001000 111	E27DFFO 0	3799908096
Data reception	As per NEC protocol for communication			

Total length of the data reception in one cycle in 32bits.
Logical '0'-a 562.5 µs high signal followed by a 562.Sµs low signal, with a total time of 1.125ms – Logical 1'-a 562.5 µs high signal followed by a 1.6875ms low signal, with a total time of 2.25ms.

(ii)Start sequence: A high signal of 9ms followed by a low signal of 4.5ms and thus making a total time of 13.5ms; bit sequence is modulating signal.

8. Integrated Charger and Socket-Specification

Parameter	Specifications
Product	: Mobile Charger
Product Description	: 48VDC Mobile Charger
Product Name	: DC Mobile Charger
Electrical Specifications	
Nominal Voltage Input	: 48V±3V
Voltage Output	: 5.1V
Maximum Current Output	: 2.5 Amps
Efficiency @ FL	: 82%
No Load power consumption	:< 100 mW
Output ripple @FL	: <100mV
Input Ripple @FL	<100mV
Output voltage Regulation @FL	: < 2%
Protection Specifications	
Reverse Polarity Protection	Yes
Over Load Protection	Yes
Short Circuit Protection	Yes

9. DC Socket:
The DC Socket unit allows consumers to utilize 48V DC supply for powering up various DC appliances viz.
Laptop adapter, Set top box, Television etc. This unit shall specifically be designed for use with DC installations having mechanical protection for interchange of polarities.

The salient features of DC socket are given below:
• 48V, 2.5A DC socket
• Used for powering DC devices such as laptops, set-top boxes, television etc.
• Uses John's socket pins

10. Remote Specifications

Parameter	Specifications
I R Transmitter:	Infrared LED, 940nm
Operation Protocol	NEC
Carrier Frequency	38 kHz
Indicator LED:	3mm Red LED
Maximum operating distance:	3 m
Max. Key Count:	Six

Type of Switches	Tactile
Fan key count:	3 (on/off, Speed increase and decrease)
Light key count:	3 (on/off, Light increase and decrease)
Controller:	16bit Microcontroller
Power Supply	3V Lithium battery, Model: CR2032
Power Consumption (Avg.):	Less than 20 mW
Enclosure Material	ABS Plastic
Approx. Dimensions (l x w x h):	80mmx40mmx18mm
Approx. Weight:	35 gms

11. Protection System

Lightning Protection: The SPV standalone system shall be protected for lightning & over voltage protection. The main aim in his protection shall be to reduce the over voltage to a tolerable value before it reaches the PV or other sub system components. The source of over voltage can be lightning, atmosphere disturbances etc.

12. Connection to Households

1.1 For all identified consumers, the contractor shall carry out following works:

a) Installation of SPV module, Solar DC charge controller, battery bank with battery enclosures & stand, lighting source (3 Nos. LED, 1 Nos. LED tube, USB mobile charger, 25 W power plug), 1 Nos. DC ceiling fan (1200 mm sweep, white in colour)

b) ISI marked system wiring as per following:

I. i. Panel to charge controller: 2 core 4 sqmm flexible multi strand copper conductor cable as per IS 694. Cable between panel to Solar DC charge controller shall be fixed properly with cable ties and shall be laid underground as per CPWD specifications between installation support and household.

II. ii. Charge controller to battery: 2 core 4 sqmm flexible multi strand copper conductor cable as per IS 694

III. iii. Charge controller to USB port for mobile charging: 2 core 1.5 sqmm flexible multistrand copper conductor cable as per IS 694

IV. iv. Battery to battery connections: 2 core 4 sqmm flexible multi strand copper conductor cable as per IS 694

All cables shall be terminated using copper lugs (ring type) duly crimped by a crimping machine. The cable shall be free of joints.

c) Wiring fixtures: Rigid non-metallic 12mm dia conduits for electrical installations as per IS-2509(latest amendment) having ISI stamping to be used for all system and internal wiring works. The wires must be properly dressed and fixed on supporting structure at 1-foot intervals. Suitable tying materials like nylon cable ties or 16/18 SWG insulated GI wire shall be used to tie / dress the wire at interval of 1 ft. Depending on size of wall structure available at beneficiary house, decision shall be taken to provide length of cable ties. In case brick wall or solid structure of house is available for wiring, clips may

be provided at 1 feet distance to hold the rigid non-metallic 12mm dia conduits pipes.25 W power plugs, USB port shall be installed on 40 mm dia round switch board properly installed on wall structure. At all corners wiring should be dressed properly using round corners etc.

Following materials shall be used for single phase service connection:

1.1.1.DC Fan: 1200 mm sweep ceiling fan white in colour shall be operating on 48 V DC. Fan should operate on variable frequency drive technology. Fan shall be of 30 W(+/-10%) and with speed of maximum 300-320 rpm. Fan should operate at around 10 w (+ / - 10%) power consumption at lowest speed. Fan should be operated by a remote control. Manual Switch and regulator to be provided along with the remote control

1.1.2. W-LED Tube light: 48-inch-long LED tube-light shall be operating on 18W/48 V DC on full capacity. Tube light should be operated by a remote-control having variable intensity control facility. At minimum intensity of light Tube light should operate at 5-6 W power consumption.

1.1.3. Remote Control: Ceiling fan and Tube light should operate by a mobile remote-control switch. It should have facility to change speed of fan as well as intensity of illumination of tube light and also have provision to turn on/off the tube light and fan. While commissioning the system, beneficiary shall be trained for remote control switch operation. The contractor shall provide 2 set of remote-control switch to each beneficiary and 5 spare batteries (other than 2 batteries already installed in the remote control switch). The beneficiaries shall also be trained for replacement of batteries in remote control switch in future as per requirement.

1.1.4. House wiring: Each Household shall be provided with internal house wiring (ISI marked) as per following:
a. Between charge controller to Tube light & fan: 2 core 1.5 sqmm flexible multi strand copper conductor cable as per IS 694.
b. Charge controller to 2 Nos LED lamps: 2 core 1.5 sqmm flexible multi strand copper conductor cable as per IS 694.
c. Charge controller to 1 Nos. LED emergency lamps: 2 core 1.5 sqmm flexible multi strand copper conductor cable as per IS 694.
d. Charge controller to power socket (25 w DC point): 2 core 2.5 sqmm flexible multi strand copper conductor cable as per IS 694.
e. Charge controller to USB mobile charging point: 2 core 1.5 sqmm flexible multi strand copper conductor cable as per IS 694.
All these cables shall preferably be brown in color for easy identification

There shall be three different circuits from Solar DC charge controller to light & fan, emergency light and power socket. There will not be any joint in negative battery wire between charge controller and the equipment. Therefore, separate negative polarity wire must run for different circuits.

Installation of tube and lamps should be on different walls. The charge controller should be installed at height of around 4 ft. The USB port and power plug should be installed at 4- 5 ft .

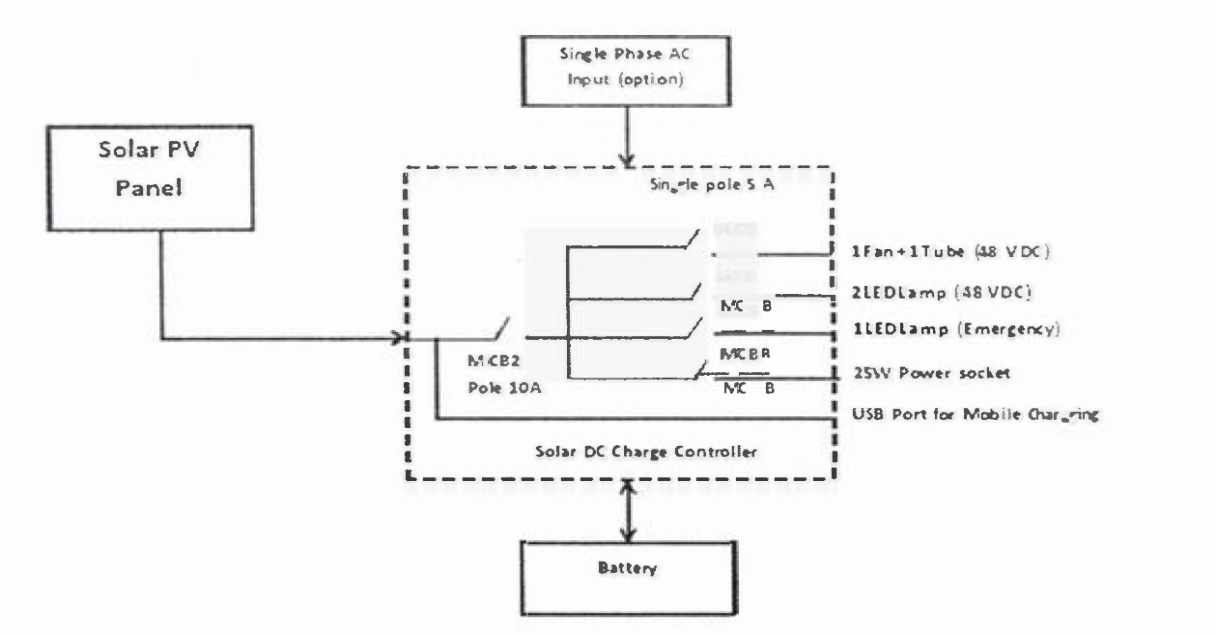
elevation from the ground. The lamp, tube light, mobile charges should not have mounted on Solar DC charge controller box. The height of tube and bulb should not be less than 7 ft.

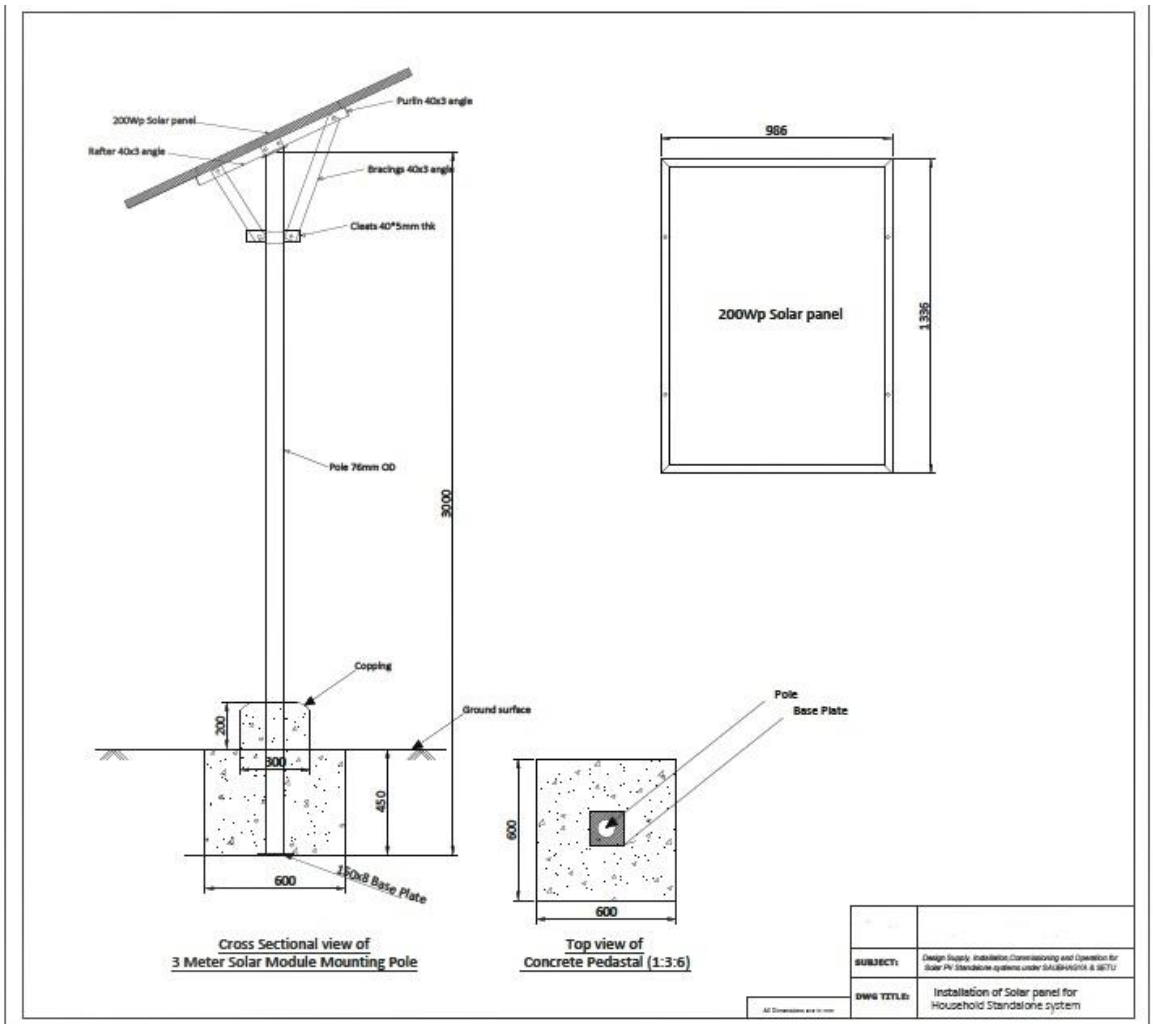
1.1.5. Cable tie: non-releasable nylon cable ties shall be used suitable for continuous use on -40-degree t o + 85 degree centigrade temperature. It should be MIL 23190 E tensile strength complied cable ties having flame resistance capacity in accordance with UL 94V2. Following sizes of Cable tie shall be used depending on requirement at site:

Length	Width
120mm	4.8mm
200mm	4.8mm
430mm	4.8mm

The indicative circuit diagram of household standalone system is given hereunder

General Arrangement Drawing of Stand-Alone System





12. System losses:

The recommended losses from Solar PV system to grid as per following:

Losses for	Recommended Losses
Solar to load directly	< 4%
Solar to battery plus battery to load	< 10% excluding battery losses
Grid to load directly	< 8 %
Grid to battery plus battery to load	<12 % excluding battery

Maintenance:

The Contractor shall undertake necessary maintenance work of the Solar PV Standalone Systems for five years from the date of commissioning. Solar PV Standalone System is to be designed to operate with minimum of maintenance. The scope of maintenance work within the contract period shall include preventive/routine maintenance activities to ensure proper functioning of solar photovoltaic power plant as a whole as well as break down/corrective maintenance in the event of malfunctions/breakdown, which prevent the operation of the standalone system or part of it & free replacement of spares required for such maintenance in stipulated time period.

While installation, the contractor shall provide User Operating Instructions in local language on A3 size sheet with thick lamination depicting features of the system and general Do and inside the household. This instruction sheet should have hanging facility through a string.

The contractor shall ensure rectification of the reported defect within 2 working days of registering the complaint by the household. The Contractor shall register the mobile number of beneficiary for registering any complaint through their 24x7 operated call center. Complaints may also be forwarded through State owned online compliant portal of DISCOM/Power Department. The contractor shall maintain a monthly log of the Complaints registered and rectified with details of household name, date, defect etc. These records should be easily available whenever required by the Project Manager/Engineer-in-Charge. For household standalone system, the contractor shall train the household for necessary cleaning of PV modules.

The maintenance of defective battery including its free replacement during 5 year maintenance period, if it is felt necessary for any reason whatsoever shall be under the scope of maintenance In case of non-rectification of the problem after 5 days (120 hours) from reporting the complaint, the Project Manager/Engineer-in-charge may consider repairing/replacing such defective system on the cost of the Contractor. Notwithstanding the same, contractor shall continue to have the responsibilities and obligations of the subject contract. User Manual-cum-Training Booklet for routine operation and Maintenance of system must be provided for each of the solar PV system.

OPERATION and MAINTENANCE MANUAL

An Operation, Instruction and Maintenance Manual, in English and the local language, should be provided with the Solar Home System. The following minimum details must be provided in the Manual:

i. Basic principles of Photovoltaic.

ii. A small write-up (with a block diagram) on Solar Home Lighting System - its components, PV module, battery, electronics and luminaire and expected performance.

iii. Significance of indicators.

iv. Type, Model number, voltage & capacity of the battery, used in the system.

v. The make, model number, country of origin and technical characteristics (including IESNA LM-80 report) of W-LEDs used in the lighting system must be indicated in the manual.

vi. Clear instructions about mounting of PV module(s).

vii. Clear instructions on regular maintenance and troubleshooting of the Solar Home Lighting System.

viii. DO's and DONT's.

ix. Name and address of the contact person for repair and maintenance

NIT No.: TPCODL/P&S/100001301/2024-25

Electrification works of UEHHs in TPCODL under PM-JANMAN in Off Grid Mode through Solar PV Standalone System (BoQ)

Sr. No.	Description
	Household Standalone System
1	**Material Components**
a	Supply of Solar PV Panels 200 Wp 48 Volt as per technical specification, approved drawings and scope of work.
b	Supply of Solar DC charge controller with junction box, single pole & double pole MCBs, AC input option etc as per technical specification, approved drawings and scope of work.
c	Supply of corrosion resistant mounting structure including GI pipe, metallic frame, cross arm, pedastal, anchor fasteners, nuts, bolts, sign board etc as per technical specification, approved drawings and scope of work.
d	Supply of battery bank with battery enclosure and stand of suitable size as per technical specification, approved drawings and scope of work for 48 V, 42 A-hr, (Appr. 2000 watt-hour) with Sealed maintenance free VRLA battery with 50% DoD
e	Supply of 3 nos. 5 watts LED 48 V DC lamp, holders and other mounting accessories as per detailed technical specifications, scope of work
f	Supply of 18 Watts 48 V DC LED tube light fixture with variable illumination features operating with remote controller. Tube light fixture to be supplied with mounting accessories and remote control switch etc as required as per technical specification and scope of the work.
g	Supply of 48 V DC Permanent Magnet Brush Less Direct Current (PM BLDC) 1200mm sweep, white in colour, DC ceiling fan. Fan to be supplied with mounting accessories and remote control switch etc as required as per technical specification and scope of the work.
2	**Installation & commissioning of the system** (Supply of house wiring as well as system wiring materials including flexible multistrand 2 core copper conductor cables, rigid non-metallic 12 mm dia conduit, mounting accessories, USB Charging point/port, remote control switch& manual switch etc as required as per technical specifications and scope of work including Erection, testing and commissioning of 3 Nos. WLED lamps (5 W), 1 No. W-LED tube light (18 W) & 1 No. 1200 mm sweep DC ceiling fan (30 W +/- 10 %) with remote control switches, stationary battery bank (for 48V supply), power socket (25 W), USB port, sign board, user instruction manual including erection, testing & commissioning of Solar PV system containing 48 V Panels, Solar DC charge controller, mounting Structure with foundation, hardware etc as per technical specification, approved drawings and scope of work).

……END ……

S.No.	Name of State	Name of DISCOM	Name of District	Name of Block	Name of Section	Name of Village	Name of Habitation	Name of Beneficiary	Electrified through (Grid/ Off-Grid)	ID Details	Rason/BPL card No
95 Nos of List											
1	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TUMUNI	TUMUNI	GURUBARI PRADHAN	Off-Grid	682720696053	13100610244
2	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TUMUNI	TUMUNI	SUKURU PRADHAN	Off-Grid	613096657037	13100610587
3	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TUMUNI	TUMUNI	GAURI PRADHAN	Off-Grid	847582226466	13100610363
4	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TUMUNI	TUMUNI	BUDUNI PRADHAN	Off-Grid	359840601684	13100610176
5	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TUMUNI	TUMUNI	SUNDARI PRADHAN	Off-Grid	698837180781	13100610198
6	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TUMUNI	TUMUNI	SITA PRADHAN	Off-Grid	313335905463	13100610202
7	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TUMUNI	TUMUNI	CHEMA PRADHAN	Off-Grid	904150500334	13100610214
8	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TUMUNI	TUMUNI	BUDULI PRADHAN	Off-Grid	397643961999	13100610231
9	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TUMUNI	TUMUNI	GURUBARI PRADHAN	Off-Grid	336697626370	13100610206
10	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TUMUNI	TUMUNI	HADIANI PRADHAN	Off-Grid	318384840421	13100610217
11	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TUMUNI	TUMUNI	RATANI PRADHAN	Off-Grid	249040150213	13100610584
12	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TUMUNI	TUMUNI	JAYANTI PRADHAN	Off-Grid	864172487779	13100610583
13	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TUMUNI	TUMUNI	MASURI PARDHAN	Off-Grid	767530509909	13100610185
14	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TUMUNI	TUMUNI	SANKHALI PARDHAN	Off-Grid	610963487019	13100610236
15	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TUMUNI	TUMUNI	BAISAKHI PRADHAN	Off-Grid	232124766551	13100610240
16	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TUMUNI	TUMUNI	BUDUNI PRADHAN	Off-Grid	767573049695	13100610432
17	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TUMUNI	TUMUNI	KUMARI PRADHAN	Off-Grid	738294964745	13100610188
18	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TUMUNI	TUMUNI	JAMINI PRADHAN	Off-Grid	204975408316	13100610254
19	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TUMUNI	TUMUNI	RAJAN PRADHAN	Off-Grid	435864135295	13100611479
20	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TUMUNI	TUMUNI	BUDHEI PRADHAN	Off-Grid	393706332633	13100610174
21	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TUMUNI	TUMUNI	KACHEI PRADHAN	Off-Grid	844258092380	13100610411
22	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TUMUNI	TUMUNI	SAMBARI PRADHAN	Off-Grid	781619763100	13100610234
23	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TUMUNI	TUMUNI	KUTHAKUNI PRADHAN	Off-Grid	379577269003	13100610243
24	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TUMUNI	TUMUNI	BELA PRADHAN	Off-Grid	791249808004	
25	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TUMUNI	TUMUNI	GURUBARI PRADHAN	Off-Grid	682720696053	13100610201
26	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TALA GUHIASAL	TALA GUHIASAL	KANDURU PRADHAN	Off-Grid	547631336590	13100610109
27	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TALA GUHIASAL	TALA GUHIASAL	GANGA PRADHAN	Off-Grid	554414962976	13100610200
28	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TALA GUHIASAL	TALA GUHIASAL	AENTHU PRADHAN	Off-Grid	907288108645	13100610194
29	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TALA GUHIASAL	TALA GUHIASAL	RADHU PRADHAN	Off-Grid	873396986669	13100610221
30	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TALA GUHIASAL	TALA GUHIASAL	JALADHAR PRADHAN	Off-Grid	825291774314	13100610194
31	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TALA GUHIASAL	TALA GUHIASAL	MACHUA PRADHAN	Off-Grid	909192230022	13100610083
32	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TALA GUHIASAL	TALA GUHIASAL	SIBA PRADHAN	Off-Grid	582104700614	13100610242
33	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TALA GUHIASAL	TALA GUHIASAL	RAIBARI PRADHAN	Off-Grid	825185354062	13100610242
34	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TALA GUHIASAL	TALA GUHIASAL	KARUNAKAR PRADHAN	Off-Grid	625059834916	13100610083
35	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TALA GUHIASAL	TALA GUHIASAL	NANDA PRADHAN	Off-Grid	611607623082	13100610143
36	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TALA GUHIASAL	TALA GUHIASAL	AMINA PRADHAN	Off-Grid	495667643642	13100610204
37	ODISHA	TPCODL	JAJPUR	SUKINDA	KALIAPANI	TALA GUHIASAL	TALA GUHIASAL	USHA PRADHAN	Off-Grid	784370458725	13100610190
38	ODISHA	TPCODL	ANGUL	PALLAHARA	Baradiha	Baradiha		BAIRAGI NAIK	Off-Grid	316444868711	01071610840
39	ODISHA	TPCODL	ANGUL	PALLAHARA	Baradiha	Baradiha		GIRIDHARI MUNDA	Off-Grid	952329453153	

S.No.	Name of State	Name of DISCOM	Name of District	Name of Block	Name of Section	Name of Village	Name of Habitation	Name of Beneficiary	Electrified through (Grid/ Off-Grid)	ID Details	Rason/BPL card No
95 Nos of List											
40	ODISHA	TPCODL	ANGUL	PALLAHARA	Baradiha	Baradiha		GURA NAIK	Off-Grid	527779418950	01071611215
41	ODISHA	TPCODL	ANGUL	PALLAHARA	Baradiha	Baradiha		HARI NAIK	Off-Grid	865347643430	01071610637
42	ODISHA	TPCODL	ANGUL	PALLAHARA	Baradiha	Baradiha		MUKUTA NAIK	Off-Grid	789440749344	01071611226
43	ODISHA	TPCODL	ANGUL	PALLAHARA	Baradiha	Baradiha		NIMANTI MUNDA	Off-Grid	913747859053	01071610992
44	ODISHA	TPCODL	ANGUL	PALLAHARA	Baradiha	Baradiha		PANDU NAIK	Off-Grid	463399286786	01071610668
45	ODISHA	TPCODL	ANGUL	PALLAHARA	Baradiha	Baradiha		QRIST BENJAMIN HESA	Off-Grid	588928624789	01071610625
46	ODISHA	TPCODL	ANGUL	PALLAHARA	Baradiha	Baradiha		RAMSINGH NAIK	Off-Grid	866836418931	01071610671
47	ODISHA	TPCODL	ANGUL	PALLAHARA	Baradiha	Baradiha		RAYA NAIK	Off-Grid	395994080969	
48	ODISHA	TPCODL	ANGUL	PALLAHARA	Baradiha	Baradiha		SAMU NAIK	Off-Grid	249826841259	01071610671
49	ODISHA	TPCODL	ANGUL	PALLAHARA	Baradiha	Baradiha		SHIRAPANI MUNDA	Off-Grid	525558987241	
50	ODISHA	TPCODL	ANGUL	PALLAHARA	Baradiha	Baradiha		SURYA NAIK	Off-Grid	620517260648	01071610670
51	ODISHA	TPCODL	ANGUL	PALLAHARA	Duipani	Kadamdihi		BIRSA BOLA	Off-Grid	497450371002	01072110186
52	ODISHA	TPCODL	ANGUL	PALLAHARA	Duipani	Kadamdihi		MARI LUGUNA	Off-Grid	740321214579	01072110182
53	ODISHA	TPCODL	ANGUL	PALLAHARA	Duipani	Kadamdihi		SRIMATI BOLA	Off-Grid	957561252043	01072110185
54	ODISHA	TPCODL	ANGUL	PALLAHARA	Khadaka	Kumbharmati		TURA GIRI	Off-Grid	613596449278	01071611105
55	ODISHA	TPCODL	ANGUL	PALLAHARA	Khadaka	Kumbharmati		BANJARU GIRI	Off-Grid	288318938493	01071611120
56	ODISHA	TPCODL	ANGUL	PALLAHARA	Khadaka	Kumbharmati		BASANTI BEHERA	Off-Grid	886344916292	01071611095
57	ODISHA	TPCODL	ANGUL	PALLAHARA	Khadaka	Kumbharmati		KULUMI GIRI	Off-Grid	582957867665	01071611084
58	ODISHA	TPCODL	ANGUL	PALLAHARA	Khadaka	Kumbharmati		PUSHPA DEHURY	Off-Grid	847231377757	01071611169
59	ODISHA	TPCODL	ANGUL	PALLAHARA	Khadaka	Kumbharmati		SANJAY BEHERA	Off-Grid	642496668559	01071611100
60	ODISHA	TPCODL	ANGUL	PALLAHARA	Khadaka	Kumbharmati		DAKTAR BEHERA	Off-Grid	665155212754	0107160679
61	ODISHA	TPCODL	ANGUL	PALLAHARA	Khadaka	Kumbharmati		DHANU BEHERA	Off-Grid	983063775620	01071610685
62	ODISHA	TPCODL	ANGUL	PALLAHARA	Khadaka	Kumbharmati		GOUDA BEHERA	Off-Grid	405243375266	01071611083
63	ODISHA	TPCODL	ANGUL	PALLAHARA	Khadaka	Kumbharmati		PABANI DEHURI	Off-Grid	784440778508	01071610739
64	ODISHA	TPCODL	ANGUL	PALLAHARA	Khadaka	Kumbharmati		RANJAN BEHERA	Off-Grid	749448578463	01071610669
65	ODISHA	TPCODL	ANGUL	PALLAHARA	Khadaka	Kumbharmati		MADAN BEHERA	Off-Grid	996792882895	
66	ODISHA	TPCODL	ANGUL	PALLAHARA	Khadaka	Kumbharmati		BAISAKHU DEHURI	Off-Grid	737785186698	01071611115
67	ODISHA	TPCODL	ANGUL	PALLAHARA	Khadaka	Kumbharmati		GOVINDA DEHURI	Off-Grid	931698281399	01071611138
68	ODISHA	TPCODL	ANGUL	PALLAHARA	Khadaka	Kumbharmati		TIKI DEHURI	Off-Grid	275047837234	01071611080
69	ODISHA	TPCODL	ANGUL	PALLAHARA	Salei	Salei		ASHA GIRI	Off-Grid	227374249366	01071610727
70	ODISHA	TPCODL	ANGUL	PALLAHARA	Salei	Salei		DAKTAR DEHURY	Off-Grid	238156014633	
71	ODISHA	TPCODL	ANGUL	PALLAHARA	Salei	Salei		NUANI GIRI	Off-Grid	484416866970	01071610795
72	ODISHA	TPCODL	ANGUL	PALLAHARA	Salei	Salei		PATAYAT DEHURY	Off-Grid	343606332117	01071610746
73	ODISHA	TPCODL	ANGUL	PALLAHARA	Salei	Salei		RABI DEHURY	Off-Grid	385358876588	01071610713
74	ODISHA	TPCODL	ANGUL	PALLAHARA	Salei	Salei		SANJU GIRI	Off-Grid	851314388920	01071611032
75	ODISHA	TPCODL	ANGUL	PALLAHARA	Sandhar	kuludiha		SIKAN MUNDA	Off-Grid	847951154211	01071611172
76	ODISHA	TPCODL	ANGUL	PALLAHARA	Sandhar	kuludiha		BUDHU MUNDA	Off-Grid	387382834332	01071610573
77	ODISHA	TPCODL	ANGUL	PALLAHARA	Sandhar	kuludiha		CHANDRA MUNDA	Off-Grid	762627000128	
78	ODISHA	TPCODL	ANGUL	PALLAHARA	Sandhar	kuludiha		DALIMBA MUNDA	Off-Grid	731442174138	01071611050

S.No.	Name of State	Name of DISCOM	Name of District	Name of Block	Name of Section	Name of Village	Name of Habitation	Name of Beneficiary	Electrified through (Grid/ Off-Grid)	ID Details	Rason/BPL card No
95 Nos of List											
79	ODISHA	TPCODL	ANGUL	PALLAHARA	Sandhar	kuludiha		GURU MUNDA	Off-Grid	796696435733	01071610576
80	ODISHA	TPCODL	ANGUL	PALLAHARA	Sandhar	kuludiha		KAMAR MUNDA	Off-Grid	940621984934	01071610496
81	ODISHA	TPCODL	ANGUL	PALLAHARA	Sandhar	kuludiha		NIRAJAN MUNDA	Off-Grid	479263669577	01071610476
82	ODISHA	TPCODL	ANGUL	PALLAHARA	Sandhar	kuludiha		SAMA MUNDA	Off-Grid	883892918411	01071610718
83	ODISHA	TPCODL	ANGUL	PALLAHARA	Sandhar	kuludiha		SUNA MUNDA	Off-Grid	979526058142	01071610541
84	ODISHA	TPCODL	ANGUL	PALLAHARA	Sandhar	kuludiha		SRIDHARA MUNDA	Off-Grid	870469647531	01071610567
85	ODISHA	TPCODL	ANGUL	PALLAHARA	Sandhar	Sandhar		BUDHUNI MUNDARY	Off-Grid	626759841619	01071610570
86	ODISHA	TPCODL	ANGUL	PALLAHARA	Sandhar	Sandhar		PHULAMANI MUNDARY	Off-Grid	710062259911	01071610486
87	ODISHA	TPCODL	ANGUL	PALLAHARA	Sandhar	Sandhar		SIDHAR MUNDA	Off-Grid	870469647531	01071610567
88	ODISHA	TPCODL	ANGUL	PALLAHARA	Sandhar	Sandhar		SIKENDRA MUNDARY	Off-Grid	893019094680	01071612511
89	ODISHA	TPCODL	ANGUL	PALLAHARA	Sandhar	Sandhar		SUKRA MUNDARY	Off-Grid	381099659776	01071610577
90	ODISHA	TPCODL	ANGUL	PALLAHARA	Sandhar	Sandhar		SUSHILA MUNDARI	Off-Grid	433544959686	01071610855
91	ODISHA	TPCODL	ANGUL	PALLAHARA	Silakala	Silakala		BUDHUNI KARJI	Off-Grid	484183228795	01071610659
92	ODISHA	TPCODL	ANGUL	PALLAHARA	Silakala	Silakala		GANDA NAYAK	Off-Grid	981904149716	01071610839
93	ODISHA	TPCODL	ANGUL	PALLAHARA	Silakala	Silakala		JANU NAYAK	Off-Grid	328232997555	01071610640
94	ODISHA	TPCODL	ANGUL	PALLAHARA	Silakala	Silakala		RANJIT NAYAK	Off-Grid	410259404327	
95	ODISHA	TPCODL	ANGUL	PALLAHARA	Silakala	Silakala		RATHA PRADHAN	Off-Grid	594098631273	01071610976

LIST OF BENEFICISRIES TO BE ELECTRIFIED UNDER SOLAR SYETEM IN DASPALLA BLOCK OF NAYAGARH DISTRICT.		
50 Nos List		
SL.NO	**Name of the Village**	**NAME**
1	Kurumi	Subala Nayak
2	Kurumi	Pramod Mallick
3	Kurumi	Sanyasi Kanhar
4	Kurumi	Sakuntala Kanhar
5	Kurumi	Prasanta Kanhar
6	Kurumi	Kedar Kanhar
7	Kurumi	Banita Behera
8	Kurumi	Afisan Kanhar
9	Kurumi	Prahallad Kanhar
10	Kurumi	Abanti Kanhar
11	Kurumi	Raghaba Majhi
12	Kurumi	Dusasan Kanhar
13	Kurumi	Arjun Kanhar
14	Kurumi	Jambita Kanhar
15	Kurumi	Bhanjan Naik
16	Kurumi	Minati Nayak
17	Kurumi	Surendra Kanhar
18	Kurumi	Angad Kanhar
19	Kurumi	Gangadhar Kanhar
20	Kurumi	Abanti Kanhar
21	Kurumi	Sisir Majhi
22	Kurumi	Padmati Kanhar
23	Kurumi	Lakhana Kanhar
24	Kurumi	Nilambar Khnar
25	Nepal	Laxmidhara Nayak
26	Nepal	RABI JANI
27	Nepal	JASODA JANI
28	Nepal	NABNAYA JANI
29	Nepal	SURENDRA JANI
30	Nepal	PRAKASH JANI
31	Nepal	SUSHANT JANI
32	Nepal	SURENDRA JANI
33	Nepal	BIRASEN JANI

LIST OF BENEFICISRIES TO BE ELECTRIFIED UNDER SOLAR SYETEM IN DASPALLA BLOCK OF NAYAGARH DISTRICT.		
50 Nos List		
SL.NO	**Name of the Village**	**NAME**
34	Nepal	MOHAN JANI
35	Nepal	JAYANTI JANI
36	Nepal	BIPIN JANI
37	Nepal	KAMA JANI
38	Nepal	DEBARAJ JANI
39	Nepal	BIJAY JANI
40	Nepal	SUSHANT JANI
41	Nepal	MAHENDRA JANI
42	Nepal	SABITA JANI
43	Nepal	TUNA NAYAK
44	Nepal	NIRANJAN JANI
45	Nepal	ABHIMANYU NAYAK
46	Nepal	SUNI JANI
47	Nepal	SANATAN NAYAK
48	Nepal	RAMAKANTA NAYAK
49	Nepal	BABULA NAYAK
50	Nepal	BHASHKAR JANI