(E-Tender through eProcurement Portal at https://tntenders.gov.in)

E-Limited Tender Document for

"Newly Constructed Electrical Sub-station Internal and External Electrical Wiring Works to increase the electrical demand for strengthening the infrastructure at Products Dairy"

Limited Tender Reference No: 510/JMDO/Engg/2023

The Tamilnadu Cooperative Milk Producers' Federation Ltd Chennai 600 098

The Dy. General Manager (Engg.),
The Joint Managing Director's Office,
Tamilnadu Cooperative Milk Producers' Federation Ltd.,
Plot No.29 & 30,
SIDCO Industrial Estate, Ambattur,
Chennai – 600 098.
Telephone No: 044-23464528/29/30/31/32
E-Mail - dgmpurchase@gmail.com

Website for online bid submission
https://tntenders.gov.in

TENDER INFORMATION

1. Name and address of the Purchaser	**The Dy. General Manager (Engg.),** **The Joint Managing Director's Office,** **Tamilnadu Cooperative Milk Producers' Federation Ltd.,** Plot No.29 & 30, SIDCO Industrial Estate, Ambattur, Chennai – 600 098. Telephone No: 044-23464528/29/30/31/32 E-Mail - dgmpurchase@gmail.com
2. Name and address of the User	**The Dy. General Manager (Dg.),** **TCMPF Ltd., Products Dairy**, Plot No.29 & 30, SIDCO Industrial Estate, Ambattur, Chennai – 600 098.
3. Name of the Item / Work	Limited Tender for the Newly Constructed Electrical Sub-station Internal and External Electrical Wiring Works to increase the electrical demand for strengthening the infrastructure at Products Dairy.
4. Method of Tender	e-Tender System (Online Technical Bid and Financial Bid) through eProcurement Portal https://tntenders.gov.in
5. Limited Tender Reference Number	510/JMDO/Engg/2023
6. Tender Estimated Value	Rs.7.45 Lakhs
7. Earnest Money Deposit (EMD)	Rs.7,450/-
8. URL for online bid submission for e-tender	https://tntenders.gov.in
9. Cost of Tender Document	Tender documents can be downloaded at free of cost from the website https://tntenders.gov.in and https://aavin.tn.gov.in
10. Tender Document Availability Date & Time on the Portal for downloading and e-submission	From: 04.09.2023 to 12.09.2023 Up to 3.00 P.M.
11. Date & Time of Pre-Bid meeting	Date: 07.09.2023 Time: 11.00 A.M.
12. Date & Time of Closing of e-Submission of Technical Bid and Financial Bid	Date: 12.09.2023 Time: 3.00 P.M.
13. Date & Time of opening of Part I Technical Bid of e-Tender	Date: 12.09.2023 Time: 3.30 P.M.
14. Date and time of opening of Part II Financial Bid	The date of opening of Financial Bid will be informed to the eligible bidders through Online Portal and registered e-mail.

15. Place of Pre-Bid meeting & Part I Technical Bid and Part II Financial Bid opening	The Joint Managing Director's Office, Tamilnadu Cooperative Milk Producers' Federation Ltd., Plot No.29 & 30, SIDCO Industrial Estate, Ambattur, Chennai – 600 098. Telephone No: 044-23464528/29/30/31/32
16. Special Instructions to the Contractors/Bidders for the e-submission of the bids online through this eProcurement Portal. The link for which is	**https://tntenders.gov.in/nicgep/app?page=HelpForContractors&service=page**
17. Bidders Manual Kit. The link for which is	**https://tntenders.gov.in/nicgep/app?page=BiddersManualKit&service=page**

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1.0 INSTRUCTIONS TO THE TENDERERS

1.1. PREAMBLE OF E-TENDER:-

1.1.1. The Dy. General Manager (Engg.), JMD's Office, TCMPF Ltd. invites Bids by way of E-Submission only from reputed firms on behalf of the Dy. General Manager(Dg.), Products Dairy, TCMPF Ltd., to submit e-Tender for the Limited Tender for the Newly Constructed Electrical Sub-station Internal and External Electrical Wiring Works to increase the electrical demand for strengthening the infrastructure at Products Dairy.

1.1.2. Applicability of Tamil Nadu Transparency in Tenders Act, 1998:-

This Tender will be governed by the Tamil Nadu Transparency in Tenders Act, 1998 and The Tamil Nadu Transparency in Tenders Rules, 2000 and subsequent amendments thereof are applicable to this Tender.

1.2. INSTRUCTION TO BIDDERS:-

1.2.1. The tenders are in Two Part System (a) Technical Bid without Financial Bid and (b) Financial Bid. All the Bidders are requested to examine the instructions, terms & conditions and specifications laid down in the Limited Tender. Failure to furnish all required information in every aspect will be at their risk and may result in the rejection of their bid.

1.2.1. THE BIDDERS WHO DO NOT FULFIL THE "PRE-QUALIFICATION CRITERIA"AS PER CLAUSE 3.0. NEED NOT PARTICIPATE IN THE TENDER. OFFERS NOT SATISFYING THIS "PRE-QUALIFICATION CRITERIA" WILL NOT BE CONSIDERED AND WILL BE SUMMARILY REJECTED.

1.3. MODE OF SUBMISSION:

1.3.1. All the documents are to be uploaded in the Online Portal only. Website https://tntenders.gov.in.

1.3.1.1. Part A – Technical Bid

1.3.1.2. Part B – Financial Bid

1.4. LANGUAGE OF THE E-TENDER:-

All information in the tender offer shall be in ENGLISH only. It shall not contain interlineations, erasures or overwriting except as necessary to correct errors made by the bidder.

1.5. The quantities mentioned in the tender document are approximate. The tender accepting authority shall be permitted to vary the quantities finally ordered and execute the work through the contractor.

1.6. Kindly go through the check-slip given and ensure whether all the asked documents are enclosed.

1.7. The Bidder has to digitally/manually sign and upload the required bid documents copy one by one as indicated in the limited tender document**.**

1.8. All the tenderers are instructed to check the designated websites, after the date of pre-bid meeting, till 48 hours before the closure date and time, for the publication of corrigendum, due to any amendments or clarifications on the tender, if any.

1.9. They are instructed to download the corrigendum, if published and enclose the duly authenticated copy of it along with the technical bid document without fail. Failing which, it is liable for rejection of the tender offer.

1.10. Detailed evaluation will be done only on the basis of the Documents / Records / Evidences / Certificates produced by the Applicant in the Technical Bid.

1.11. If the Qualification application is made by a FIRM in partnership, it shall be signed by all the partners of the firm with their full names and current address or by a partner authorized by the firm (either as per Articles of the Deed of Partnership / by power of attorney) for signing in Tenders, Agreements etc. In which case, certified copy of the registered deed of Partnership along with the current address of all the partners and a certified photocopy of the Registered Power of Attorney issued in favour of the Signatory should be produced.

1.12. If the Qualification Application is made by a Limited Company or a Limited Corporation, it shall be signed by a duly authorized person holding the Power of attorney for signing the application, in which case, the certified copy of the power of attorney shall accompany the qualification application. Such limited company or corporation shall also furnish satisfactory evidence of its existence along with the Qualification schedule.

2. ELIGIBILITY CRITERIA

Contractor should furnish along with technical bid limited tender :

2.1 The contractor should be an electrical EA license holder issued by a competent authority and furnish a copy of license along with part-I technical bid.

2.2 The tenderer should furnish copy of electrical EA license live certificate.

2.3 The tenderer should furnish Income Tax Permanent Account Number.

2.4 The tenderer should furnish TIN Number (GST certificate).

2.5 The tenderer should furnish past experience certificate (work completion certificate) for the past three financial years clearly indicating department of work/reputed industry executed, period and value of work.

2.6 The tenderer should have completed at least one building electrification work in similar food processing industry/reputed industry for which tender called for and the value should not be less than 60% of the tender value.

2.7 The tenderer should furnish average annual sales turnover for the last 3 (three) financial years which shall not be less than the tender value of contract in the same name & style and minimum annual sales turnover in last three years shall not be less than 50% of the tender value of contract.

2.8 The tenderer should furnish their Income Tax Permanent Account Number [PAN] in the tender document itself.

2.9 List of various machineries and other equipment of the tenderer disposal for use in the execution of work should be furnished.

2.10. Tenderers not meeting one or all the Tender Clauses of the Eligibility Criteria will not be considered for opening of Commercial Bid.

2.11. VALIDITY OF PRICE :

2.11.1. The tender offer shall be kept for acceptance for a period of 180 days from the date of opening of Part-I - Technical bid. The offers with lower validity period are liable for rejection.

2.11.2. Further the tenderer shall agree to extend the validity of the bids without altering the substance and prices of their bid for further period, if any required by Federation (i.e) The Price Bid shall be valid for a period of at least 90 days (Ninety Days) from the date, notified for opening of Price Bid.

2.12. DEVIATION:

2.12.1. The offers of the tenderers with deviations on technical / commercial terms of the tender will be rejected.

2.12.2. No alternate offer will be accepted.

2.12.3 Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have:

2.12.4. Made misleading or false representations in the forms, statements and attachments submitted as proof for the qualification requirements. and/or

2.12.5. Record of poor performance such as abandoning the contract, not properly completing the contract, inordinate delays in completion, litigation history or financial failures etc. and/or

2.12.6. Participated in the previous bidding on such contract and had quoted unreasonably high bid prices and could not furnish apt rational justifications.

3. GENERAL TERMS & CONDITIONS

3.1. PART - A Technical bid, wherein the pre-qualification, based on various factors such as suitability and eligibility of the tenderer will be evaluated, considered and decided prior to opening and consideration of Commercial Bids under PART - B of the tender.

3.2 PART - A Technical bid shall be opened on **12.09.2023 at 3:30 PM** in the presence of the tenderers or their authorized representative who opt to be present during the opening.

3.3 PART - B Commercial Bid of the tenerers who do not satisfy any / all the terms and conditions specifically so mentioned under PART - A Technical bid, shall not be considered eligible and shall not be opened.

3.4 PART - B Commercial Bid, wherein the rates tendered by those who qualify themselves for and are selected as per the terms and conditions prescribed in PART - A Technical Bid only will be considered and decided for the award of the contract.

3.5 Part - B Commercial bids shall be opened after scrutiny of Part-A Pre-qualification / Technical bids in respect of those who are found and declared as qualified, eligible and short listed as per technical parameters and terms and conditions of pre-qualification bid with prior individual intimation in the presence of tenderers or their authorized representative who opt to be present. The date of such opening of part-B Commercial bid will be informed separately to those who qualify in the PART - A Technical bid confirm to the Technical parameters prescribed thereon.

3.6 The tender forms are not transferable or assignable.

3.7 The signatory of the tender should indicate his / their status in which he / they have signed and submit necessary documentary proof admissible in law in respect of such authority assigned to him / them by the firm. *If the tender opening day is declared as a holiday, the tenders shall be received and opened immediately on the next working day at the same time and place.*

3.8. EARNEST MONEY DEPOSIT

3.8.1. Bidder should pay the specified amount towards Earnest Money Deposit as follows:

Sl. No.	Name of Item	EMD amount
1	Newly Constructed Electrical Sub-station Internal and External Electrical Wiring Works to increase the electrical demand for strengthening the infrastructure at Products Dairy	Rs.7,450/- (Rupees seven thousand four hundred and fifty only)

3.8.2. Online payment gateway has been enabled for Tamilnadu Cooperative Milk Producers' Federation Limited, Chennai in eProcurement Portal https://tntenders.gov.in. The EMD amount should be paid only through online payment mode in e-tender portal of https://tntenders.gov.in.

3.8.3. The EMD will not carry any interest.

3.8.4. Bidder has to select the payment option as "pay online" to pay the EMD amount. Only after payment of EMD, bidder will be able to encrypt/upload their bids. In order to avoid any issues and last minute delay in processing of payment online, it is recommended to make payment and submit the bid as early as possible. TCMPF will not be responsible for any sort of difficulty faced/failure in submission of bids online by the bidder

3.8.5. Any other mode of payment of EMD shall not be accepted

3.8.6. Online payment mode (EMD):

3.8.6.1. During online bid submission process, bidder shall select SBI MOPS option and submit the page, to view the terms and conditions page. On further submission, bidder will be re-directed to MOPS gateway, where two options namely SBI and Other Banks will be shown, here the bidder may proceed as follows:

3.8.6.1.1. SBI Account Holder: Shall click 'SBI' option to view the Net Banking Facility, where they can enter their internet banking credentials and transfer the EMD amount.

3.8.6.1.2. Other Bank Account Holders: Shall click 'Other Bank' option to view the bank selection page and select their respective bank to proceed with Net banking Facility for payment of EMD.

Note - Bidders using "Other Bank" option under SBI MOPS payment Gateway are advised by SBI to make online payment 72 hours in advance before tender submission closing time.

3.8.6.2. Any transaction charges levied while using any of the above modes of online payment has to be borne by the bidder.

3.8.6.3. The bidders will be evaluated only if payment status shows “Success” during bid opening. It is necessary to click on “Freeze bid” link/icon to complete the process of bid submission, otherwise the bid will not get submitted online and same shall not be available for viewing/opening during technical bid opening.

3.8.7. Refund of EMD of unsuccessful bidders:

The EMD paid by the bidder will automatically be deposited in the “Pooling Account” of the State Govt. only and not in TCMPF’s account. Hence refund process will be initiated automatically, once the bid is rejected by TCMPF during technical / financial evaluation and TCMPF is no way responsible for refund of EMD of the unsuccessful bidders.

3.8.8. Tenders not accompanied with Online Payment towards the prescribed EMD shall be summarily rejected.

3.8.9. No earlier EMDs or performance guarantees are transferable against present Tender. Therefore, submission of fresh EMD along with the offer is MANDATORY.

3.9. COST OF BIDDING

The bidder shall bear all costs associated with the preparation and submission of its tender and TCMPF will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the tendering process.

3.10. SUBMISSION OF e-TENDER

Two-part (Technical and Financial Bid) online system should be uploaded in eProcurement Portal (https://tntenders.gov.in):

3.10.1. General Instructions for Two Part E-Tender:

3.10.1.1. The tender proposes two stage tender system viz. (PART A) Technical Bid and (PART B) Financial Bid. The first stage enables TCMPF to know whether the Bidder is technically competent and capable of executing the order. Only those who qualify in the first stage would be eligible to take part in the second stage viz. Financial Bid. The Financial Bid of Bidders who failed in the first stage will not be opened.

3.10.1.2. Both the Technical and Financial Bids should be submitted in Online Portal https://tntenders.gov.in.

3.10.1.3. In Technical Bid – Documents listed in the **Tender Clause No.3.10.2** shall be uploaded.

3.10.1.4. In Financial Bid – The firm rates alone are to be quoted in the Financial Bid - BOQ (Excel Format) and to be uploaded online.

3.10.2. Details to be Uploaded in the Technical Bid:

3.10.2.1. Details of E-Remittance towards EMD Amount.

3.10.2.2. Documentary evidence for Manufacturer/Supplier/Dealer of tendered item as per Tender Clause No.3.1.

3.10.2.3. Copies of purchase orders / supply orders within a period of 3 years from the date of tender opening in respect of tendered items as per Tender Clause No. 3.3.

3.10.2.4. Copies of Satisfactory supply Completion Certificate / Performance Certificate (indicating the period of supply) for which Purchase Order / Supply

order furnished as per 3.3 within a period of 3 years from the date of tender opening as per Tender Clause No.3.4.

3.10.2.5. Documentary evidence for minimum experience of 3 Years in the manufacturing of tendered items as per Tender Clause No.3.5.

3.10.2.6. Documentary evidence for average annual sales turn-over for the last three financial years (2019-20, 2020-21 & 2021-22) as per Tender Clause No.3.6.

3.10.2.7. Digitally signed tender documents or authenticated tender documents.

3.10.2.8. The following Supporting Documents, including the Annexures / Amendments are to be uploaded duly signed and sealed in each and every page.

3.10.2.8.1. Profile of the Bidding Organization as per Annexure-I.

3.10.2.8.2. Financial Capability as per Annexure-II

3.10.2.8.3. Declaration Form as per Annexure-III

3.10.2.8.4. Certificate of Conformity as per Annexure-IV

3.10.2.8.5. AFFIDAVIT as per Annexure-V

3.10.2.8.6. BANK CERTIFICATE as per Annexure-VI

3.10.2.8.7. Bidder's Experience Details as per Annexure-VII

3.10.2.8.8. Details of Abandonment of work Litigation / debarring done as per Annexure - VIII

3.10.2.8.9. Any other documents wherever insisted in the limited tender document.

3.10.3. Details to be Uploaded in Financial Bid:

3.10.3.1. All rates shall be quoted in the format provided and no other format is acceptable. If the Financial Bid has been given as a standard BOQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BOQ file, open it and complete the unprotected cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BOQ file is found to be modified by he bidder, the bid will be rejected.

3.10.3.2. This financial bid will be opened only if the bidder is qualified to execute the tender as per technical bid.

3.11. SIGNING OF BIDS:

3.11.1. The signatory of the tender should indicate his/their status in which he/they have signed and submit necessary documentary proof admissible in law in respect of such authority assigned to him/them by the firm.

3.11.2. If the Qualification application is made by a FIRM in partnership, it shall be signed by all the partners of the firm with their full names and current address or by a partner authorized by the firm (either as per Articles of the Deed of Partnership / by power of attorney) - for signing in Tenders, Agreements etc. In which case, certified copy of the registered deed of Partnership along with the current address of all the partners and a certified photocopy of the Registered Power of Attorney issued in favour of the Signatory, should be produced.

3.11.3. If the Qualification Application is made by a Limited Company or a Limited Corporation, it shall be signed by a duly authorized person holding the ower of attorney for signing the application, in which case, the certified copy of the power of attorney shall accompany the qualification application. Such limited company or corporation shall also furnish satisfactory evidence of its' existence along with the Qualification schedule

3.12. MODIFICATIONS/CLARIFICATIONS TO TENDER DOCUMENTS:

3.12.1. At any time after the issue of the tender documents and before the opening of the tender, TCMPF may make any changes, modifications or amendments to the tender documents and the same will be intimated to the concerned vendors through corrigendum which can be downloaded from the vendor login.

3.12.2. In case any bidder asks for a clarification to the tender documents before 48 hours of opening of tenders, the DGM(Engg.), JMD's Office, TCMPF will clarify the same.

3.12.3. The responses to the clarification will also be notified on https://tntenders.gov.in without indicating the source of query.

3.12.4. TCMPF at its discretion may or may not extend the due date and time for the submission of bids on account of amendments.

3.12.5. All the Bidders must periodically browse website https://tntenders.gov.in till the closing date of this Tender for any amendments or corrigendum issued in connection with this Tender. TCMPF will not be responsible for any misinterpretation of the provisions of this tender

document on account of the Bidders failure to update the bid documents based on changes announced through the website.

3.13. WITHDRAWAL OF BIDS

No Bidder shall be allowed to withdraw the tenders after submitting the tender on the portal. If do so their EMD will be forfeited.

3.14. OPENING OF e-TENDER

3.14.1. Opening of Technical Bids without Price (Part-I):

3.14.1.1. The Tender offers except Financial Bid will be opened electronically on the date and time notified at the Office of the Deputy General Manager (Engg.), Joint Managing Director's Office, TCMPF Ltd., Plot No.29 & 30, SIDCO Industrial Estate, Ambattur, Chennai – 600 098, through eProcurement Portal https://tntenders.gov.in in the presence of bidder's authorized representative who may wish to be present on the date of opening.

3.14.1.2. Technical Bid would be opened first on the due date and time. Pre-Qualification Criteria such as payment of EMD and compliance with pre-qualification conditions will be checked. The supporting documents would be cross checked wherever required.

3.14.1.3. Only the Technical Bid will be opened on the due date.

3.14.1.4. In the event of the specified date for tender opening day is declared as a holiday, bids will be opened on the next working day at the same time and venue.

3.14.2. Opening of the Financial Bids: (Part - II)

The date and time of opening of Financial Bids shall be later notified through the registered e-mail to the Bidders who fulfill the Pre-Qualification criteria and whose bids are found to be technically acceptable

3.15. e-TENDER EVALUATION CRITERIA

The tenders will be evaluated strictly as per the Tamilnadu Transparency in Tenders Act 1998 and the Tamilnadu Transparency in Tenders Rules 2000 and amendments made thereon in the Act & Rules by the Government

3.15.1. Technical Bid Evaluation:

Bidders will be eligible for further processing, only if they fulfill the following criteria:

3.15.1.1. Payment of EMD in accordance with Tender Clause No.3.8.

3.15.1.2. Furnishing the tender document, Annexures, Amendments if any and any other document wherever insisted in the tender document duly signed.

3.15.1.3. Compliance with the Eligibility Criteria indicated in Tender Clause no. 2.0

3.15.1.4. Compliance with Technical specifications of tendered items as per tender Clause 7.0

3.15.1.5. If any clarification is needed from the bidder about the deficiency in his uploaded documents in technical bid he will be asked to provide it through Tamil Nadu Tender portal. The bidder shall upload the requisite clarification/ documents within the time specified failing which tender will be liable for rejection

3.15.1.6. TCMPF will prepare a list of Bidders based on the compliance of detailed Technical Specifications for tendered item and company profile as given in Tender form. The Tenders, which do not conform to the Technical Specifications or Tender conditions or Tenders from Companies without adequate capabilities for supply shall be rejected. The eligible bidders alone will be considered for further evaluation.

3.15.2. Financial Bid Evaluation

3.15.2.1. For the purpose of evaluation of tender offers, the following factors will be taken into account for arriving the evaluation price.

3.15.2.2. The evaluation of offer will be computed by taking into account Supply and Job Work put together.

3.15.2.3. The evaluation for L1 shall be on total end price of all items.

3.16. REJECTION OF TENDERS

3.16.1. Tender will be SUMMARILY rejected if

3.16.1.1. The EMD requirements are not complied with as specified in Tender Clause 2.0.

3.16.1.2. Bid Pre-Qualification Criteria as specified in Tender Clause 3.0 are not complied with.

3.16.1.3. If the documents furnished with the offer is found to be bogus or the documents contains any false particulars.

3.16.2. Tender is LIABLE to be rejected, if it is:

3.16.2.1. Not covering the entire scope of supply.

3.16.2.2. Not in conformity with TCMPF's tender terms and Technical Specifications.

3.16.2.3. Not properly signed by the bidder.

3.16.2.4. From any black listed Firm or Contractor.

3.16.2.5. Received by Telex / Telegram / E-Mail / fax.

3.16.2.6. Not containing all required particulars as per Annexures I to VIII.

3.16.2.7. Offer submitted without GSTIN and PAN is liable for rejection.

3.17. NEGOTIATION :

TCMPF reserves the right to negotiate with the Bidder whose offer is the lowest evaluated price for further reduction of price. TCMPF also reserves the right to negotiate with other Bidders to match the negotiated L1 price, strictly according to the Tamil Nadu Transparency in Tenders Rules, 2000.

3.18. SECURITY DEPOSIT:

3.18.1 After Evaluation and finalization of pre qualification cum technical bids and Commercial bids, selected successful tenderers would be required to furnish a Security Deposit at 5% of ordered value, drawn by means of Demand Draft from any Indian Nationalized Bank / Scheduled Commercial Bank in India (Approved by the Reserve Bank of India) drawn in favour of "The Joint Managing Director, TCMPF Ltd., Chennai – 600 098", payable at Chennai (or) the successful tender shall furnish Irrevocable Bank Guarantee from any Indian Nationalized Bank / Scheduled Commercial Bank in India (Approved by the Reserve Bank of India) within 15 days from the date of notifying to them and validity period of Irrevocable Bank Guarantee will be 1 year from the date of execution of the contract for the above security amount value. The EMD already paid along with tender shall be adjusted against SD to be paid by the successful bidder.

3.18.2 No exemption will be given for payment of security deposit under any circumstances as per TNTT Act and the same should be remitted by Demand Draft.

3.18.3 No interest shall be paid on Earnest Money Deposit / Security Deposit.

3.19. AGREEMENT :

3.19.1. The successful bidder has to execute an agreement on Rs.100/-non-judicial stamp paper incorporating the terms and conditions of the contract and the specification within 15 days from the date of acceptance of the tender. In case of default of either of the conditions (i.e) remitting the security deposit or execution of the agreement within the time allowed, the EMD paid is likely to be forfeited by TCMPF.

3.19.2. If the contractor fails to execute the contract satisfactorily at the tendered rate, the security deposit will be forfeited by TCMPF.

3.19.3. If the TCMPF incurs any loss / additional expenditure due to the negligence of the contractor in connection with the work during the period of contract, the same shall be recovered together with all charges and expenses from the contractor.

3.20. The variation in the statutory levies and taxes by State Government / Central Government shall be effected on the basic price to the benefit of either the tenderer or the Federation as the case, it may be.

3.21 Should the tenderer withdraw his offer before finalization of the tender, the EMD remitted by the tenderer shall be forfeited in full?

3.22 The tenderer should be submitted along with a covering letter giving full details as called for in the tender notice together with the copy of letter registering them in the appropriate class.

3.23 The tenderer should furnish their Income Tax Permanent Account Number [PAN] in the tender document itself.

3.24 List of various machineries and other equipment of the tenderer disposal for use in the execution of work should be furnished.

3.25 Details of previous work done / under execution by the tenderer covering the cost of work, Agreement No. & date, the department in which the work was carried out etc., should be furnished so as to assess the previous experience of the tenderer. Year wise details should be furnished so as to see that these tenderers have minimum experience of major buildings.

3.26 **The rate quoted in the tender shall be kept valid for 180 days from the date of opening of part-A Technical bids** and the tenderer at his own cost shall attend and sign the contract as soon as the acceptance of tender is communicated. Failure to attend in the manner above said shall entail forfeiture of EMD furnished by the tenderer. Besides, the tenderer shall be held responsible for any loss to the Federation on account of his failure to attend the manner aforesaid.

3.27 The EMD of the successful tenderer shall be retained as security deposit, which will not bear any interest, and the same will be released after 6 months from the date of completion of work. The EMD of the unsuccessful tenderer shall be returned after execution of the agreement of the contract.

3.28 The tenderer's particular attention is drawn to the sections and clauses in the General Conditions of the Contract dealing with

a) Test, Inspection and rejection of defective materials and work
b) Carriage
c) Accidents
d) Delays
e) Sanction on particulars of payments
f) Construction plant
g) Water and lighting and
h) Cleaning up during progress and for delivery.

3.29 PENALTY:

If the contractor fails in its due performance of the contract within the time fixed or extension of time granted, the contractor is liable to pay liquidated damage of 1% per month subject to the maximum of 5% on actual expenditure of contract / final bill value.

3.30 DISPUTES & ARBITRATION:

3.30.1 The Arbitrator for fulfilling the duties set forth in the Arbitration clause of General Conditions of Contract shall be in case of value of claim upto Rs.50,000/- [Rupees fifty thousand only] the Arbitrator who will be appointed by the Managing Director, TCMPF Limited and if the value of claim exceeds Rs.50,000/- it shall be settled through the competent civil court of Chennai jurisdiction.

3.30.2 In case of discrepancy between the prices quoted in words and in figures, the lower of the two shall be considered.

3.31 WITHHELD AMOUNT:

10% of bill value shall be retained in each bill as withheld amount and at the time of payment of the final bill 10% of the withheld amount shall be released to the contractor.

3.32 SALES TAX:

The contractor's rates are inclusive of Sales Tax payable by the contractor to Government as per the Tamil Nadu General Sales Tax Act of 1939 as amended from time to time. No enhanced rates will be paid to the contractor for any upward revision of Sales Tax during the currency of the contract.

The tenderer shall furnish the Sales Tax Registration Number and the Area of Sales Tax Officer having jurisdiction over the place of business may be indicated. Further a deduction of GST (percentage to be indicated) will be deducted from the contractor's bill.

3.33 SERVICE TAX: -

The tenderer should furnish a self attested copy of the Service Tax registration certificate after award of contract.

If the tenderer is not required to pay Service Tax by virtue of the value of his services being below the limit of Rs.10 Lakhs, the tenderer has to produce a certificate in original obtained from a Chartered Accountant duly certifying the fact.

The rates quoted by the tenderer in the commercial bids, with reference to the quantities indicated, should be exclusive of Service Tax. Upon award of contract, the contractor shall while claiming the part / final bills, remit the applicable Service Tax, as per the Service Tax (Determination of value) Rules, 2006, into Government Account and claim the same separately by producing proof for remittance into Government Account.

The tenderer should quote the amount towards service tax for both service provider and receiver in the appropriate columns. If not quoted, it will be considered that the rate quoted is inclusive of service tax.

3.18 VARIATION IN TAXES: -

The variation in the statutory levies and taxes by State Government / Central Government shall be effected on the basic price to the benefit of either the tenderer or the Federation as the case may be.

4.0 TENDER EVALUATION CRITERIA

4.1. The tenders will be evaluated strictly as per the Tamilnadu Transparency in Tenders Act 1998 and the Tamilnadu Transparency in Tenders Rule 2000. The tender offers received will be examined to determine whether they are in complete shape, all required data have been furnished, properly signed and generally in order and confirms to all the terms and conditions of the specification without any deviation. For the purpose of evaluation of tender offers, the following factors will be taken into account for arriving the evaluation price.

4.2. The quoted price will be corrected to arithmetical errors. In case of discrepancy between the price quoted in words and figures, lower of the two shall be considered.

4.3. The evaluation shall include States Goods and Services Tax, Central Goods and Services Tax, Integrated Goods and Services Tax and all central duties such as customs duty as a part of the price, as detailed below:-

4.3.1. In evaluation of the price of an imported item, the price has to be determined inclusive of the customs duty.

4.3.2. In evaluation of the price of articles which are subject to States Goods and Services Tax, Central Goods and Services Tax, Integrated Goods and Services Tax, the price has to be determined with such States Goods and Services Tax, Central Goods and Services Tax, Integrated Goods and Services Tax.

4.4. The percentage of GST shall be indicated in the offer.

4.5. DEVIATION:

4.5.1. The offers of the tenderers with deviations in commercial terms of the tender document are liable for rejection.

4.5.2. No alternate offers will be accepted.

5.0 SPECIAL CONDITIONS, TECHNICAL SPECIFICATIONS AND MODE OF MEASUREMENT

SPECIAL CONDITION:

POWER (ELECTRICITY) SUPPLY

Unless otherwise specified the tenderer shall have to make his own arrangements for the power supply at his own cost. All the works shall be done as per IEA rules. The temporary lines shall be removed by the tenderer at his cost after the completion of the work or if there is any hindrance, to the other works due to the alignment of these lines, during the contract period.

In case the Federation provides the power supply, it shall be on the following conditions:

1. The supply shall be made at one point in the site at the discretion of the Engineer. The tenderer shall make their own arrangement to carry and distribute the power wherever it is required within the site as per IEA rules.
2. An Energy Meter shall be installed at the site by the tenderer for recording the power consumed by the tenderer and the same shall be recovered at the prevailing rate of supply of Electricity by the local electricity board or other local authorities as the case may be.
3. If at any time during the period of contract the Energy meter is found to be faulty the electricity charges shall be recovered from the interim bills of the tenderer at 0.50 % of the value of work done during that particular period.
4. Power required for commissioning and trial runs of the plant shall be supplied free of cost.
5. The temporary supply lines shall be removed and the tenderer shall clear the site after the completion of the work at their own cost.

TECHNICAL SPECIFICATION

The following specifications will apply under all circumstances to the equipment to be supplied and installed against this contract and it is to be ensured that the contractor shall obtain for himself at his own expense and on his own responsibility all the information which may be necessary for the purpose of submitting the tender and for entering into a contract keeping in view the specifications of installation and inspection of site etc.

1.0. STANDARDS AND CODES

The following Indian Standard Specifications and code of practices amended as

on date will apply to the equipment, materials and installation for this contract:

a.	Steel boxes for enclosure of electrical accessories	IS 5133 – 1969 Part I
b.	Fittings for rigid steel conduits	IS 2667 – 1964
c.	Rigid steel conduits for electrical wiring	IS 1653 – 1981
d.	Accessories for rigid steel conduits for electrical wiring	IS 3837 - 1966
e.	Switch socket outlets	IS 4615 - 1968
f.	Three pin plug and socket outlets	IS 1293 - 1967
g.	Switches for domestic and similar purpose	IS 3854 - 1966
h.	PVC wires	IS 694 – 1990
i.	PVC Insulated Heavy Duty Cables	IS 1554 - 1976
j.	Conductor for Insulated Electric Cables	IS 8130 - 1984
k.	PVC Insulated & PVC Sheathed solid Al conductor cables – 1100 volts.	IS 4288 - 1988
l.	Low Voltage Switchgears & Control Gears	IS 13947 – 1993
m.	Switchgear bus bars	IS 375 - 1963
n.	Enclosures for low voltage switchgear	IS 2147 - 1962
o.	Moulded Case Circuit Breakers	IS 13947 - 1993
p.	Miniature Air Circuit Breakers for AC Circuits	IS 13947 – 1993
q.	Code of Practice for Installations & Maintenance of power cables	IS 1255 – 1983
r.	Code of Practice for Electrical wiring installation	IS 732 - 1989
s.	Code of Practice for Selection, Installation & Maintenance of Switchgear & Control gear	IS 10118 – 1982
t.	Code of practice for Earthing	IS 3043 – 1987
u.	Code of Practice for Lightening protection	IS 2309 – 1989
v.	Code of Practice for personal hazard & fire safety of buildings	IS 1644 – 1960
w.	Code of Practice for Electrical Installation fire Safety of Building	IS 1646 – 1982

Indian Electricity Rule 1956 & Indian Electricity Act 1910 amended as on date and NATIONAL BUILDING CODE OF INDIA

2.0. SURFACE CONDUIT WORKS

(Pertains to items appearing under Part I, Trade code – 81, Section X Schedule of Quantity – Vol – II)

2.1. Metallic Conduits specification & size

2.1.1. **Steel Conduits**: These shall be of Mild Steel of **wall thickness, 16 SWG (1.6 mm thick) up to 19 mm / 25 mm dia M.S. Conduit pipe (or) ISI Brand**, heavy duty, electric resistance welded, electric thread type / screw type, having perfectly circular tubing and capable of being cleaned and tight fitting joints. The conduit shall be protected from rust by two coats of primer and one coat of black enamel paint applied inside and outside in its manufactured form.

2.1.2. **Steel Conduit Connections**: Connections between steel conduits shall be with screwed couplers ensuring screwed metal to metal contact. Length of threads in all cases of joints shall be between **13 to 19 mm**. Connections between screwed conduits & sheet metal boxes shall be by means of MS hexagon check-nuts fixed inside the box. Joints in conduits and

terminations shall be free of burrs to avoid damage to insulation of conductors while pulling through the conduits. Connection between MS & PVC conduits if required shall be through a junction box & never directly.

2.1.3. **Conduit Bends:** Conduit bends shall of **16 S.W.G.** As far as possible, the conduit system shall be so laid out that it will alleviate the use of tees, elbows and sharp bends. Bending of conduit with large radius while laying at site to minimize use of readymade bends shall be adopted as far as possible. No length of conduit shall have more than the equivalent of two-quarter bends from inlet to outlet.

2.1.4. **Conduit Cross Section / Size:** The conduit shall be of ample section area to facilitate the drawing of PVC wires/cables. In no case shall the total cross section of wires/cables measured overall, be more than half the inside area of the conduits.

MINIMUM CONDUIT DIA (0.D.) FOR ELECTRICAL WIRING - 19 MM

2.2. Laying of Conduits

2.2.1 Conduits shall be laid before casting in the upper portion of a slab/in PCC if below flooring or otherwise, as may be instructed in accordance with approved drawings, so as to conceal the entire run of conduits and ceiling outlet boxes with a concrete cover of **minimum 12 mm**. Conduits shall be so laid that they are interconnected. This is required to facilitate pulling of wires from different routes in case of any of the portion of conduit/junction box/outlet box is blocked during slab casting. Vertical drops shall be cut in masonry work by the contractor to sufficient depth to allow full thickness of plaster over conduits. The width of the chases will be made to accommodate the required number of conduits. The chases will be filled with cement, coarse sand mortar **(1:4)** and properly cured by watering by the contractor. This filling of chases shall be done by electrical contractor prior to building contractor doing finishing plaster on walls.

2.2.2 When the conduit is to be embedded in a concrete member it shall be adequately tied by steel wires to the reinforcement to prevent displacement during casting/vibrating of concrete. Tying wire to be supplied by the contractor. Conduit in chases or laid in the slab shall be supported at maximum of 1 m centre.

2.2.3 Cutting of chases in any R.C.C. member/finished floor/ already finished wall surface is not allowed unless prior approval of Site Engineer is taken in site instruction book. If a chases is cut in an already finished surface, the contractor shall fill the chases and finish it to match the existing finish including painting at his cost to Site Engineer's satisfaction.

2.2.4. Contractor shall not cut any steel reinforcement bars or steel structure to fix the conduits. Puncturing of wooden / steel shuttering for R.C.C. slab / beams / column etc. for conduit work is also not allowed, unless Site Engineer permits in site instruction book under special conditions.

2.2.5. Run of conduit pipe through expansion joints in R.C.C. members should be avoided as far as possible and if unavoidable, flexible conduit pipe should be used with ceiling outlet box on both sides of expansion joint.

2.2.6. **Surface Conduiting :** Conduit on surface of walls/R.C.C. members shall

be avoided as far as possible and if unavoidable prior approval of Site Engineer on sample saddles, clamps, screws and a **minimum 5 M** conduit laid on surface shall be taken, to achieve best possible workmanship. Distance between 2 consecutive clamps for fixing conduit on surface shall not exceed 600 mm. No wooden gutties for fixing saddles/clamps shall be used. Roll plug/steel fastener with hard setting/sealing compound shall be used. Conduits & boxes fixed on surface shall be painted with finishing paint of approved colour & finish.

WHERE EVER FALSE CEILING IS BEING PROVIDED, CONCEALED CONDUITS IN RCC SLAB SHALL NOT BE PROVIDED BUT SURFACE CONDUITING WITH MS SUPPORTS / CLAMPS ETC. SHALL BE DONE OVER FLASE CEILING. SIMILARLY FOR INSULATED CEILING & WALLS, ONLY SURFACE CONDUITING TO BE PROVIDED

2.3. Ceiling/Wall outlet boxes for lights/fans

2.3.1. Outlet boxes shall be **of minimum 16 SWG** steel sheets or of casting with removeable cover sheet for all the light points & the fan points and so installed as to maintain continuity throughout. These shall be protected at the time of laying by filling with jute/earth/cotton etc. so that no cement mortar finds its way inside during concreting or plastering etc. While installing lighting fixture and ceiling fans, removeable covers to be removed and **3 mm** thick matching colour hylem sheet covers to be used.

2.3.2. For fixing lighting fixtures/brackets, outlet boxes complete with check nut for holding conduits shall be used. For fixing lighting fixture suitable for LED on RCC slabs/walls, only **one** outlet box is required.

2.3.3. For fixing ceiling fans, circular outlet boxes, made of **minimum 14 SWG** Sheet Steel, **125 mm** diameter, complete with **12 mm dia** Mild Steel rod **525 mm** long, with loop in the box & hylem sheet cover **150 mm dia** at bottom shall be used.

2.4. Draw Out Junction Boxes

The following shall be treated as general guidelines for deciding the location of these:

a. Junction boxes in the offset of bottom of R.C.C. beamed vertical wall shall not be provided.
b. If junction boxes are coming side by side for two or more conduits, one common MS box of proper size can be used to act as junction box.
c. Junction box in ceiling to be avoided as far as possible & if junction box is to be provided in ceiling, its position should be so located that it is in line with other light/fan points.
d. Junction boxes shall never be used for splitting one conduit into two or more. Junction box for such functions is avoidable and for this, number of conduits to be connected to one switchboard shall be calculated correctly as per drawing before laying conduits in ceiling.
e. Locating junction boxes on outer surface of exterior walls of building shall be avoided as these are in direct view and are

also exposed to weather.

f. Junction boxes shall never be closed permanently by plaster. Removable covering of Aluminium / Steel Sheet shall be provided for conduit boxes acting as junction boxes and for MS junction boxes removable hylem (white colour) plate shall be provided. This cover to be painted with wall colour.

g. Junction boxes in important areas shall be avoided and can be located in toilets/corridors/service shafts & stores etc.

2.5. Switch Boxes (for Modular type switches)

Same as above but only Zinc chromate passivated MS boxes suitable to house modular type switches, fan regulators & sockets of required ratings. These shall be so designed that accessories are mounted on a grid plate with tapped holes for brass machine screws. The grid plates & MS boxes shall be fitted with a brass earth terminal. Moulded front covers made from high impact resistant, flame retardant and ultra violet stabilized engineering plastics shall be fixed by means of counter sunk chromium plated brass machine screws.

3.0. WIRING AND SWITCHES:

(Pertains to items appearing under Part I, Trade code – 81, Section X Schedule of Quantity – Vol – II)

3.1. Specification of wires, sizes and laying / termination.

All wires shall have been manufactured in accordance with the latest IS Specification (IS 694-1990 Part II). All wires shall be PVC insulated, unsheathed, single core, FRLS (Fire Resistance Low Smoke), copper conductor (stranded), of 1100 volt grade. Cross section of the conductor shall be as per the specification mentioned in schedule of quantities.

MINIMUM CROSS SECTION OF COPPER STRANDED CONDUCTOR FOR ELECTRICAL WIRING - 1.5 MM SQUARE.

For single phase wiring, colour of live conductor's insulation shall be Red/Yellow/Blue (only one of these colour for one building) and Black for neutral. Earthing is to be done by green PVC insulated copper conductor. For three phase wiring, colour of live conductor's insulation shall be Red/Yellow/Blue, as per relevant phase and black for neutral. However, if due to unavoidable circumstances, these colour codes cannot be used by contractor, prior approval of the Site Engineer shall be taken and correct colour PVC tape should be put in distribution board/ outlet boxes/switch boxes etc. wherever these wires are to be inspected. Earth wire shall always be of Copper conductor PVC insulated & colour of insulation shall be Green. Whenever wires are being terminated in a Distribution Board / Switch Box / Plug Points / Outlet Box etc., a minimum of 200-mm long extra wire should be provided in the form of a loop for future maintenance/use.

Conductor having nominal cross sectional area exceeding 4 Sq. mm. shall always be provided with crimping socket unless switchgear is having facility to receive direct naked wires.

3.2 A Switches and Sockets (Conventional piano key type)

All 6 and 16 Ampere switches shall be conventional piano key type 240 volts AC of best quality & standard. The switch's moving & fixed contacts shall be of silver nickel and silver graphite alloy & contact tips coated with silver switches controlling the light, fan or sockets shall be connected on to the phase wire of the circuit. 6 A socket shall be 3-pin type with safety shutter, suitable for 240 V AC, 16 A socket shall be universal type (6 pins) suitable for 240 V AC with safety shutter.

3.2 B SWITCHES AND SOCKETS (Modular type)

All 6 & 16 A switches shall be of the modular flush mounting type, 240 V AC of best quality & standard. The switch's moving & fixed contacts shall be of silver nickel & silver graphite alloy & contact tips coated with silver. Housing of switches shall be made from high impact resistant, flame retarding & ultra violet stabilized engineering plastic material. Fan regulators shall be fixed inside the switch boxes on grid plates with tapered holes & brass machine screws leaving ample space at the back & sides for accommodating wires. Switches & sockets shall be provided with moulded cover plates of approved colour, shape & size made from high impact resistant, flame retarding & ultra violet stabilized engineering Plastic material & secure the box with counter sunk / round head chromium plated brass screws, where two or more switches are installed together, they shall be provided with one common switch cover plate as described above with notches to accommodate all switches either in one, two or three rows. 6 / 16 A socket outlets shall be of modular flush mounting type & shall be switch three pin type (for 6 A) and 6 pin type (for 16 A) and fitted with automatic linear safety shutters to ensure safety from putting fingers. Socket outlets shall be made from high impact, flame retarding & ultra violet stabilized engineering plastic material. Switch & sockets shall be located in the same plate.

3.3. Point wiring

3.3.1. For lights, fans, call bells & 6 A plug points in lighting switch boards

(a) Providing & fixing of conduit, conduit accessories, draw out boxes, outlet boxes and switch boxes etc. in concealed / surface system. Providing & laying of wires of sizes as specified in the schedule of requirement.

(b) Looping system shall be adopted from terminal to terminal throughout including supply and drawing of required numbers and sizes (minimum 1.5 sq. mm copper stranded conductor) of wires without stripping off the insulation in-between.

(c) All flush type switches and accessories will be used on **3 mm** thick hylem sheet in MS switch box or modular switches in special boxes as per technical specifications & requirement given in schedule of quantities.

(d) The point will commence from the switch box and would end up to outlet box and shall also include supply and fixing of 6 A switch for each light point or group of light points as the case may be for the items.

(CIRCUIT WIRING INCLUDING CONDUITING UP TO SWITCH BOARDS IS NOT INCLUDED IN SCOPE OF POINT WIRING)

(e) **POINT WIRING AND CIRCUIT WIRING IN SAME CONDUIT IS NOT ALLOWED AND THESE SHOULD BE DRAWN IN INDEPENDENT CONDUITS. POINT WIRING ORIGINATING FROM TWO DIFFERENT PHASES SHALL NOT BE RUN IN THE SAME CONDUIT.**

(f) The ceiling fan point shall be complete with special outlet box as specified in **2.3.3**. including fixing and connection of regulator. Supply and fixing of 6A switch and electronic stepped fan regulator for each ceiling fan is included in scope of the contractor. Switch box for ceiling

fan shall be suitable for electronic type regulators unless otherwise specified.

(g) For exhaust fans, ceiling rose near exhaust fan to be provided.

(h) In any switch box, not more than **six (6)** regulators for ceiling fans should be provided unless approved in writing by the Site Engineer.

(i) Joining of wires by taping inside the switch box to be avoided by utilizing neutral & phase pin of 6/16/20 A socket or of suitable capacity connector if there is no socket in switch box.

(j) Fan regulator in switch box should be earthed if it is chocked or resistance type. **Earthing of light fittings / call bells / fans not required.** 6 Amp. convenience plug point's 3rd pin to be earthed with 2.5 sq. mm. green PVC insulated copper wire.

(k) In one switch box, only one phase circuit shall be provided.

(l) **BUILDING FOR POINT WIRING (LIGHTS, FANS, CALL BELLS AND 6 A PLUG POINTS N LIGHTING SWITCH BOARDS) SHALL BE TWO TYPES :**

TYPE A - INDUSTRIAL BUILDINGS SUCH AS PROD. BLOCK SERVICE BLOCK, SUB-STATION, REF. BLOCK, BOILER HOUSE AND WORKSHOP ETC.

3.3.2. For 16A Power Plug Points

(a) Providing & Fixing of conduit, conduit accessories, draw out boxes switch boxes etc. in concealed/surface system including supply and drawing of circuit wiring. Conduit and wiring up to power plug point shall be paid separately and is not including in the scope of work for supplying & fixing power plug point.

(b) Providing and drawing of wires of sizes as specified in the item. In one circuit, there shall not be more than 2 nos. 16 A power plug points and circuit shall be **2 x 2.5/4.0 sq. mm.** copper stranded conductor wires, as specified in schedule of quantities.

(c) One no. flush type plug socket outlet and switch shall be supplied and fixed for each power point on 3 mm thick hylem sheet cover. Plug socket shall be universal type (one common 16A switch for 16/6 A sockets). 6-pin switch & socket to be piano type in conventional MS box or modular type in special MS box as required in schedule of quantities.

(d) The point would commence from the distribution board and will end up to the switch box. Looping of circuit would be done to second 16 A power point from first 16 A power point.

(e) Each circuit would have its own **2.5/4.0 sq. mm**. green PVC insulated copper wire from distribution board to switch box and would be connected to third pin of socket outlet.

3.5. Circuit / Sub Mains Wiring

3.5.1. Circuit wiring with PVC insulated wires

Specification for this item covers, PVC insulated wires from distribution boards to light switchboard or to 6 / 16 A isolated power plug points, in surface/concealed conduit system. This shall also cover wiring between two light switchboards or between two group lighting switchboards or between Two 6 / 16 A power plug points. This shall be carried out as follows:

(a) Supply and fixing of conduit, conduit accessories, draw out boxes, etc. in concealed / surface system as per specification given in **2.0.**

(b) Providing and drawing of wires of sizes as specified in items details specified in schedule of quantities. For each circuit, independent conduit of size as specified in schedule of quantities to be provided (i.e.) pulling of more than one circuit in one conduit is not allowed.
However, this condition can be relaxed by Site Engineer as per site conditions. In such cases one circuit shall be paid as per the relevant circuit wiring item and wires for other circuits shall be paid in items of pulling wires in existing conduits. Specification of wires shall be as per details given at **3.1.**

4.0. POWER CABLE WORK

(Pertains to items appearing under Part VI, Trade code – 86, Section X Schedule of Quantity – Vol – II)

4.1. Specification of Cables

Heavy duty, PVC insulated, PVC outer and inner sheath, steel armoured, Al. conductor cables suitable for 1100 Volts AC, as per IS 1554 (Part-I-1976) of sizes as specified in schedule of quantities. The conductor of cable of size 16 sq. mm. & above shall be stranded whereas cables of size up to 10 sq. mm. shall be of single strand. While deciding the sizes of cable (if not specified in drawings) for current rating following conditions may be considered.

a.	Maximum conductor Temperature	70 deg. C
b.	Ambient Air Temperature	45 deg. C
c.	Ground Temperature	30 deg. C
d.	Depth of Laying	750 mm
e.	Load	Maximum connected load
f.	Grouping of cable	Yes
g.	Voltage drop	Not to exceed 5% from one end to another end

4.2. General Precautions for handling of cables

4.2.1. Before laying cables, these shall be tested for physical damage, continuity, absence of cross phasing, insulation resistance to earth and between conductors. Insulation resistance tests shall be carried out with **500/1000-Volt** Insulation Tester.

4.2.2. The cables shall be supplied to site wound on wooden drum as far as possible. For smaller length and sizes, cable in properly coiled form can be accepted. The cables shall be laid by mounting the drum of the cable on drum carriage (specially for cable of sizes above 50 sq. mm.). Where the carriage is not available, the drum shall be mounted on a properly supported axle, and the cable laid out from the top of the drum. In no case the cable will be rolled on, as it produces kinks which may damage the conductor.

4.2.3. Sharp bending and kinking of cables shall be avoided. The bending radius for PVC insulated and sheath armoured cable shall not be **less than 12 D where `D' is overall dia of the cable.**

4.2.4. While drawing cables through GI pipes and conduits & RCC pipe, ensure that size of pipe is such that, after drawing cables, **40% area is free.** After drawing cable, the end of GI pipes / conduits shall be sealed with cotton/bituminous compound. After drawing cables through RCC pipes, the ends shall be sealed with lean mortar of brickbat.

4.2.5. Electric power cables and telephone wires / cables shall not be laid in same trench, G.I. / conduit / R.C.C. pipe. Minimum distance of **400 mm** between power and telephone wire / cable shall be maintained.

4.2.6. Armoured cables shall never be concealed in walls / floor/ roads without GI pipes, conduit or R.C.C. pipes.

4.3. Laying of Cables (Underground System)

4.3.1. Cables shall be so laid in ground that these will not interfere with other underground structures. All water pipes, sewage lines or other structure which become exposed by excavation shall be properly supported and protected from injury until the filling has been rammed solidly in places under and around them. Any telephone or other cables coming in the way are to be properly shielded, diverted as directed by the Site Engineer.

4.3.2. Cables shall be laid at a minimum depth of **750 mm** from existing ground level. Excavation will generally be in ordinary alluvial soil. The width of the trench shall be sufficient for laying of required number of cables.

4.3.3. Sand bedding **75 mm** thick shall be made below and above the cables. A layer of second class bricks (full size 230 x 100 x 75 mm) shall be laid over the cable, above sand bedding to cover cable completely. More than one cable can be laid in the same trench by providing sand between two cables. For details of laying of cables see **sketch no. SK-26 attached.** However, the relative location of cables in trench shall be maintained till termination. The surface of the ground after back filling the earth shall be made good so as to conform in all respects to the surrounded ground and to the entire satisfaction to Site Engineer.

4.3.4. **Cable Joints:** Joints in the cable throughout its length of laying shall be avoided as far as possible and if unavoidable, prior approval of site engineer shall be taken. If allowed proper straight through epoxy joint shall be made including preparing necessary bedding without any additional cost.

4.3.5. **Cable Loops:** A minimum loop of **3 M** shall be provided on both ends of the cable at entry of buildings, or after every **150 M** of un-jointed length of cable, and on both ends of straight through cable joint. This additional length shall be used for fresh termination in future. Cable for this loop shall be paid for supply and laying.

THE LOOP SHALL BE KEPT IN "S" FORM AND LOOPS OF DIFFERENT CABLES SHOULD NOT OVERLAP.

4.4. Termination & Jointing of Cables

4.4.1. On both ends of cables suitable size **brass chrome plated (CP)** heavy duty, **double compression type** cable glands shall be used before it enters terminal box / main L.T. panel / distribution board / sub-distribution board / joint box / cable box etc. Armour of cable shall be connected to earth point.

4.4.2. All the cores of PVC cables, of conductor size **exceeding 4 sq. mm**. shall be connected at the ends with the help of appropriate size and type of sockets

/ lugs. These sockets shall be of tinned copper or Aluminium alloy (socket material to be same as of cable conductor) and these shall be fitted on conductor **by crimping process** only with appropriate crimping tool. Following is the recommended procedure for crimped joint and the same shall be followed:

(i) Strip off the insulation of the cable and with every precaution, not to severe or damage any strand. All insulations to be removed from the stripped portion of the conductor and ends of the insulation should be clean and square.

(ii) The cable should be kept clean as far as possible before assembling it with the terminal/socket. For preventing the ingress of moisture and possibility of re-oxidation after crimping of the Aluminium conductors, the socket should be fitted with corrosion inhibiting compound. This compound should also be applied over the stripped portion of the conductor and the palm surface of socket.

(iii) Correct size and type of socket / ferrule / lug should be selected depending on size of conductor and type of connection to be made.

(iv) Make the crimped joint by suitable crimping tool.

(v) If after crimping the conductor in socket / lug, some portion of the conductor remains without insulation the same should be covered sufficiently with PVC tape.

5.0. EARTHING & LIGHTENING PROTECTION SYSTEM

(Pertains to items appearing under Part IV, Trade code – 84, Section X Schedule of Quantity – Vol – II)

5.1. Earth Pit

(a) Plate or pipe type earth electrode with earth pit shall be provided for this work unless otherwise advised by site engineer due to typical site conditions. Earthing electrode and pit shall be as per IS 3043-1987, the latest revision (code of practices for Earthing). For ready reference, sketches for pipes and plate type earth electrode earthing pit have been shown in the **attached sketch no. SK - 25.** All earth electrodes shall preferably be driven to a sufficient depth to reach permanent moist soil.

PRIOR APPROVAL OF SITE ENGINEER SHALL BE TAKEN FOR SELECTING TYPE OF EARTH ELECTRODE (PIPE OR PLATE).

(b) Earth pit centre shall be at a minimum distance of **3 M** from nearest building, unless otherwise advised. The minimum **3 M** distance shall be maintained between centres of 2 earth pits.

(c) Earth electrode for Neutral of transformer shall be of copper, whereas the same for all other application shall be of GI.

5.2. Earth Bus, Earthing Lead & Earth Wire/Strip

(a) All single phase & three phase distribution boards, LT Panels shall be provided with two earth point from 2 independent earthing systems.

Bare round / flat sections of galvanised Iron or PVC insulated aluminium conductor wire of sizes as specified in schedule of quantities shall be used for taking out earthing from earth electrodes, for making earthing bus or for connecting to LT panels / distribution board etc.

(c) Heavy duty, PVC insulated, PVC outer and inner sheath armoured copper conductor cable suitable for 1100 Volts as per IS-1554 (PART -1

: 1976) of sizes in specified in schedule of quantities shall be used from earth electrode to concealed distribution board shall be laid underground. Specification 4.2, 4.3, 4.4 & 4.5 of handling and laying of power cable shall be applicable for this cable also.

5.3. Lightening Protection System

For lightening protective system IS 2309-1989 "Code of practice for the protection of building & allied structures against lightning" shall be followed.

5.3.1 Lightening Arrestor/Vertical Air Termination

Vertical air terminations shall comprise of finals made of **25-mm** dia GI tube 1200 MM long with multiple spikes at the top. Vertical terminations when provided shall project at least **300 mm** above the salient point or network on which it is fixed. Roof conductors/down conductor/GI strip as specified in schedule of quantities shall be fixed to base plate of this lightning arrestor. Lightning arrestor shall be fixed on highest point of the tallest building of the project. Numbers and building on which it has to be installed shall be shown in the drawings/ finalised by site engineer.

5.3.2. General

The lightning protective system shall have as few joints as possible and they shall be mechanically and electrically effective. In general, joints for strips shall be tinned, soldered and at least double riveted. Bolted joints shall only be used on test points or on bonds to existing metals. Each down conductor shall be provided with a testing joint in a position convenient for testing but inaccessible for interference.

All other metal objects such as water tanks, iron staircase/railings, water or gas pipes on top of, inside or by the side of a building should be at least 2 m away from the lightning roof conductor/down conductor system. If this is not possible they should be provided with a separate down conductor and earth pit.

Structures with explosive or inflammable contents shall not have any spire, flagstaff or other salient point, which can impair the efficiency of air termination/lightning arrestor. No outdoor radio aerials or overhead line poles may be located within a distance of **15m** from the structure. Special instructions for earthing system:

EARTHING SYSTEM USED FOR LIGHTNING PROTECTION MUST BE INDEPENDENT OF THE EQUIPMENT/ DISTRIBUTION EARTHING SYSTEM.

6.0. SUPPLY & INSTALLATION OF LIGHTING FIXTURES/ FANS (Pertains to items appearing under Part II, Trade code – 82, Section X Schedule of Quantity – Vol – II)

6.1. Installation of Lighting Fixtures

6.1.1. Scope of work under this item shall start from light point, with a 6 A bakelite connector, 2 core 1.5 Sq. mm PVC insulated copper stranded conductor wires from this connector to the connector inside the lighting fixture, connections, fixing of lighting fixture complete with all accessories, lamps on wall / roof etc. testing the lighting fixture and commissioning. If wire length of light point is enough to reach connector of light fitting, connector in light point can be deleted.

6.1.2. If lighting fixtures are being supplied by Purchaser / Client, the contractor would take delivery of these from site store, test the same before installation and if found defective, the defect would be brought to the notice of site engineer. Repair of wiring / circuit of the fitting shall be

carried out by contractor without any additional cost. However, if any component of the lighting fixture is defective / damaged, the same would be located and brought to the notice of site engineer, who would arrange repair / procurement of the same. However, labour for replacement of the damaged / defective component of lighting fixture shall be done by contractor without any additional cost.

6.1.3. Contractor shall clarify from site engineer for type of installation (direct on ceiling/hanging) of lighting fixture, if not specifically mentioned on drawings. Length of the suspension rods shall also be decided in consultation with site engineer.

6.2. Installation of Ceiling Fans

6.2.1. Scope of work under this item shall start from fan point with a 6 A bakelite connector, 2 core 1.5 Sq. mm PVC insulated copper stranded conductor wires from this connector to the connector fan, connections, fixing of fan (complete with all accessories) to the fan hook of fan point, testing the fan with regulator and commissioning.

6.2.2. If ceiling fans are being supplied by Purchaser, the contractor would take delivery of these from site store, assemble the same, test before installation and if found defective, the defect would be brought to the notice of site engineer. If any component of fan is defective / damaged, the same shall be located and brought to the notice of site engineer, who would arrange repair / procurement of the same. However, labour for replacement of the damaged / defective component of fan shall be done by contractor without any additional cost.

6.2.3. Extension/replacement of hanging rod of fans shall be carried out only if advised by site engineer on drawing / site instruction book. Only GI pipe (`B' class) shall be used for ceiling fan hanging. Screwed joint within the length of fan hanging rod is not allowed and shall never be adopted. Fan hanging rod should be preferably of one piece and if not possible, welded joint can be allowed. This hanging rod shall be painted with enamel paint as directed.

6.3. Installation of wall fans

Specification same as **7.3** except that fan has to be fixed on wall with screws / bolts grouting instead of on fan hooks.

6.4. Installation of Exhaust fans

6.4.1. Scope of work under this item shall start from exhaust fan point, with a ceiling rose, 2 core 2.5 Sq. mm PVC insulated copper stranded conductor cable in flexible conduit from ceiling rose to connector of exhaust fan, connections, fixing of exhaust fan in existing opening, complete with accessories and louvers on walls with hold- fasts, testing the exhaust fans and commissioning.

6.4.2. Same as **6.2.2** (read exhaust fan instead of ceiling fans).

6.4.3. If instructed by Site Engineer, Electrical contractor shall make opening in wall for exhaust fan including repair and finishing of opening. Charges of this work shall be paid separately as per schedule of quantities.

6.5. Special Notes

6.5.1. Location of lighting fixtures / fans shall be shown on the working drawings and the same shall be followed. However, if due to site conditions the location cannot be adhered to, the same shall be brought out to the notice of site engineer for advice.

6.5.2. Maintenance and custody of light fixture / fans after installation / commissioning would be with contractor till that building / area is completed and handed over to TCMPF Site Engineer in satisfactory working order.

7.0. STREET LIGHTING

7.1. Installation of street light fixtures

This includes fixing of street light fitting complete with accessories and lamps at the end of the pole/bracket, connecting it **with 3 X 2.5 Sq.mm** Copper stranded conductor, PVC insulated, flexible cable from water tight MS switch box, testing & commissioning. One core of cable shall be connected with earthing point of light fitting at one end & earthing point of MS switch box at the other end. If the pole has more than one light fitting, each fitting should have independent flexible cable from MS switch box to fitting.

While fixing streetlight fitting on bracket (8.2 above), supplying and fixing of necessary MS conduit between MS switch box and fitting is also included in contractor's scope without any extra cost.

8.0. SWITCH BOARDS AND DISTRIBUTION BOARDS

(Pertains to items appearing under Part VI, Trade code – 86, Section X Schedule of Quantity – Vol – II)

8.1. Cubicle type electrical switch boards

8.1.1. General

It shall be of cubicle type (having individual cubical for each incoming and outgoing feeder), totally enclosed, dust and vermin proof, floor mounted, fabricated out of **14 / 16 SWG** mild steel sheets of commercial quality. However doors & covers may be fabricated from **1.6-mm thick (16 G)** CRCA sheets. A base channel of **75 x 75 mm** shall be provided at the bottom.

A horizontal wire way cable compartments with screwed cover shall be provided at the top or bottom (as per site conditions, first preference being at top) to take inter connecting control wiring between vertical sections. Separate cable compartments of adequate size running for the complete height of the switchboard in the case of front access boards shall be provided for incoming and outgoing cables. Adequate & proper support shall be provided in cable compartments to support cables.

The height of switchboard to be so designed that no operating switch is at more than **1900 mm** and less than **300 mm** from finished floor level. Door closing shall be by quick open able thumb screws. Mechanical inter-locking to be there for doors of cubicles having incoming/outing feeder such that door can be opened only if feeder is OFF.

8.1.2. Painting

All the MS parts shall be given rigorous rust proofing process comprising degreasing, pickling, phosphatising etc. and anti rust primer coating, following by powder coating finish with two coats of shade 692 to IS 5 with outside & white on the inside paint thickness shall not be less than 50 microns approved shade. Half-litre paint shall be supplied along with panel for touch up wherever necessary.

8.1.3. Gaskets

All joints between different sections and the switchboard shall be provided with synthetic rubber gaskets so as to make the complete board completely

dust proof as per **IP 54.**

8.1.4. Bus Bars

A completely enclosed ventilated dust & vermin proof bus bar compartment for the horizontal & vertical busbars. The rectangular busbar shall be made of high conductivity Aluminium alloy, PVC sleeved (heat shrinkable), air insulated, and of adequate size (full load current for phase busbars and half rated current for neutral busbars), current density to be considered as 0.8 Amp/sq.mm for operation on 3 phase, 4 wire, 440 V, 50 Hz. AC supply system, as per IS 345-1963 with amendment till date. The busbars shall be supported and separated by strong epoxy based SMC/DMC blocks at close intervals to prevent busbar sag and to effectively withstand electro-magnetic stresses in the event of a short-circuit (25 MVA fault level on 415 volts for 1 sec). Minimum clearance to be maintained for enclosed indoor air insulated busbars working at system voltage up to 600 V shall be as follows:

Phase to neutral - 20 mm Phase to phase - 25 mm

Feeder boxes should be completely shrouded by sheet steel plates provided between the feeder boxes and the busbar chambers, in order to avoid falling down of any nuts / bolts / parts into the busbar chambers while carrying out maintenance of the feeder components.

MINIMUM SIZE OF MAIN AL. BUSBAR OF CUBICAL TYPE MAIN SWITCH BOARD TO BE -- 40 X 6 SQ.MM.

8.1.5. Components of switch boards

The panel shall be provided with switches, fuses, MCB, MCCB, meters and instruments etc. of size, capacity as specified in schedule of quantities. Only approved make as selected by contractor in annexure III can be used for manufacture of switchboard.

Switches disconnector fuse switches:

The load break switches shall confirm to IES-947-3 and IS 13947-3 specification. They shall be suitable for continuous maximum rating having positive isolation with position indication of contact separation. They should have high short circuit making and withstanding capacities. Breaking capacity should correspond to AC 23A utilisation category. Switches handle shall be provided with door interlocking arrangement. Also ‘defeat’ arrangement shall be provided to open the door in switch ‘Close’ position for testing purpose. Live terminals of the switch shall be shrouded.

HRC cartridge fuse links

These shall be non deteriorating HRC cartridge link type with operation indicator which will be visible without removing fuses for the service. These shall be complete with moulded phenolic fuse base and cover. The fuse base shall be so located in the modules to permit insertion of fuse pullers and removing of fuse links without any problem.

Miniature circuit breakers (MCB)

These shall be suitable for 230/415 V, 50 Hz. AC supply and current rating as specified in schedule of quantities. These shall be of short circuit current of 10 KA minimum at 0.5 pf on 230 V.AC, long mechanical and electrical operation life, with over load tripping through accurately calibrated thermal bimetal strips and short circuit tripping through magnetic coil. Complete MCB should be housed in heat resistant moulding.

Over current tripping should result in switching off all poles automatically even if tripping only takes place in one pole. Miniature circuit breakers shall confirm IS 13947 - 1993.

Moulded case circuit breakers (MCCB)

The MCCB shall be as per to provisions of IS 13947 – 1993. The MCCB's shall be of triple / four pole construction arranged for simultaneous three / four pole manual closing or opening and automatic instantaneous tripping on short circuits.

Closing mechanism shall be quick make, quick break and trip-free type. 'ON', 'OFF' and 'Trip' indications shall be provided on the front cover with door interlocking facility. All feeders having MCCB shall be provided with neutral link complete with isolating link, if not FOUR POLE type. The control voltage shall be 240 V AC.

MCCB's shall be provided with following interlocking devices for interlocking to door of switchboard.

- Handle interlock to prevent unnecessary manipulation of the breaker.
- Door interlock to prevent doors being opened when the breaker is on ON position.
- De-interlocking device to open the door even if the breaker is in ON position.

The MCCB's shall be rated for continuous maximum duty as specified.

The rating of the MCCB's shall be as per the feeder details.

Rated breaking capacities shall be as under:

MCCB's up to 100 Amps 25 kA (minimum) at 415 volts

Above 100 A to 400 Amps 35 kA (minimum) at 415 volts

Above 400 A 50 KA (minimum) at 415 volts

Measuring instruments & Indication Lamps

Measuring instruments shall be of square pattern having approximate dimensions 96mmx96mm, flush mounting type. Necessary auxiliary instruments like CTs, PTs etc. are also included in the scope of supply.

All AC meters shall be of moving iron type having class 1.0 accuracy for voltmeters and 1.5 for ammeters. Voltmeter shall be suitable for direct line connection. Voltmeters shall be connected through fuses only.

Multifunction meters shall be suitable to measure unbalanced / balanced loads of 3-phase 3/4-wire system.

Current Transformers (CTs) & Potential Transformers (PTs)

CTs shall be cast resin insulated type. Primary and secondary terminals shall be marked indelibly. CTs shall preferably be mounted on stationery parts. CT rating and ratios shall be as per feeder ratings. These shall be capable of withstanding momentary short circuit and symmetrical short circuit current for 1 second. Neutral side of CTs shall be earthed. Protection CTs shall have low reactance, accuracy class "SP" and an accuracy limit factor greater than "10". Instrument CTs shall be of accuracy class "1.0" and accuracy limit factor less than "5.0". CT shall confirm to IS 2705 (part I, II & III) in all respects.

Earth leakage circuit breakers (ELCB/RCCB)

These current operated ELCB's shall be suitable for 2/4 poles 230/415 V, 50 Hz. AC supply, current and sensitivity rating to be as specified in schedule of quantities. (If not specified it may be taken as 30 MA). These shall be able to withstand short circuit current of 3 kA minimum at 230 V AC and have long operational life. This shall incorporate highly sensitive relay to trip the circuit in case of earth leakage. This shall have the facility to trip the circuit during interruption in the earth connection or loss of supply neutral. Over current tripping should result in switching off all poles automatically even if tripping takes place in one pole. Earth leakage circuit breakers shall conform to BS - 4293.

8.1.6. Earthing

Two independent earthing points shall be provided outside the panel near bottom and these shall be inter-connected with GI earthing busbars of minimum **size 40 x 6 mm.** All earthing points inside the distribution board shall be interconnected to these earthing points with suitable size copper conductor PVC insulated wire.

8.1.7. Name plates

Switch board / distribution board shall be provided with danger plate and name plates for all incoming and outgoing feeders. These name plate shall be of PVC (black colour base & white letters engraved) screwed to panel. PVC identification ferrule numbers shall be used for all internal wiring.

8.1.8. Preparation of Drawing

The drawing showing general arrangements and detailed wiring diagram for the switch board shall be submitted to employer for approval, prior to manufacture and switch board shall be got inspected, prior to despatch to project site. The complete switchboard and its component shall conform to Indian Electricity Rules & relevant I.S.S. approval.

8.2. Electrical Distribution Boards

8.2.1. General

These shall be wall mounted, surface / flush type, indoor type enclosure, hinged front cover, dust and vermin proof fabricated out of **16 G** mild steel sheet of commercial quality.

All components such as switches, M.C.B. etc. to be so mounted inside the distribution boards, that only operating handles / knobs are visible outside the front hinged door. Detachable cable / conduit entry plates with required 25-mm dia knockouts shall be provided on top and bottom of D.B.

If distribution board is concealed and receiving incoming power from bottom of board by Armoured cable through GI pipes, height of DB shall be increased suitably, so that 2 mm thick gland plate can be fixed as shown in **the attached sketch no. 24.**

Alternatively, readymade DBs (in standard size / capacity) of reputed make, as approved by the purchaser, with double metal door (**16/18 G sheets**) may also be provided and installed.

8.2.2. Painting

Same as clause no.8.1.2 of cubicle switch boards.

8.2.3. Gaskets

Same as clause no.8.1.3 of cubicle switch boards.

8.2.4. Connections

All interconnections shall be done either by solid copper PVC insulated or by suitable size (minimum 4.0sq.mm.) Copper stranded conductor PVC insulated wires with suitable size and type of crimped type plug. Arrangement shall be there for directly mounting of M.C.B. on busbars. The bolts and nuts used for connections to busbars shall be of Al. alloy or tinned forged brass.

Enough space shall be provided inside the distribution board to accommodate loop of surplus incoming and outgoing wires. For all line conductor PVC colour of wire would be Red, Yellow, Blue & that of neutral to be Black. For accommodating neutral wires of all incoming and outgoing circuits, suitable size connector or neutral bus shall be provided inside the distribution board.

8.2.5. Earthing

Two independent earthing points shall be provided inside the distribution board in case of 3 phase and one earthing point in case of single phase distribution system. An earthing bus of copper shall be provided inside the D.B.

8.2.6. Name plates

Same as clause no. **8.1.7** of cubicle switch boards.

8.2.7. Approval

Same as clause no. **8.1.7.** of cubicle switch boards except that sample approval of only one typical distribution board may be taken from employer.

8.2.8. Components of distribution boards

Same as clause no. 8.1.5 of cubicle switch boards.

9.0. COMPLETION TEST AND DRAWINGS

After supply and installation of complete project or a particular building/area, following tests shall be carried out by the contractor before switching on the power to installation and the results shall be recorded and submitted to the site engineer.

If results are not satisfactory / as per the standard set herewith, the contractor shall identify the defects / short coming and shall rectify the same. Nothing extra shall be paid for carrying out these tests and contractor has to arrange all necessary instruments.

9.1. Insulation resistance to earth

This to be measured with all fuse links in place, all switches on, all lamps and appliances in position by applying a voltage not less than twice the working voltage (subject to a limit of 500V). Insulation resistance of the whole or any part of the installation to earth must not be less than 50 Mega-ohms divided by the number of outlets (points and switch positions) except that it need not exceed 1 Megaohm for the whole installation.

9.2. Insulation resistance between conductors

Test to be made between all the conductors connected to one pole or phase conductor of the supply and all the conductors connected to the middle wire or neutral or the other pole or phase conductors of the supply. For this test, all lamps shall be removed and all switches put on. The result of the test must be 50 Mega-ohms divided by the number of outlets (point and switch positions) but need not exceed one Megaohm for the whole

installation.

9.3. Polarity of single pole switches

Test shall be made to verify that all non-linked single pole switches are on phase conductor (Live) and not on the neutral or earthed conductor.

This can be done by connecting test lamps between two terminals of switch and earth. If the lamp lights up when switch is ON & either terminal is touched the switch is correctly installed.

9.4. Resistance of metal conduits/sheaths (Earth continuity test)

In case of cables encased in metal whether conduit of metallic sheathing, the total resistance of the conduit or sheathing from the earthing point any other position in the completed installation shall not exceed 2 ohms. This can be carried out by the circuit shown in Annexure VII. One end of the lead is connected to the ECC at its connection with the electrode and the other to the farthest point of the ECC. First, current through the circuit is measured with the resistance of 2 ohms short-circuited by the link. Next, current is measured through the two ohms resistance by disconnecting the two leads from the ECC and joining them together. If current is more in the first case, the resistance of ECC is less than two ohms.

9.5. Completion Drawings and Documents

9.5.1. Completion drawings

After completion of works & before issuance of virtual completion certificate the contractor shall submit completion drawings in the form of one complete set of originals on sepia cloth with two sets of blue prints & three sets of documents as listed below:

i) As built conduit layout for lights, sockets, outlets, fans & sub-mains showing position of bends / inspection boxes / draw-out boxes / junction boxes / outlet boxes / switch boxes, conduit size, number & size of wires in each run, number & size of earth continuity conductor etc.

ii) As built layout of lights, sockets outlet, switch boards, distribution boards etc.

iii) As built details of electric, number of cables of mode of installation.

iv) As built detail earthing conductors, earth pits and lightning protection system etc.

v) As built General Arrangement and schematic diagrams of switchboards & distribution boards.

vi) A certificate shall be furnished by the contractor countersigned by the licensed electrical supervisor, under whose direct supervision the installation was carried out. This certificate shall be in the prescribed form as required by the local supply/electrical inspector authority. The contractor shall be responsible for getting the electrical installation inspected & approved by the local & statutory authorities concerned.

10. MODE OF MEASUREMENT:

NEWLY CONSTRUCTED ELECTRICAL SUB-STATION INTERNAL AND EXTERNAL ELECTRICAL WIRING WORKS TO INCREASE THE ELETRICAL DEMAND FOR STRENGTHENING THE INFRASTRUCTURE AT PRODUCTS DAIRY

S. No.	Description	Qty.
1.	Supply of Sway Seven Segment MCB Double Door Distribution Board with following incoming and outgoing switchgears as required(Lighting DB). Incomer – 40A FP MCB – 1 No., Sub Incomer – 25A DP 30 mA ELCB – 3 No., Outgoing – 6/10 A SP MCB – 18 Nos.	1 No.
2.	Supply of Sway VTPN MCB Double Door Distribution Board with following incoming and outgoing switchgears as required(Power DB). Incomer – 100A FB MCB – 1 No., Outgoing – 63A TP MCB – 1 No., Outgoing – 32A TP MCB – 4 Nos. Outgoing – 16/20A SP MCB – 9 Nos.	1 No.
3.	Supply of Sway SPN MCB Double Door Distribution Board with following incoming and outgoing switchgears as required (ELDB). Incomer – 25A DP 30mA, ELCB – 1 No. Outgoing – 6/10A SP MCB – 6 Nos.	1 No.
4.	Supply of 63A tempra 5 pin plug and socket with 63A FP MCB with enclosure box and accessories	1 No.
5.	Supply of 32A tempra 5 pin plug and socket with 32A FP MCB with enclosure box and accessories	2 Nos.
6.	Supply of 25A DP MCB with enclosure box and accessories	2 Nos.
7.	Supply of 2KVA Inverter (1 ph input, 1 ph o/p – suitable for 1 phase loads) with 1 hr battery backup with MS rack and accessories	1 Set
8.	Supply of 3 run 1.5 Sq.mm. Copper FRLS Wire and Accessories for linght point wiring(working height 7 mtrs)	1080 Mtr.
9.	Supply of 2 run 2.5 Sq.mm. + 1 run 1.5 Sq.mm. Copper FRLS wire and accessories for exhaust fan/power point wiring (working height 7 mtrs.)	390 Mtr.
10.	Supply of 1” MS Conduite Pipe and Accessories(working height 7 mtrs.)	575 Mtr.
11.	Supply of 2 x 20W LED Fitting with 2 Nos. of Lamp and Accessories for exhaust fan/power point wiring (working height 7 mtrs.)	24 Nos.
12.	Supply of 90W LED Street Lightfitting and accessories(working height 7 mtrs)	4 Nos.
13.	Supply of 45W LED Street Lightfitting and accessories(working height 7 mtrs)	8 Nos.
14.	Supply of 32mm Dia. GI Wall bracket for streetlight fitting and accessories (working height 7 mtrs.)	12 Nos.
15.	Supply of balance socket for light fitting and accessories (working height 7 mtrs.)	50 Nos.

S. No.	Description	Qty.
16.	Supply of 1200mm ceiling fan with 3 metres long down rod and accessories (working height 7 metres)	1 No.
17.	Supply of 1 No. of 15 Amps switch and 3 Nos. of 5 Amps Socket with MS base box and front plate and accessories	2 Nos.
18.	Supply of 1 No. of 15 Amps switch and socket with MS base box and front plant and accessories	3 Nos.
19.	Supply of 3.5C x 35 Sq. mm. XLPE Al. Ar. Cable and accessories	55 Metres
20.	Supply of 4C x 16 Sq. mm. XLPE Al. Ar. Cable and accessories	75 Metres
21.	Supply of 4C x 10 Sq. mm. XLPE Al. Ar. Cable and accessories	150 Metres
22.	Supply of end termination for 3.5C x 35 Sq. mm. XLPE Al. Ar. Cable Gland and Sockets and Accessories	2 Nos.
23.	Supply of end termination for 4C x 16 Sq. mm. XLPE Al. Ar. Cable Gland and Sockets and Accessories	4 Nos.
24.	Supply of end termination for 4C x 6 Sq. mm. XLPE Al. Ar. Cable, Cable Gland and Sockets and Accessories	4 Nos.
25.	Supply of 8SWG Copper Wire for earthing	60 Metre
26.	Supply of MS Clamps and Accessories for light fitting	14 Set
27.	Fixing of 6way Seven Segment MCB Double Door Distribution Board with following incoming and outgoing switchgears as required (Lighting DB) Incomer – 40A FP MCB – 1 No. Sub Incomer – 25A DP 30 mA ELCB – 3 No. Outgoing – 6/10 A SP MCB – 18 Nos.	1 No.
28.	Fixing of 8way VTPN MCB Double Door Distribution Board with following incoming and outgoing swtichgears as required (PowerDB) Incomer – 100A FP MCB – 1 No. Outgoing – 63A TP MCB – 1 No. Outgoing – 32A TP MCB – 4 Nos. Outgoing – 16/20A SP MCB – 9 Nos.	1 No.
29.	Fixing of 6way SPN MCB Double Door Distribution Board with following incoming and outgoing switchgears as required (ELDB) Incomer – 25A DP 30mA ELCB – 1 No. Outgoing – 6/10 A SP MCB – 6 Nos.	1 No.
30.	Fixing of 63A tempra 5 pin plug and socket with 63A FP MCB with enclosure box and accessories	1 No.
31.	Fixing of 32A tempra 5 pin plug and socket with 32A FP MCB with enclosure box and accessories	2 Nos.
32.	Fixing of 25A DP MCB with MS enclosure box and accessories	2 Nos.
33.	Installation, testing & commissioning of 2KVA Inverter (1 ph input, 1 ph o/p – suitable for 1 phase loads) with 1 hr. battery backup with MS rack and accessories	1 No.

S. No.	Description	Qty.
34.	Laying of 3 run 1.5 Sq. mm. Copper Wire and accessories for linght point wiring (working height 7 metres)	1080 Metres
35.	Laying of 2 run 2.5 Sq. mm. + 1 run 1.5 Sq. mm. Copper wire and accessories for exhaust fan/power point wiring (working height 7 metres)	390 Metres
36.	:Laying of MS Conduite Pipe and accessories (working height 7 metres)	575 Metres
37.	Fixing of 2 x 20W LED Fitting with Lamp and Accessories(working height 7 metres)	24 Nos.
38.	Fixing of 90W LED Streetlight fitting and accessories (working height 7 metres)	4 Nos.
39.	Supply and fixing of 45W LED Streetlight fitting and accessories (working height 7 metres)	8 Nos.
40.	Fixing of 32mm Dia. GI Wall Bracket for streetlight fitting and accessories (working height 7 metres)	12 Nos.
41.	Fixing of Balance Socket for light fitting and accessories (working height 7 metres)	50 Nos.
42.	Fixing of 1200mm ceiling fan with 3 metres long down rod and accessories (working height 7 metres)	1 No.
43.	Fixing of 1 No. of 15 Amps switch and 3 Nos. of 5 Amps Socket with MS base box and front plate and accessories	2 Nos.
44.	Fixing of 1 No. of 15 Amps switch and socket with MS base box and front plate and accessories	3 Nos.
45.	Laying of 3.5C x 35 Sq. mm. XLPE Al. Ar. Cable, Cable and accessories	55 Metres
46.	Laying of 4C x 16 Sq. mm. XLPE Al. Ar. Cable, Cable and accessories	75 Metres
47.	Laying of 4C x 10 Sq. mm. XLPE Al. Ar. Cable, Cable and accessories	150 Metres
48.	Making end termination for 3.5C x 35 Sq. mm. XLPE Al. Ar. Cable, Cable Gland and Sockets and Accessories	2 Nos.
49.	Making end termination for 4C x 16 Sq. mm. XLPE Al. Ar. Cable, Cable Gland and Sockets and Accessories	4 Nos.
50.	Making end termination for 4C x 6 Sq. mm. XLPE Al. Ar. Cable, Cable Gland and Sockets and Accessories	4 Nos.
51.	Laying of 8SWG Copper wire for earthing	60 Metres
52.	Towards rental charges for 6 metres height scaffolding ladder	1 Job
53.	Fixing of MS Clamps and Accessories for light fitting	14 Set

ANNEXURE-I

PROFILE OF THE BIDDING ORGANISATION

The Bidder shall furnish the following details without fail:

Name of the Organization	
Nature of the Organization: PSU/Public Ltd/Private Ltd	
Year of Incorporation (Furnish copy of Certificate of incorporation)	
Address of the Registered Office:	
Contact Person Name	
Contact Person Mobile	
E-Mail Address	
GST Registration Number (Furnish copy of GST Certificate)	
PAN Number (Furnish copy of PAN Card)	

Note: The Bidder must upload documentary proof for the above details without fail.

I/we hereby declare that the details furnished above are true and correct to the best of my knowledge. In case any of the above information is found to be false or untrue or misleading or misrepresenting, I/we am/are aware that I/we may be held liable for it.

Signature of the Bidder with office seal

Place:
Date:

ANNEXURE-II

FINANCIAL CAPABILITY

The Average Annual Sales / Revenue Turnover of M/s.....(Name of Firm)..... and address ……..... for the past three years are given below and certified that the statement is true and correct:-

S. No.	Financial Years	Sales / Revenue Turnover in Lakh (Rs)
1.	2019-20	
2.	2020-21	
3.	2021-22	
	Total	

Average annual Sales/Revenue turnover - Rs. _____ Lakh

Note:- The Bidder must upload either the Annual Turn Over Certificate for above 3 years certified by Chartered Accountant or Annual statement of Accounts (i.e.) Profit & Loss Accounts and Balance Sheet for the above 3 years certified by Chartered Accountant in support of Annual Turn Over without fail.

Signature of the Bidder with office seal

Place:
Date:

ANNEXURE-III

DECLARATION FORM

(To be signed with company seal on letter head and uploaded in the Technical Bid)

To
The Dy. General Manager (Engg.),
Tamilnadu Cooperative Milk Producers' Federation Ltd.,
Plot No.29 & 30,
SIDCO Industrial Estate, Ambattur,
Chennai – 600 098.

Sir,
Sub: Acceptance of Terms & Conditions of Limited Tender.
Tender Ref. No.: 510/JMDO/Engg/2023
Name of Tender / Work / Item : Newly Constructed Electrical Sub-station Internal and External Electrical Wiring Works to increase the electrical demand for strengthening the infrastructure at Products Dairy

*****

We, the undersigned, declare that:

1. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents including all documents like detailed technical specification, annexure(s), etc ,
2. I/we agree to abide by all the detailed specifications, terms and conditions stipulated by the TCMPF which I/we have read and understood.
3. I/we certify that I/we have fully read and understood the instruction to bidders for online bid submission given by TCMPF, and any lapse to properly submit the bids result in rejection of the bid submitted.
4. I/we certify that the tender is offered without any alteration / addition / omission.
5. The corrigendum(s) issued from time to time by your department/ organisation too has also been taken into consideration, while submitting this declaration form
6. I/ we certify that all the conditions of the tender are accepted.
7. I/we agree that the TCMPF, is not responsible for any data corruption that might arise during the transmission / uploading of data in the website or due to disruption in communication error in my / our tender.
8. I/we agree that the TCMPF, has right to change schedule of opening or any technical corrective action to resolve any error that might arise during the opening of the e-tender by TCMPF.

9. I/we certify that I/we are responsible for the uploading of correct copies of scanned documents as per the e-tender procedure of TCMPF.
10. I/we understand that any error in doing so my / our tender may be summarily rejected by TCMPF.
11. I/We hereby agree to hold the tender offer valid for acceptance for a period of 180 days from the date of opening of Part – I – Technical bid
12. In the event of failure on my / our part to comply with all the requirements mentioned in this tender document I / we unconditionally agree that the department is at its liberty to reject my/our tender including the forfeiture of the full said earnest money deposit absolutely.
13. **I / We unconditionally agreed to pay penalty amount equivalent to Earnest Money Deposit / Security Deposit or an amount equal to the actual loss incurred by the TCMPF Limited whichever is less in the event of non-fulfilment or non-observance of any of the conditions stipulated in this tender.**

Signature of the Bidder with office seal

Place:
Date:

ANNEXURE – IV

CERTIFICATE OF CONFORMITY

Certified that the offer is in total conformity with tender terms and specification without any deviation, whatsoever.

SIGNATURE OF THE BIDDER :

FULL NAME :

DESIGNATION :

SEAL OF COMPANY :

ANNEXURE – V

AFFIDAVIT

(To be furnished in a Hundred Rupees Non-Judicial Stamp Paper duly Certified by Notary Public)

1). I/We the undersigned solemnly declare that all the statements made in the documents, records etc., attached with this application are true and correct to the best of my/our knowledge.

2). I/We the undersigned do hereby certify that neither my/our firm/company nor any of it's constituent partners have abandoned any work/works of similar nature and magnitude in India, during the Last Three years.

3). I/We the undersigned do hereby certify that any of the contracts awarded to me/us has not been terminated rescinded, due to breach of contract on my/our part, during the last Three Years.

4). I/We the undersigned authorize (s) and request any bank / person / firm / corporation / Government Departments to furnish pertinent information deemed necessary and requested by the Joint Managing Director, TCMPF Ltd., JMD's Office, No: 29 & 30, SIDCO Industrial Estate, Ambattur, Chennai – 600 098 to verify the statement made by me/us or to assess my/our competence and general reputation.

5). I/We the undersigned, understand(s) that further qualifying information / clarifications on the statement made by me / us may be requested by the Joint Managing Director, TCMPF Ltd., JMD's Office, No: 29 & 30, SIDCO Industrial Estate, Ambattur, Chennai – 600 098 and agree(s) to furnish such information/clarification within SEVEN Days from the date of receipt of such request from the Joint Managing Director, TCMPF Ltd., JMD's Office, No: 29 & 30, Industrial Estate, Ambattur, Chennai – 600 098.

Dated Signature of Applicant with Seal:

To be signed by the officer authorized by the Firm/Company to sign on behalf, the Firm/Company with company's seal)

Note: In case of sole proprietary concern, affidavit should be signed only by the sole proprietor.

(Title of the Officer)

(Title of the firm/Company)

(Date)

The above named deponent has understood the contents well and solemnly and sincerely declared and affirmed by the deponent in my presence at……and signed before me on this day of …….. (Seal).

(Signature of the Notary Public)

ANNEXURE – VI

SAMPLE FORMAT FOR EVIDENCE OF ACCESS TO OR AVAILABILITY OF CREDIT FACILITIES

BANK CERTIFICATE

This is to certify that M/s …… is a reputed company with a good financial standing.

If the contract for the work, namely, _____ is awarded to the above firm, we shall be able to provide overdraft/credit facilities to the extent of Rs…….. to meet their working capital requirements for executing the above contract.

Signature of Senior Bank Manager …….

Name of the senior Bank Manager …….

Address of the Bank ……..

Stamp of the Bank

Note: Certificate should be on the letter head of the bank.

ANNEXURE – VII

BIDDER'S EXPERIENCE DETAILS

Details of purchase orders successfully executed in last five years / performance certificates of last three years may please be summarized chronologically in the given format and copies of the same may be scanned and uploaded.

S. No.	Name and address of the Purchaser	Name of the Works/Items	Purchase Order No. & Date	Qty.	Value of order in Rs. Lakh	Performance Certificate obtained on
1.						
2.						
3.						
4.						

Signature of the Bidder with office seal

Place:
Date:

Annexure – VIII

INFORMATION REGARDING CURRENT LITIGATION / DEBARRING / EXPELLING OF APPLICANT OR ABANDONMENT OF WORK BY THE APPLICANT

1. (a) Is the Applicant currently involved in any Arbitration / litigation relating to any contract works	Yes/No
(b) If Yes, Details thereon	
2. (a) Has the Applicant or any of it's constituent partners been Debarred/Expelled by any agency during the last Three years	Yes/No
(b) If yes, Details thereon	
3. (a) Has the Applicant or any of it's constituent Partners failed to complete, any contract work during the past Three years	Yes/No
(b) If yes, give details thereon	

Dated Signature of Applicant with seal

Note: It any information in this Annexure is found to be incorrect or concealed, the Qualification Application will be summarily rejected & price tender will not be opened.

ANNEXURE – IX

FINANCIAL BID

I/We have gone through and understood all the terms and conditions of the tender and will abide by all the condition laid down for the supply of tendered items / works as per the detailed scope of works, terms and conditions laid down in the tender document.

SL. NO.	ITEM DESCRIPTION	QTY.	Units	Basic Price per Metres/Nos./ Set/Lot/Job including Packing & Forwarding, Freight Charges if any, to be entered by the Bidder Rs. P	GST on the Basic Price (Col. 5) to be entered by the Bidder (Col. 5 X GST %) Rs. P	Total Amount without Taxes per Metres/ Nos./ Set/Lot/ Job	Total Amount with Taxes per Metres/ Nos./ Set/Lot/ Job	Total Amount In Words per per Metres/ Nos./ Set/Lot/ Job
1	2	3	4	5	6	7	8	9
	← RATE SHOULD BE QUOTED IN PRICE BID IN ONLINE →							

1). The rate quoted in the Financial Bid (BOQ - Excel online) shall remain constant during the period of contract or till extended period if any and no other additional charges on any account will be claimed. The above rate is on F.O.R. which is inclusive of all viz. material cost, GST/IGST for supply, transport charges, toll charges, transit insurance, loading and unloading charges, etc.

2). All the rates should be only in terms of Indian Rupees.

3). After the financial bid opening, the L1 bidder shall furnish complete break up details for the bill of materials mentioned in the Technical Specification in a separate sheet for Price, GST/IGST, with the percentage.

Signature of the Bidder with office seal

Place:
Date:

CHECK LIST

BIDDER TO FILL IN THE CHECK LIST AND UPLOAD IN THE ONLINE PORTAL WHILE SUBMITTING THE TENDER

(State YES / NO for each item)

Kindly ensure compliance of the under-mentioned requirements, as per Tender Terms and Conditions.

S. No.	Description	Bidders Response
I.	**TECHNICAL BID**	
1.	Whether details of E-Remittance towards EMD Amount is uploaded.	Yes/No
2.	Whether documentary evidence for EA License issued by a competent authority as per tender clause 2.1 are uploaded	Yes/No
3.	Whether the copies of work orders as per Tender Clause No.2.6 are uploaded.	Yes/No
4.	Whether the copies of Past Experience Certificate/Work Completion Certificate (indicating the period of work completed) for which work order furnished as per Tender Clause No.2.5 are uploaded.	Yes/No
5.	Whether documentary evidence for average annual sales turn-over for the last three financial years (2019-20, 2020-21 & 2021-22) are uploaded as per tender clause 3.8 are uploaded	Yes/No
6.	Whether the tender documents are Digitally signed/authenticated and uploaded	Yes/No
7.	Whether the following Supporting Documents, including the Annexures / Amendments are uploaded duly signed and sealed in each and every page, failing which their offer will be rejected	Yes/No
	a). Profile of the Bidding Organisation as per Annexure-I	Yes/No
	b). Financial Capability as per Annexure-II	Yes/No
	c). Declaration Form as per Annexure-III	Yes/No
	d). Certificate of Conformity as per Annexure-IV	Yes/No
	e). AFFIDAVIT as per Annexure-V	Yes/No
	f). BANK CERTIFICATE as per Annexure-VI	Yes/No
	g). Bidder's Experience Details as per Annexure-VII	Yes/No
	h). Details of Abandonment of work Litigation / debarring done as per Annexure – VIII	Yes/No
	i). Any other documents wherever insisted in the tender document.	Yes/No
II.	**FINANCIAL BID**	
8.	Whether the Financial Bid - BOQ (Excel Format) is filled and uploaded	Yes/No

Note: Please ensure that all the relevant boxes are marked YES / NO against each column

Important Note: Bidders must ensure to upload all the required documents indicated in the Tender document without fail in the Online Portal. Bids uploaded without supporting documents (See Clause No.2 Eligibility Criteria) in respect of the various requirements mentioned in the tender document are liable to be rejected at the initial stage itself.

INSTRUCTION TO BIDDERS FOR SUBMISSION OF ONLINE BIDS IN E-TENDER

The bidders are required to submit scanned copies of their bids electronically on the https://tntenders.gov.in, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the portal, prepare their bids in accordance with the requirements and submitting their bids online.

More information useful for submitting online bids on the portal may be obtained at https://tntenders.gov.in.

REGISTRATION:-

1) Bidders are requested to enroll on the e-procurement module of the Tamil Nadu Tenders procurement portal https://tntenders.gov.inby clicking on the link “on line bidder Enrollment” which is free of charge.
2) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
3) Bidders are advised to register their valid email address and mobile numbers as part of the registration process .These would be used for any communication from the portal.
4) Upon enrolment, the bidders will be required to register their valid (DSC) Digital Signature Certificate (Class II or Class III certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g.Sify/nCode/eMudhra etc),with their profile.
5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC’s to others which may lead to misuse.
6) Bidder may then log in to the site through the secured log-in by entering their user ID/password and the password of the DSC/e-Token

SEARCHING FOR TENDER DOCUMENTS

1) There are various search operations built in the https://tntenders.gov.in to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organisation Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search

parameters such as Organization Name, Form of Contract, Location, Date, Other key words etc to search for a tender published on the CPP portal.

2) Once the bidders have selected the tenders they are interested in, they may download the required documents/tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable to intimate the bidders through SMS/e-mail in case there is any corrigendum issued to the tender documents.

3) The bidder should make a note of the unique Tender ID assigned to each tender in case they want to obtain any clarification/help from the Helpdesk

PREPARATION OF BIDS:

1) Bidder should take in to account any corrigendum published on the tender document before submitting their bids.
2) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which bids documents have to be submitted, the number of documents – including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
3) Bidder, in advance, should keep ready the bid documents to be submitted as indicated in the tender document /schedule and generally they can be in PDF/XLS/RAR/DWF/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
4) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as part of every bid, a provision of uploading such standard documents (e.g PAN card copy, annual reports, auditor certificates etc) has been provided to the bidders .Bidders can use "MySpace" or "Other Important Documents" area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

SUBMISSION OF BIDS:

1) Bidder should log in to the site well in advance for bid submission so that they can upload the bid in time i.e on or before the bid submission time. Bidder will be solely responsible for any delay due to other issues.

2) The Bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
3) Bidder has to select the payment option as “online” to pay the tender fee/EMD as applicable and enter details of the instrument.
4) Bidder should prepare the EMD as per the instructions specified in the tender document.
5) Bidder is requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the Financial Bidis a standard BOQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders.

   Bidders are required to download the BOQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder).No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing filename. If the BOQ file is found to be modified by the bidder, the bid will be rejected.
6) The server time (which is displayed on the bidder’s dashboard) will be considered as a standard time for referencing the deadline for submission of the bids by the bidders, opening of bids etc.,. The bidder should follow this during bid submission.
7) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
8) Upon the successful and timely submission of bids (ie after Clicking “Freeze Bid Submission” in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
9) The bid summary has to be printed and kept as an acknowledgement for the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

ASSISTANCE TO BIDDERS

1) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a Tender or the relevant contact person indicated in the tender.
2) Any queries relating to the process of online bid submission or queries relating to https://tntenders.gov.inin general may be directed to the 24x7 Helpdesk of the portal.

SYSTEM REQUIREMENT:

i) Operating System - Windows XP-SP3 & above

ii) Firefox/Internet browser - IE7 and above

iii) Signing type digital signature

iv) JRE 7 update 79 (Preferred file- Windows X-86 Offline) and above to be Downloaded and installed in the system

To enable ALL active X controls and disable 'use pop up blocker' under Tools → Internet Options → custom level.

NOTE: The above instructions are time to time change by the NIC. Hence, all the Bidders must periodically browse the website https://tntenders.gov.in and follow the procedure and being updated.

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