

Replacement of old and existing energy meters installed for shops / banks/ canteens etc. at various locations with smart prepaid / postpaid energy meters with all allied works in the campus at IIT Kanpur.

BID DOCUMENT



SUPERINTENDING ENGINEER
INDIAN INSTITUTE OF TECHNOLOGY KANPUR
December 2025

Indian Institute of Technology Kanpur

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Superintending Engineer

1 Notice Inviting e-Tenders

The Superintending Engineer on behalf of Board of Governors of Indian Institute of Technology Kanpur invites online percentage rate tenders from enlisted contractors in CPWD and/ or the eligible firms / agencies satisfying the eligibility criteria mentioned in the document.

NIT No: **55/EE/Elect/2025-26**

1	Name of work	: Replacement of old and existing energy meters installed for shops / banks/ canteens etc. at various locations with smart prepaid / postpaid energy meters with all allied works in the campus at IIT Kanpur
2	Estimated Cost Inclusive of GST	: Rs. 34,01,672/-
3	Earnest Money Deposit (Rs.)	: Rs. 68,033/- (In favour of Director IIT Kanpur)
4	Duration of contract	: Four (04) months
5	Last Time & date of submission of bids (Up to)	: As per CPP portal data (https://eprocure.gov.in/eprocure/app)
6	Opening of bids	: As per CPP portal data
7	Time allowed for submission of requisite documents by lowest bidder	: Within One week of opening of financial bids

The bid forms and other details may be downloaded from Central Public Procurement Portal (<http://eprocure.gov.in/eprocure/app>). Aspiring bidders who have not enrolled / registered in e- procurement should enroll / register themselves before participating through web site <http://eprocure.gov.in/eprocure/app>. The portal enrolment is free of cost. Bidders are advised to go through instructions provided at “Instructions for online bid submission.”

Bidders can access quotation / tender documents on the website (for searching in the NIC site), kindly go to quotation search option and type ‘IIT’. Thereafter, click on “GO” button to view all IIT quotations. Select the appropriate quotation / tender and fill them with all relevant information and submit the completed Quotation / Tender document online on the website <http://eprocure.gov.in/eprocure/app> as per the schedule given in the next page.

Note: No manual bids will be accepted. All bids (both Technical & Financial) should be submitted in the e-procurement portal.

Applicants are advised to keep visiting the above-mentioned websites from time to time (till the deadline for bid submission) for any updates in respect of the tender documents, if any. Failure to do so shall not absolve the applicant of his liabilities to submit the applications complete in all respect including updates thereof, if any. An incomplete application may be liable for rejection.

Superintending Engineer

2 Information and Instructions for Bidders for E-Tendering

The Superintending Engineer on behalf of Board of Governors of Indian Institute of Technology Kanpur invites online percentage rate tenders from enlisted contractors in CPWD and/ or the eligible firms / agencies satisfying the eligibility criteria mentioned in the document

2.1 Schedule

1	Name of organization	: Indian Institute of Technology Kanpur
2	NIT No	: 55 /EE/Elect/2025-26
3	Location	: Indian Institute of Technology Kanpur
4	Tender / Quotation type (open / limited / EOI / auction / single)	: Open
5	Tender / Quotation category (services / goods /works)	: Works
6	Type of Contract (work / supply / auction / service / buy / empanelment / sell)	: Work
7	Form of contract (IITK-7/8)	: IITK-7
8	Work Category Electrical	: Electrical
9	Is multi-currency allowed?	: No
10	Date of publishing / issue / start	: As per CPP portal
11	Document download start date	: As per CPP portal
12	Document download end date	: As per CPP portal
13	Date & time of pre-bid meeting	: As per CPP portal
14	Venue of pre-bid meeting	: As per CPP portal
15	Last date & time of uploading of bids	: As per CPP portal
16	Date & time of opening of Technical bids	: As per CPP portal
17	Bid Validity Days	: 90 days after opening of technical bid
18	Earnest Money Deposit (EMD)	: Rs. 68,033/- . Scanned copy of the proof of EMD deposition to be uploaded with the tender. The hardcopy of the EMD receipt shall be submitted in the office of Executive Engineer IWD IIT Kanpur

19	No. of Bids / Covers (1 / 2 / 3 / 4)	:	2
20	Address for communication	:	Office of Executive Engineer- Indian Institute of Techno- logy Kanpur, Kanpur, U.P. Pin - 208016
21	e-mail address	:	vkatiwari@iitk.ac.in , kesav@iitk.ac.in

The intending bidder must read the terms and conditions of CPWD-6 carefully. He should only submit his bid if he considers himself eligible and he is in possession of all the documents required.

1. Information and instructions for bidders posted on website shall form part of bid document.
2. The bid document consisting of drawings, specifications, schedule of quantities of items to be executed, schedule of stages for payment as applicable and the set of terms & conditions of the contract to be complied with and other necessary documents can be seen and downloaded free of cost from www.eprocure.gov.in
3. But the bid can only be submitted proof of submission of EMD.
4. Those contractors not registered on the website mentioned above, are required to get registered beforehand. Only e-bids shall be accepted on website CPP portal through e-tendering processes.
5. The intending bidder must have valid Class-III digital signature to submit the bid.
6. On opening date, the contractor can login and see the bid opening process. After opening of bids, he will receive the competitor bid sheets.
7. Contractor can upload documents in the form of JPG format and PDF format.
8. Contractor must ensure to quote rate of each item. The column meant for quoting rate in figures appears in pink colour and the moment rate is entered, it turns sky blue.

In addition to this, while selecting any of the cells a warning appears that if any cell is left blank the same shall be treated as "0". Therefore, if any cell is left blank and no rate is quoted by the bidder, rate of such item shall be treated as "0" (ZERO).

However, if a tenderer quotes nil rates against each item in item rate tender or does not quote any percentage above/below on the total amount of the tender or any section / sub head in percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.

9. The “Eligibility/technical Bid” shall be opened first on due date and time as per the evaluation scheme. The “Financial Bid” of bidders qualifying the technical bid shall be opened on a later date as to be announced in CPP portal.
10. The bidders are advised to visit the site before submission of bids to have more clarity about the site conditions and availability of space for execution of the work.
11. All modifications/addendums/corrigendum issued regarding this bidding process shall be uploaded on website only.
12. The department reserves the right to reject any or all bids without assigning any reason thereof and may restrict the list of qualified bidders to any number deemed suitable by it, if too many bids are received satisfying the minimum laid down criteria.
13. The rates for all items of work, shall unless clearly specified otherwise, include cost of all operations and all inputs of labour, material, T&P, scaffolding, wastages, watch and ward, other inputs, all incidental charges, all taxes, cess, duties, levies, etc. Inclusive of GST required for execution of the work.
14. If the work involves addition/upgradation/alteration/renovation the work shall be in compliance with 3 Star GRIHA rating and as per environmental policies of Institute. Nothing extra shall be payable on this account.
15. The enlistment of the contractors, if applicable, should be valid on the last date of submission of bids. In case the last date of submission of bid is extended, the enlistment of contractor should be valid on the original date of submission of bids.
16. The description of the work is as follows: **“Replacement of old and existing energy meters installed for shops / banks/ canteens etc. at various locations with smart prepaid / postpaid energy meters with all allied works in the campus at IIT Kanpur.”**
17. The work is estimated to cost **Rs. 34,01,672/-**. However, this estimate given is mere approximation for guide.
18. Agreement shall be drawn with the successful bidders on prescribed Form No. CPWD 7 which is available as a Govt. of India Publication and also available on website www.cpwd.gov.in. Bidders shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.
19. The time allowed for carrying out the entire work will be **Four (04) months** from the date of **start as defined in Schedule “F” or from the first** date of handing over of the site, whichever is later, in accordance with the phasing as detailed in special conditions of contract in the bid document.
20. The sites for the work will be handed over as per the special terms and conditions of the document.

21. An approved programme of completion submitted by the contractor after award of work based on the available / to be available works for addition/alteration/upgradation.
22. The bid document consisting of NIT, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from website www.eprocure.gov.in free of cost.
23. After submission of the bid the contractor can re-submit revised bid any number of times but before last time and date of submission of bid as notified.
24. While submitting the revised bid, contractor can revise the rate of one or more item(s) any number of times (he need not re-enter rate of all the items) but before last time and date of submission of bid as notified.
25. Earnest Money Deposit receipt scanned copy shall be uploaded to the e-Tendering website within period of submission.
26. Earnest money can be paid in the form of Treasury Challan or Demand Draft or Pay **order or Banker's cheque or Deposit at call receipt or Fixed Deposit Receipt drawn** in favor of Director IIT Kanpur along with Bank Guarantee of any Scheduled Bank where applicable.

A part of earnest money is acceptable in the form of bank guarantee also in such case 50% of earnest money or Rs. 20 lacs, whichever is less, will have to be deposited in shape prescribed above and balance in shape of Bank Guarantee of any scheduled bank.
27. The e-tendering website by the intending bidder up to the specified bid under Section Various Forms and Formats.
28. Copy of Enlistment Order and other documents as specified in the bid shall be scanned and uploaded to the e-tendering website within the period of bid submission.
29. The bid submitted shall be opened at as per the details provided in the CPP portal at IWD office. The date of opening of Financial Bid shall be informed through web site after the opening of technical bid.
30. The bid submitted shall become invalid:
 - (i) The bidder is found ineligible.
 - (ii) The bidder does not upload scanned copies of all the documents stipulated in the bid document.
 - (iii) If a tenderer quotes nil rates against each item in item rate tender or does not quote any percentage above/below on the total amount of the tender or any section / sub head in percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.
31. The contractor whose bid is accepted will be required to furnish performance guarantee of 5% of tendered value within the period specified in Schedule F. This guarantee shall **be in the form of or Deposit at Call receipt of any scheduled bank/ Banker's cheque of** any scheduled bank/ Demand Draft of any scheduled bank/ Pay order of any Scheduled Bank of any scheduled bank (in case guarantee amount is less than Rs. 1,00,000/-) or Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form.

32. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F' including the extended period if any, the contractor shall be suspended for two years and shall not be eligible to bid for IITK tenders from the date of issue of suspension order.
33. The contractor whose bid is accepted will also be required to furnish either copy of applicable licenses/ registrations or proof of applying for obtaining licenses, registration with EPFO, ESIC and BOCW Welfare Board including Provident Fund Code No. If applicable and also ensure the compliance of afore-said provisions by the sub-contractors, if any engaged by the contractor for the said work and program chart (Time and Progress) **within the period specified in Schedule 'F'.**
34. Intending Bidders are advised to inspect and examine the sites and its surroundings and satisfy themselves before submitting their bids as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, making proper arrangements to the site for smooth operation, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. Bidder shall be deemed to have full knowledge of the sites whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. **The bidder shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents.** Submission of a bid by a bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Institute and local conditions and other factors having a bearing on the execution of the work.
35. Intending Bidders are advised to get familiarized with the specifications /rules related (i.e., **Replacement of old and existing energy meters installed for shops / banks/ canteens etc. at various locations with smart prepaid / postpaid energy meters with all allied works in the campus at IIT Kanpur**) to the work as approved by the competent authority and various policies related to c&d waste and other environmental guidelines of the institute pertaining to the. Bidder shall be deemed to have full knowledge of such rules and regulations whether he has read it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. In case of reduction of scope of work or no work is possible to carry out on account of such issues, no cost shall be payable to them. Submission of a bid by the bidder implies that he has read this notice and all other documents and has made himself aware of the Institute Regulations and other factors having a bearing on the execution of the work.
36. The competent authority on behalf of the Board of Governors does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without assigning any reason. Bids in which any of the prescribed conditions is not fulfilled or any condition including that of conditional rebate is put forth by the bidders shall be summarily rejected.
37. Canvassing whether directly or indirectly, in connection with bids is strictly prohibited and the bids submitted by the bidders who resort to canvassing will be liable to rejection.
38. The competent authority on behalf of the Board of Governors reserves to himself the right of accepting the whole or any part of the bid and the bidders shall be bound to perform the same at the rate quoted.

39. The contractor shall not be permitted to bid for works in the Office of Infrastructure and Planning / Institute Works Department responsible for award and execution of contracts, in which his near relative is posted as Divisional Accountant or as an officer in any capacity between the grades of Superintending Engineer and Junior Engineer (both inclusive) in IWD and Office of Infrastructure and Planning. He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any gazetted officer in the Office of Infrastructure and Planning/ Institute Works Department. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Department.
40. No Engineer of Gazetted Rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the prior permission of the Government of India in writing. This contract is liable to be canceled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the bid or engagement in the **contractor's** service.
41. The bids for the work shall remain open for acceptance for a period of Ninety (90) days from the date of opening of bids. If any bidder withdraws his bid before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the bid which are not acceptable to the department, then the Institute shall, without prejudice to any other right or remedy, be at liberty to suspend the bidder for one year
42. This notice inviting Bid shall form a part of the contract document. The successful bidders/contractor, on acceptance of his bid by the Accepting Authority shall within 7 days from the stipulated date of start of the work, sign the contract consisting of the Notice Inviting Bid, all the documents including additional conditions, specifications and drawings, if any, forming part of the bid as uploaded at the time of invitation of bid and the rates quoted online at the time of submission of bid and acceptance thereof together with any correspondence leading thereto
43. Standard C.P.W.D. Form 7 or other Standard C.P.W.D. Form as applicable.
44. The bid document will include the following components:
- (a) CPWD-7 and CPWD-6 including Schedule A to F for all the components of the work, Standard General Conditions of Contract for CPWD 2023 as amended/modified up to last date of submission of the bid.
 - (b) General / specific conditions, specifications applicable to all components of the work.
45. After acceptance of the bid by competent authority, Superintending Engineer issue letter of award on behalf of the Board of Governors to the contractor. After the work is awarded, the contractor will have to enter into one agreement with Executive Engineer. One such signed set of agreement shall be handed over to Engineer-In- Charge.
46. The requirement of technical staff given in various specialized works is as per requirements given in clause 32 of NIT document. The actual deployment of these technical staff will be as per execution of work and direction of the Executive Engineer, IITK. **In case of non-deployment, a penalty of Rs. 25,000/- per month shall be levied from the contractor.**

Payment shall be regulated as under

- (a) 75% of the tendered value on receipt of all materials listed in BOQ at site be submitted to claim the payment)
 - (b) 15% of the tendered value on installation and connection.
 - (c) 10% of the tendered value on testing and commissioning.
47. Running bill and final bill for components shall be facilitated by Engineer-in-Charge to the contractor.
 48. The work shall be treated as complete when all the components of the work are complete.
 49. It will be obligatory on the part of bidder to sign the contract document for all components before the first payment is released.
 50. In case of reduction in scope of work no claim on account of reduction in value of work, loss of expected profit, consequential overheads etc. shall be entertained.
 51. A team of officers from Indian Institute of Technology Kanpur may visit the office/ site of work of bidders for establishing their credibility and verification of submitted documents.
 52. The work is urgent as requested by client/Institute and to be completed strictly in given time schedule as per special terms and conditions. The contractor has to deploy the labour and supervisory staff in shifts to meet the targeted completion date. The work may be executed in extended shifts or two shifts. The rates quoted by the contractor will be deemed to be inclusive of any extra expenditures on account of this reason. Nothing shall be paid on this account.
 53. The contractor/ agency must have to co-operate with any other agency deployed by IIT Kanpur for laying of cables and other works for the agency has to make itself available and provide full co-operation during installation, if required.
 54. The competent authority on behalf of the Board of Governors reserves the right to terminate the contract if,
 - (a) Any violation of labour law has been observed.**
 - (b) Any of the construction workers engaged in the works under this contract is found also engaged in Service Contracts of the Institute at the same time.**
 55. The competent authority on behalf of the Board of Governors reserves the right to disqualify an agency for
 - (a) Non-compliance of Institute orders**
 - (b) Violation of Institute policies as established by the Competent Authority in the best interests of the Institute.**

2.2 Instructions for Online BID Submission

This tender document has been published on the Central Public Procurement Portal (URL: <http://eprocure.gov.in/eprocure/app>). The bidders are required to submit soft-copies of their bids electronically on the CPP portal, using valid Digital Signature Certificates (DSC). The instructions given below are meant to assist the bidders in registering on the CPP portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP portal.

More information useful for submitting online bids on the CPP portal may be obtained at <http://eprocure.gov.in/eprocure/app>

2.2.1 Registration

1. Bidders are required to enroll on the e-procurement module of the Central Public Procurement portal (URL:<http://eprocure.gov.in/eprocure/app>) **by clicking on the link, “click here to enroll”**. Enrolment on the CPP portal 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 the accounts.
3. Bidders are advised to register their valid e-mail address and mobile number as part of the registration process. These would be used for any communication from the CPP portal.
4. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (class 2 or class 3 certificates with signing key usage) issued by any certifying authority recognized by CCA India (e.g. Sify / TCS / nCode/ eMudhra etc.) with their profile.
5. Only one valid DSC should be registered by a bidder. Please note that bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse.
6. Bidder then logs in to the site through the secured log-in by entering their user ID Password and the password of the DSC / eToken.

2.2.2 Searching for tender documents

1. There are various search options built in the CPP portal to facilitate bidders to search active tenders by several parameters. These parameters could include tender ID, organization 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 keywords 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. The tenders can be moved to the respective **“My Tenders”** folder. This would enable the CPP portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
3. The bidder should make a note of the unique Tender ID assigned to each other; in case they want to obtain any clarification/help from the Helpdesk.

2.2.3 Preparation of bids

1. Bidder should take into 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 bids. Please note the number of covers in which the bid documents have to be submitted. Any deviations from these may lead to rejection of the bids.
3. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF formats. Bid documents may be scanned with 100 dpi with black & white option.
4. To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g., PAN card copy, annual reports, **auditor’s** certificates, etc.) has been provided to the bidders. **Bidders can use “My Space” 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.

2.2.4 Submission of bids

1. Bidder should log into the site well in advance for bid submission so that he / she upload the bid in time i.e. on or before the bid submission time. Bidder will be 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. A standard BOQ Format has been provided with the tender document to be filled by all the bidders. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. Bidders are required to

download the BOQ file, open it and complete the white colored [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 online, without changing the filename. If the BOQ file is found to be modified by the bidder, the bid will be rejected.

OR

In some cases, financial bids can be submitted in PDF format as well (in lieu of BOQ).

4. The server time (which is displayed on the **bidders'** dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
5. 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.
6. The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
7. Upon the successful and timely submission of bids, 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.
8. Add scanned PDF of all relevant documents in a single PDF file of compliance sheet.

2.2.5 Assistance to bidders

1. Any queries relating to 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 CPP portal in general may be directed to the 24 x 7 CPP Portal Help Desk.

2.2.6 General instruction to bidders

1. The tenders will be received online through portal <https://eprocure.gov.in/eprocure/app>. In the technical bids, the bidders are required to upload all the documents in PDF format.
2. Possession of a valid class II / III Digital Signature Certificate (DSC) in the form of smart card / e-token in the **company's** name is a prerequisite for registration and participating in the bid submission activities through <https://eprocure.gov.in/eprocure/app>. Digital Signature Certificates can be obtained from the authorized certifying agencies, details of which are available in the website <https://eprocure.gov.in/eprocure/app> under the link **"Information about DSC"**.

Tenderers are advised to follow the instructions provided in the **"Instructions to the tenderer"** for the e-submission of the bids online through the Central Public Procurement Portal for e-procurement at <https://eprocure.gov.in/eprocure/app>.

Superintending Engineer
Institute Works Department

2.3 List of documents to be scanned and uploaded within the period of bid submission

The following mandatory documents to be submitted with online bid submission:

The Online bids (complete in all respect) must be uploaded online in two Envelops as explained here: -

2.3.1 Envelope - 1: Technical Bid

The following mandatory documents to be provided as **a single PDF** file in the same sequence as listed for evaluation:

1. Scanned copy of EMD
2. GST Registration Certificate or GST Undertaking as per 5.1
3. EPF & ESI Registration
4. Copy of PAN card
5. Affidavit for not being blacklisted/debarred/restrained As per 5.2
6. Turnover and Other Financial statement of the Agency as per 5.3
7. Solvency certificate as per 5.4 **Or** Net Worth Certificate from certified Chartered Accountant as per 5.5
8. Performance report of works executed as per 5.6
9. Structure and Organization of the Agency as per 5.7
10. Declaration on Details of the Bidder(s) as per 5.8
11. Details of Similar Nature of Works Completed as per 5.9
12. Declaration about Site Inspection as per 5.10
13. Enlistment order of the contractor in appropriate class and category issued by CPWD or others.
14. **Scanned copy of “A” class Electrical License.**
15. Letter of Transmittal as per 5.11
16. Tender Acceptance Letter 5.12
17. Certificate for tender as per 5.13
18. CPWD-7 5.14

The hard copy of earnest money deposit receipt (EMD) shall be submitted in the office of Executive Engineer Elect., IWD IIT Kanpur before the opening of the technical bid on **17.12.2025** till 3:00 PM. In absence of the EMD in hardcopy, the bidder shall be not eligible for opening of their technical bid and shall be rejected.

2.3.2 Envelope - 2: Financial Bid

Price bid should be submitted in BOQ format

3 Eligibility Criteria

3.1 Eligibility criteria for contractors

Contractors who fulfill the following criteria shall be eligible to apply.

Eligible Bidders

Eligible bidders should satisfy the following criteria for an eligible bid:

1. **Average annual financial turn over:**

- i. Average annual financial turnover of works should be at least 30% of the estimated cost of work put to tender during the last 3 consecutive financial years by the certified Chartered Accountant.

Audited turnover statements to be furnished as proof of the same duly certified by chartered accountant along with Profit & Loss Statements.

- ii. Solvency Certificate- 30% of the estimated cost put to tender **Or** Net Worth Certificate from certified Chartered Accountant as per 5.6

2. **Experience (value of work done shall be within a span of one year):**

Firms/Contractors must have completed satisfactorily

- i) One similar work of 80% value of the estimated cost put to tender

Or

- ii) Two similar work of 60% value of the estimated cost put to tender

or

- iii) Three similar work of 40% value of the estimated cost put to tender

Works completed during last 7 years ending on date **15.12.2025**.

And

One Completed work of similar nature costing not less than the amount equal to 40% of the estimated cost put to tender with Central Government Department / Central Autonomous Body/ Central Public Sector Undertaking / State Government Department.

Definition of similar work: Similar type of work means “**Internal Electrical works /supply, installation, testing, commissioning of prepaid/smart meters works**”

done with any Central Government Department / Central Autonomous Body / Central Public Sector Undertakings /State Government/ Establishment of repute in last 7 years.

The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to the previous day of last date of submission of bids.

- i. Having valid “A” Class Electrical License

Eligible bidders must also satisfy the following conditions and ensure submission of all documents mentioned in 2.3.

1. **Legal:** Unregistered Partnership Firm and Joint Venture or Consortium are not eligible.
2. **Registration:** Bidder should be registered with the Income Tax Department, Employees Provident Fund (EPF) Organization, Employees State Insurance (ESI) Corporation & GST. Bidders are not eligible in absence of these documents.

3. Office:

Bidders have to establish its local accessible office at IIT Kanpur registered with local GSTIN to run the awarded work.

4 Bid Evaluation

The following process will be followed for the Technical and Financial Bids Evaluation:

4.1 Technical Bid Evaluation

- Technical bids received complete in all respects covering the entire scope of work, will only be opened
- The technical bid evaluation is done only for bidders who satisfy the minimum criteria by submitting documentary proof supporting eligibility criteria and the bids of agencies who have not submitted these documents are liable to be rejected without notice.

4.2 Financial Bid Evaluation

For financial bids, the following points shall be followed:

- After evaluation of Pre-eligibility conditions, a list of short listed agencies will be prepared.
- Thereafter the financial bids of only the qualified and technically acceptable bidders shall be opened at the notified time, date and place in the presence of the qualified bidders or their representatives, if present.
- The bid shall remain valid for Ninety (90) days from date of opening of eligibility bids/Technical bid.

NOTE

The employer reserves the right, without being liable for any damages or obligation to inform the bidder, to:

- Amend the scope and value of contract to the bidder.
- Reject any or all the applications without assigning any reason.

Any effort on the part of the bidder or his agent to exercise influence or to pressurize the employer would result in rejection of his bid. Canvassing of any kind is prohibited.

5 Various Forms and Formats

5.1 Undertaking regarding obtaining GST registration

Proforma for Undertaking regarding obtaining GST registration Certificate of The State in which work is to be taken up

(Undertaking to be furnished on a 'Non-Judicial' stamp paper worth Rs.100/)

(Scanned copy of this notarized undertaking to be uploaded at the time of submission of bid, if required)

If work is awarded to me, I/we shall obtain GST registration Certificate of the State, in which work is to be taken up within one month from the date of receipt of award letter or before release of any payment by IITK, whichever is earlier, failing which I/We shall be responsible for any delay in payments which will be due towards me/us on a/c of the work executed and/or for any action taken by IITK or GST department in this regard.

.....
(Signature of Bidder(s))

Or

.....
(An authorized Officer of the firm with stamp)

.....
(Signature of Notary with seal)

5.2 Affidavit for not being blacklisted/debarred/restrained

Proforma for AFFIDAVIT for not being blacklisted/debarred/restrained

(AFFIDAVIT to be submitted on a 'Non-Judicial' stamp paper worth Rs.100/-)

(Scanned copy of this notarized affidavit to be uploaded at the time of submission of bid)

I/we undertake and confirm that our firm/partnership firm has not been blacklisted and/or debarred/restrained by any Central Govt./ State Govt. Agency/ Autonomous body of the Central or State govt./ PSU etc. Further that, if such information comes to the notice of the Institute, then I/we shall be debarred for bidding in the Institute in future forever. Also, if such information comes to the notice of the Institute on any day before date of start of work, the competent authority shall be free to cancel the agreement and to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee.

.....
(Signature of Bidder(s))

Or

.....
(An authorized Officer of the firm with stamp)

.....
(Signature of Notary with seal)

5.3 Financial Information

Proforma for providing Financial Information

(Scanned copy of the completed information sheet to be uploaded at the time of submission of bid)

Financial Analysis: Details to be furnished duly supported by figures in balance sheet/ profit & loss account for the last three financial years duly certified by the Chartered Accountant, as submitted by the applicant to the Income Tax Department (Copies to be attached).

Financial Years	2022-23	2023-24	2024-25
Gross Annual turnover			
Profit/Loss			

.....
Signature of Chartered Accountant with Seal

.....
Signature of the bidders(s)

5.4 Banker's Certificate from a scheduled Bank

Proforma of Banker's Certificate from a Scheduled Bank

(To be printed in Bank's Letterhead)

(Scanned copy of the Certificate to be uploaded at the time of submission of bid)

This is to certify that to the best of our knowledge and information that M/s. /Sh.....
having marginally noted address, a customer of our bank are/is respectable and can be treated
as good for any engagement up to a limit of Rs (Rupees). This
certificate is issued without any guarantee or responsibility on the bank or any of the officers.

.....
(Signature for the Bank)

NOTE:

1. Bankers certificates should be on letter head of the Bank, addressed to tendering authority.
2. In case of partnership firm, certificate should include names of all partners as recorded with the Bank.

5.5 Net Worth Certificate by certified Chartered Accountant

Proforma of Net Worth Certificate by certified Chartered Accountant

(To be printed in Letterhead of Chartered Accountant)

(Scanned copy of the Certificate to be uploaded at the time of submission of bid)

This is to certify that as per the audited Balance Sheet and Profit & Loss statement of the account during the financial year, the net worth of M/s./Sh.....(Name & Registered Address of individual/firm/company) as on 31.3.2025 is Rs.....(Rupees.....) after considering all liabilities.. It is further certified that the net worth of the company has not eroded by more than 30% in the last three years ending on 31.3.2025.

.....
(Signature of the Chartered Accountant)

.....
(Name of the Chartered Accountant)

.....
(Membership No. of ICAI)

.....
(Date & Seal)

5.6 Performance report on work executed

Proforma of Performance report on works referred to in Financial Information

(To be printed in **Company's** Letterhead)

(Scanned copy of the Performance Reports to be uploaded at the time of submission of bid)

1. Name of work/project & location:
2. Agreement no.:
3. Estimated cost:
4. Tendered cost:
5. Date of start:
6. Date of completion:
7. Stipulated date of completion:
8. Actual date of completion:
9. Amount of compensation levied for delayed completion, if any:
10. Amount of reduced rate items, if any:
11. Performance Report:
 - (a) Quality of work: Outstanding / Very Good / Good /Poor
 - (b) Technical Proficiency: Outstanding / Very Good / Good /Poor
 - (c) Resourcefulness: Outstanding / Very Good / Good /Poor
 - (d) General Behavior: Outstanding / Very Good / Good /Poor

Date:

Signature of Superintending Engineer or Equivalent

5.7 Structure and Organization of the Agency

Proforma of providing Structure and Organization of the Bidding Agency

(To be printed in **Company's** Letterhead)

(Scanned copy of the Structure and Organization Document to be uploaded at the time of submission of bid)

1. Name & address of the bidder:
2. Telephone no./Telex no./Fax no.:
3. Email address for Communication:
4. Legal status of the bidder (attach copies of original document defining the legal status):
 - (a) An Individual:
 - (b) A proprietary firm:
 - (c) A firm in partnership:
 - (d) A limited company or Corporation:
5. Particulars of registration with various Government Bodies (attach attested photocopy)

Organization / Place of registration, Registration No.

- 1.
- 2.
- 3.
6. Names and titles of Directors & Officers with designation to be concerned with this work.
7. Designation of individuals authorized to act for the organization
8. Has the bidder, or any constituent partner in case of partnership firm, ever been convicted by the court of law? If so, give details.
9. Any other information considered necessary but not included above.

(Signature of of Bidder(s))

5.8 Declaration on Details of the Bidders

Proforma of Declaration on Details of the Bidders

(To be printed in **Company's** Letterhead)

(Scanned copy of the Performance Reports to be uploaded at the time of submission of bid)

DECLARATION

I/We,hereby declare that all the information and data furnished by our organization with regard to this tender specification are true and complete to the best of our knowledge. I/we have gone through the specification, conditions and stipulations in details and agree to comply with the requirements and intent of specification.

Particulars of the bidder as per following details:

1	Name of the firm / organization	:
2	Type of the firm / organization: Public Ltd. / Private Ltd. / Registered firm	:
3	Registered address	:
4	Address of office	:
5	Contact people	:
6	Name & Designation	:
7	Landline & Mobile numbers	:
8	E-mail IDs	:
9	PAN No.	:
10	GST No.	:
11	EPFO Reg. No.	:
12	ESIC Reg. No.	:
13	Annual Turnover for the last 3 years (Enclose copies of audited balance sheet and P&L A/c.)	
13.1	2024-2025	:
13.2	2023-2024	:
13.3	2022-2023	:
14	Copy of EMD receipt with signature	:
15	Has the applicant ever been required to suspend any project for a period of more than six months continuously after Commencement of work?	: If so, give the name of the project and reasons of suspension of project

16	Has the applicant ever been convicted by a court of law?	:	YES / NO ,If yes, give details of the case
17	Details of any litigation in which the applicant is/was involved.	:	
18	All forms submitted as desired in the bid	:	Yes / No
19	Undertaking regarding subletting of work	:	

We further declare that our organization has not been blacklisted /delisted or put to any holiday by any Institutional agency / Govt. Department / Public Sector Undertaking in the last three years.

Date:

Signature of Bidder(s) with seal

5.9 Details of Similar Nature of Works Completed by Agency

Proforma for submission of Details of Eligible Similar Nature of Works Completed* during the Last Seven Years ending previous day of the last date of submission of tenders

The contractor needs to submit the supporting documents in the following tabular format:

Sr.No.	Name of work/project and location	Owner or sponsoring organization	Cost of work in crores of rupees	Date of commencement as per contract	Stipulated date of completion	Actual date of completion	Litigation / arbitration cases pending / in progress with details*	Name and address/ telephone number of officers to whom reference maybe made	Whether the work was done on back to back basis Yes / No
1	2	3	4	5	6	7	8	9	10

Date:

Signature(s) of with seal

5.10 Declaration About Site Inspection

Declaration about Site Inspection

(By Bidder)

To

The Superintending Engineer

Subject: Submission of Tender for the work of “**Replacement of old and existing energy meters installed for shops / banks/ canteens etc. at various locations with smart prepaid / postpaid energy meters with all allied works in the campus at IIT Kanpur.**”

Dear Sir/Madam,

It is hereby declared that as per terms and conditions of this tender document, I/ We the bidder inspected and examined the subject site and its surrounding and satisfy myself / ourselves as to the nature of the ground and sub-soil (so far as is practicable), the forms and nature of the site./ ourselves before submitting the bid, the accommodation which may require and all necessary information as to risks, contingencies and other circumstances which may influence or affect our bid have been obtained. I/We the bidder shall have full knowledge of the site and no extra charge consequent upon any misunderstanding or otherwise shall be claimed in later date. I /We bidder shall be responsible for arranging and maintaining at own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a bid by me/us implies that I / We have read this notice and all other contract documents and has made myself /ourselves aware of the scope and specifications of the work to be done and local conditions and other factors having a bearing on the execution of the work.

Sincerely

(Duly authorized signatory of the Bidder)

5.11 Letter of Transmittal

To

The Superintending Engineer
Indian Institute of Technology Kanpur
Kanpur, UP - 208016

Replacement of old and existing energy meters installed for shops / banks/ canteens etc. at various locations with smart prepaid / postpaid energy meters with all allied works in the campus at IIT Kanpur

Dear Sir/Madam

Having examined details given in Notice and bid document for the above work, I/we hereby submit the relevant information.

1. I/We hereby certify that all the statements made and information supplied in the enclosed forms and accompanying statement are true and correct.
2. I/we have furnished all information and details necessary for eligibility and have no further pertinent information to supply.
3. I/We also authorize the Executive Engineer, Indian Institute of Technology Kanpur or his representative(s) to approach individuals, employers, firms and corporation to verify our competence, work experience, and general reputation.
4. I/we submit the following certificates in support of our suitability, technical knowledge and capability for having successfully completed the following eligible completed works:

Sl. No.	Name of work	Amount	Certificate issued by
1.			
2.			
3.			
4.			

CERTIFICATE

It is certified that the information given in the enclosed eligibility bid are correct. It is also certified that I/We shall be liable to be debarred, disqualified/ cancelation of enlistment in case any information furnished by me/us found to be incorrect.

Enclosures:

Date of submission:

Signature(s) of Bidder with seal

5.12 Tender Acceptance Letter

(To be given on Company Letter Head)

To,
Superintending Engineer
IIT Kanpur-208016

Sub: Acceptance of Terms & Conditions of Tender. Tender Reference No: Date:

.....

Name of Tender / Work:

Dear Sir,

- 5.12.1** I / We have downloaded / obtained the tender document(s) for the above mentioned **"Tender/Work"** from the web site(s) namely: as per your advertisement, given in the above mentioned website(s).
- 5.12.2** I / We hereby certify that I / we have read the entire terms and conditions of the tender documents from Page No..... to (including all documents like annexure(s), schedule(s), etc ..), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.
- 5.12.3** The corrigendum(s) issued from time to time by your department/ organization too have also been taken into consideration, while submitting this acceptance letter.
- 5.12.4** I / We hereby unconditionally accept the tender conditions of above mentioned tender document(s) / corrigendum(s) in its totality / entirety.
- 5.12.5** I / We do hereby declare that our Firm has not been blacklisted/ debarred/ terminated/ banned by any Govt. Department/Public sector undertaking.
- 5.12.6** I / We certify that all information furnished by our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/ organization shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

(Signature of the Bidder, with Official Seal)

5.13 Certificate for Tender

(To be given on Company Letter Head)

Date:

To,
Superintending Engineer
IIT Kanpur-208016

Sub: Certificate of compliance as per Rule 144 (xi) **GFR's**

2017Tender Reference No:

.....

Name of Tender / Work:

1. "I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"
2. "I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority. I hereby certify that this bidder fulfills all the requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

(Signature of the Bidder, with Official Seal)

Yours Faithfully,

5.14 CPWD-7

CPWD-7

PERCENTAGE RATE TENDER & CONTRACT FOR WORKS

Tender for the **“Replacement of old and existing energy meters installed for shops / banks/ canteens etc. at various locations with smart prepaid / postpaid energy meters with all allied works in the campus at IIT Kanpur.**

1. To be uploaded as per details uploaded in CPP portal at www.eprocure.gov
2. To be opened in the presence of tenderers who may be present at the time of opening in the Office of Executive Engineer, IIT Kanpur.
3. The pre-qualification/Technical bid shall be opened first on due date and time as mentioned above. The time and date of opening of financial bid of contractors qualifying the technical bid shall be communicated to them at a later date.

TENDER ((To be signed in Company's Letterhead))

I/We have read and examined the notice inviting tender, schedule, A, B, C, D, E & F Specifications applicable, Drawings & Designs, General Rules and Directions, General Conditions of Contract (For construction works) 2023, CPWD SOP 2024 corrected up to the last date of bid submission, CPWD works manual 2024 corrected up to the last date of bid submission and clauses of contract, Special conditions, Schedule of Rate & other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.

I/We hereby tender for the execution of the work specified for the Board of Governors within **the time specified in Schedule 'F' viz., schedule of quantities and in accordance in all respect** with the specifications, designs, drawing and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the Conditions of contract and with such materials as are provided for, by, and in respect of accordance with, such conditions so far as applicable.

We agree to keep the tender open for Ninety (90) days from the due date of its opening and not to make any modification in its terms and conditions.

If I/we, fail to furnish the prescribed performance guarantee or fail to commence the work within prescribed period, I/ we agree that the said Board of Governors, IIT Kanpur or his successors in office shall without prejudice to any other right or remedy to be at liberty to forfeit the said earnest money absolutely. Further, if I/we fail of commence the work as specified, I/we agree that Board of Governors, IIT Kanpur or his successor in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely, otherwise the said earnest money shall be retained by him towards security deposit to execute all the works referred to the tender documents upon the terms & condition contained or referred to therein and to carry out such deviations as may **be ordered, up to maximum of the percentage mentioned in schedule "F"** and those in excess of that limit at the rates to be determined in accordance with the provision contained in clause 12.2 and 12.3 of the tender form.

Further, If I/we, withdraws tender or makes any modification in the terms & conditions of the tender which is not acceptable to the department after the last date of submission of bids, then the Institute shall without prejudice to any other right or remedy, be at liberty to forfeit 100% of the earnest money absolutely irrespective of letter of acceptance for the work is issued or not. Further, I/we agree that in case of forfeiture of earnest money or both earnest money & performance guarantee as aforesaid, I/we shall be debarred for participation in the retendering process of the work.

I/We undertake and confirm that eligible similar work(s) has/have not been got executed through another contractor on back-to-back basis. Further that, if such a violation comes to the notice of Department, then I/we shall be debarred for tendering in Indian Institute of Technology Kanpur in future forever. Also, if such a violation comes to the notice of Indian Institute of Technology Kanpur before date of start of work, the Superintending Engineer shall be free to forfeit the entire amount of Performance Guarantee.

I/We hereby declare that I/We shall treat the tender documents drawings and other records connected with the work as secret/confidential documents and shall not communicate information/derived there from to any person other than a person to whom I/We am/are authorized to communicate the same or use the information in any manner prejudicial to the safety & integrity of IIT Kanpur

Date: Signature(s) of Contractor(s) with seal

Address:

Occupation:

6 Proforma of Schedules

PROFORMA OF SCHEDULES

6.1 SCHEDULE 'A': Schedule of Quantities

Schedule of Quantities : BOQ uploaded separately

6.2 SCHEDULE 'B': Schedule of materials to be issued to the contractor

Schedule of materials to be issued to the contractor: NIL

6.3 SCHEDULE 'C': Tools and plants to be hired to the contractor

Tools and plants to be hired to the contractor: NIL

6.4 SCHEDULE 'D': Extra schedule for specific requirements/document for the work, if any

Extra schedule for specific requirements/document for the work, if any: NIL

6.5 SCHEDULE 'E': Reference to General Conditions of Contract

Reference to General Conditions of Contract	:	General Conditions of Contract 2020 for Construction Works & Maintenance work and as amended / modified up to the last date of sub- mission of Bid.
Name of Work	:	Replacement of old and existing energy meters installed for shops / banks/ canteens etc. at various locations with smart prepaid / postpaid energy meters with all allied works in the campus at IIT Kanpur
Total Estimated cost of work	:	Rs. 34,01,672/-
Earnest Money	:	Rs. 68,033/-
Performance Guarantee	:	5% of tendered value
Security Deposit	:	2.5% of tendered value will be deducted from each bill. Same would be released after successful completion of One year defect liability period and as per special conditions of the contract.

6.6 SCHEDULE 'F': General Rules and Directions

GENERAL RULES & DIRECTIONS:

Officer Inviting tender: Superintending Engineer

6.6.1 Definitions

1 Inviting Authority	:	Superintending Engineer
2(v) Engineer-in-Charge	:	Executive Engineer
(viii) Accepting Authority	:	Dy. Director
2(x) Percentage on cost of materials and Labour to cover all overheads and profits	:	15%
2(xi) Standard Schedule of Rates	:	For Electrical Work: DSR (E&M), 2022 & MR with up-to-date correction slip
2(xii) Department	:	Institute Works Department, IIT Kanpur
9(ii) Standard CPWD Contract Form	:	General Conditions of Contract 2023, SOPs 2024, CPWD Works manual 2024, CPWD Form 7 as amended / modified up to the last date of submission of Bid. The following condition pertains to GST of clause 37 & 38 of General Condition of contract and corresponding Amendments should be read as follows: a- The Quoted rates should be inclusive of GST.

6.6.2 Clauses

Clause 1

- | | | |
|--|---|---------------|
| i. Time allowed for submission of Performance Guarantee, Programme Chart (Time and Progress) and applicable labour licenses, registration with EPFO, ESIC and BOCW welfare board or proof of applying thereof from the date of issue of the letter of acceptance | : | 7 days |
|--|---|---------------|

ii. Maximum allowable extension : **7 days**
with late fee @ 0.1% per day of Performance Guarantee amount beyond the Period provided in (i) above

Clause 1A	:	Applicable. The Defect liability period shall be One year from the date of handing over of the assigned works to the user/Institute
Clause 2 Authority for fixing compensation under Clause 2	:	Dy. Director/Director, IIT Kanpur
Clause 2A Whether Clause 2A shall be applicable	:	YES
Clause 5	:	
(i): Number of days from the date of issue of letter of acceptance for reckoning date of start	:	15 Days
ii: Milestones	:	Time allowed for execution of work along with the amount to be withheld in case of non-achievement of milestone are shown in Tables 6
Clause 6: Computerized Measurement Bill	:	<i>Applicable</i>
Clause 7 Gross work to be done together with net payment/Adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment	:	Not Applicable
Clause 7A	:	Applicable
Clause 10A	:	Applicable
Clause 10B (ii)	:	Not Applicable
Clause 10B (iii)	:	Not Applicable
Clause 10C	:	Not Applicable
Clause 10CA	:	Not Applicable
Clause 10CC	:	Not applicable

Clause 11	:	CPWD Specification 2019 Vol. I & II, and latest CPWD specifications of all E&M items, with correction Slips issued up to the last date of receipt of tenders (herein called CPWD Specifications also) and as per NIT for E&M works. Specifications to be followed for execution of Civil work and E&M works
Clause 12: Type of work	:	Original Work
Clause 12.2 & 12.3: Deviation limit beyond which clause 12.2 & 12.3 shall apply for Building work	:	Not Applicable
Clause 16 Competent Authority for deciding reduced rates: For Civil items and For Electrical items of work	:	As per Table 7
Clause 17 - Defect liability period completion of contract whichever is later	:	One year and those listed in Special Conditions of Contract
Clause 18 - List of mandatory machinery, tools & plants to be deployed by the contractor at site	:	As per the scope of the work
Clause 32 - Requirement of Technical Representative(s)	:	As per Table 9

If the Contractor commits default in commencing the execution of the work as aforesaid, the performance guarantee shall be forfeited.

Table 7: Authority to decide

(i)	Extension of time (EOT)	:	Superintending Engineer
(ii)	Rescheduling of milestones	:	Superintending Engineer, IIT Kanpur
(iii)	Shifting of date of start in case of delay in handing over of site	:	Superintending Engineer, IIT Kanpur

Table 8: Materials for which all India Wholesale Price Index to be followed

Sl.No	Material covered under this clause	Nearest Materials (other than cement, reinforcement bars and the structural steel) for which All India Wholesale Price Index to be followed	Base Price (with GST) of Materials, covered under clause 10 CA
1	Portland Pozzolana Cement (PPC)/ Ordinary Pozzolana Cement	Nil	Nil
2	Steel for Reinforcement TMT Fe 500D Primary Manufacturer	Nil	Nil
3	Structural Steel (Primary producers)	Nil	

Table 9: Requirement of Technical staff for major + minor component(s), Clause 32

Sl No.	Requirement of Technical staff (of major + minor component)		Minimum experience in Year	Designation	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of Clause 32	
	Qualification	Number			Figures	Words
	(Of Major + Minor component)					
2	Graduate Engineer (Minor component Or Diploma Engineer)	1	5 years	Project Planning/ quality/ billing Engineer (Electrical/ Mechanica l)	Rs. 15,000/-pm per month per person	Rupees Fifteen Thousand only per month per person

Note 2: Project/Site Engineer for Electrical work mentioned must be required from the beginning of the work electrical work has to happen in a coordinated manner to meet the date of handover of site as per special terms and conditions.

7. Scope of work:

7.1 TECHNICAL SPECIFICATIONS FOR WHOLE CURRENT A.C. SINGLE PHASE TWO WIRE SMART ENERGY METER OF ACCURACY CLASS 1.0 WITH BI-DIRECTIONAL COMMUNICATION FACILITY AND REMOTE CONNECT/DISCONNECT SWITCH

1. SCOPE

These specifications cover the design, manufacturing, testing, supply and delivery of AC whole current, single phase, 2 wires Smart Energy Meter with bidirectional communication facility & remote connect/disconnect switch. The meter shall communicate with Head End System (HES) on any one of the communication technologies mentioned in IS16444 Part 1, as per the requirement of the utility.

2. BASIC FEATURES

The Smart Meter would have the following minimum basic features-

- Measurement of electrical energy parameters
- Bidirectional Communication
- Integrated Load limiting /connect/disconnect switch
- Tamper event detection, recording and reporting
- Power event alarms as per IS 16444 Part 1
- Remote firmware upgrade
- Pre paid features at MDM end (as per IS 15959 Part 2)
- TOD features
- Net Metering(kWh) features (optional as per requirement of utility)
- On demand reading

3. GENERAL STANDARDS APPLICABLE FOR METERS

S. No.	Standard No.	Title
1	IS 13779 with latest amendments	AC Static Watt-hour Meter class 1& 2
2	IS 15884 with latest amendments	Alternating Current Direct Connected Static Prepayment Meters for Active
3	IS 16444 Part 1 with latest amendments	A.C. Static Direct Connected Watt Hour Smart Meter Class 1 and 2- Specification
4	IS 15959 Part 1 & Part 2 with latest amendments	Data Exchange for Electricity Meter Reading, Tariff and Load Control- Companion Standards

4. COMMUNICATION

Meter shall have the ability to communicate with Head End System (HES) on any one of the communication technologies mentioned in IS16444 Part 1 (RF/PLC /Cellular) in a secure manner. The selection of communication technology should be as per the site conditions and as per design consideration of AMI Implementing agency to meet the performance as per agreed Service Level Agreements (SLAs). In case of Cellular based meter, the meter shall accommodate SIM card of any service provider. In case of Plug in type communication module, the meter shall log communication module removal /non responsive event with snapshot.

4.1 REMOTE CONNECT/DISCONNECT/LOAD LIMITING: *Remote*

Connect/disconnect/Load control facilities would be as per IS 16444 part 1.

5. OTHER SPECIFICATIONS

Particulars	Specification
Applicable Standards	The meters shall comply with IS 16444 Part 1 for all requirements.
Reference Voltage	As per relevant IS (240 V)
Current Rating	5-30 A 10-60 A (Other current ratings would not be preferred)
Category	UC1
Starting Current	As per IS 16444 Part 1
Accuracy	Class 1.0 as per IS 16444 Part 1
Limits of error	As per IS 16444 Part 1
Operating Temperature range	As per IS 16444 Part 1
Humidity	As per IS 16444 Part 1
Frequency	As per IS 16444 Part 1
Influence Quantities	As per IS 16444 Part 1
Power Consumption of	As per IS 16444 Part 1
Current and Voltage Circuit	As per IS 16444 Part 1
Running at No Load	As per IS 16444 Part 1
Test output device	As per IS 16444 Part 1
Meter Display	As per IS 16444 Part 1
Name Plate & marking Meter Display	As per IS 16444 Part 1
Parameters to be measured	As per IS 16444 Part 1 / As per IS 15959 Part-2

Maximum Demand resetting	As per IS 15959 Part 2
Time of Use registers	As per IS 15959 part 2
Power Quality Information	As per IS 15959 part 2
LED/LCD Indicators	As per IS 16444 Part 1
Load Survey/Interval Data	As per IS 15959 part 2
Tamper/ Event Recording	As per IS 15959 part 2
Measuring Elements	As per IS 16444 part 1
Alarm	As per IS 16444 Part 1/ 15959 Part 2
Load Control	As per IS 16444 Part 1
Connect/Disconnect switch	UC1(As per IS 16444 part 1)
Status of load switch	As per IS 16444 Part 1
Programmability	As per IS 16444 Part 1
Communication	As per IS 16444. Part 1
Data Exchange Protocol	As per IS 16444 Part 1
Remote Firmware upgrade	As per IS 15959 part 2
Real Time Clock(RTC)	<p>As per IS 16444 Part 1/ IS 15959 Part1 & Part 2</p> <p>The clock day/date setting and synchronization shall only be possible through password/Key code command from one of the following:</p> <ul style="list-style-type: none"> • From remote server through suitable communication network. • Hand Held Unit (HHU) or Meter testing work bench and this shall need password enabling for meter. (as per requirement of utility)
Data Retention	As per IIT Kanpur requirements
Battery Backup	Meter shall be supplied with separate battery backup for RTC.

Guarantee	The meter which are found defective/inoperative at the time of installation or become inoperative/defective within the guarantee period, the same shall be replaced/repared by the manufacturer/supplier within one month of receipt of report. (as per agreement with utility)
First Breath(power on) and Last gasp (power off) condition detection and communication to HES	As per IS 16444 Part 1
Plug-in Communication Module	The Smart Meters shall be have a dedicated sealable slot for accommodating plug-in type bi - directional communication module which shall integrate the respective communication technology (RF/PLC/ Cellular) with the smart meters, leading to easy adaptability for network interfaces (WAN/NAN).The Plug-In module shall be field swappable/replaceable.

5.1 DATA DISPLAY FACILITY(AUTO/MANUAL)

Data Display shall be in two modes-

1. Auto Scroll
2. Scroll with Push Button

The display parameters shall be:

- ☐ **Auto Scroll**
 - Display Check
 - Date and Time
 - Last Recharge Amount
 - Last Recharge Time
 - Current Balance Amount
 - Current Balance Time
 - Cumulative Active Energy kWh with legend.
 - Current calendar month MD in kW with legend.
 - Instantaneous voltage
 - Instantaneous Phase current
 - Instantaneous Load kW
 - Instantaneous average Power Factor

These parameters should be displayed on the Meter Display continuously for a period of 10 seconds on Auto scroll.

□ **Scroll with Push-button**

All Parameters mentioned under Auto-Scroll mode should be displayed. Additionally, the following Parameters shall also be displayed:

- Internal diagnostics (display check)
- Meter Serial No.
- Last month cumulative kWh with legends
- Last month MD in kW with legends
- Current month Average Power Factor
- Last month Average Power Factor

Further, the Meter should display High Resolution energy values with resolution of 3 digits before decimal and 2 digits after decimal in push button mode

The meter's display should return to default display mode (continues auto scroll) if push button is not operated for more than 10 seconds. (The order of display may be revised as per requirement of the utility). Meter display should not go in to sleep mode during Power-On condition.

6. ANTI TAMPER FEATURES

The meter shall continue recording energy under tamper conditions as defined in IS 15959 Part 2 and would log the event and send alarm at Head End System after detection of the defined theft features as per IS 15959 Part 2.

7. TESTS

7.1 Type Tests & Test Certificates

Smart meter shall be type tested for all the tests as per IS: 16444 Part 1 (latest version) in a third party independent lab. The number of sampling for testing of meters and criteria for conformity would be as per IS 16444 Part 1 (as amended up to date).

Necessary copies of test certificates shall be submitted as per agreement with the utility.

7.2 Routine & Acceptance Tests

The Factory Acceptance and Routine tests shall be carried out as per IS 16444 Part 1.

Test as per requirement of utility: The Meter (without communication module) shall be immune under external magnetic influences and shall be tested for high voltage discharge as per CBIP 325.

8. GENERAL & CONSTRUCTIONAL REQUIREMENTS

8.1 Meter shall be BIS marked as per IS 16444 Part 1.

8.2 General & construction requirement shall be as per IS 16444/IS 13779

9. METER BASE & COVER- Meter base & cover shall be as per IS 16444 Part1 / IS 13779. The meter Base & cover shall be **‘Break to open’** design. The material for meter base and cover shall be made of high grade polycarbonate.

10. TERMINAL BLOCK & COVER - As per IS 16444 Part 1/IS 13779

11. DESIGN

Voltage circuit, sealing arrangement, terminal block, terminal cover and nameplate etc. shall be in accordance with IS-16444 Part 1(latest version).

The meter shall be compact and reliable in design, easy to transport and immune to vibration and shock involved in transportation and handling.

12. NAME PLATE AND MARKING

The name plate on the meter should be clearly visible, effectively secured against removal and indelibly/distinctly marked in accordance with relevant IS. **In addition, “Name of the Utility”, purchase order no. & year/month of manufacturing shall be provided on the name plate.** The rating plate information shall be as per relevant IS.

13. CONNECTION DIAGRAM: As per IS 16444 Part 1

14. FIXING ARRANGEMENTS:

The meter shall be mounted type. The Meter should have three fixing holes, one at top and two at the bottom. The Top hole should be such that the holding screw is not accessible to the consumer after fixing the meters. The lower screws should be provided under sealable terminal cover.

15. SEALING ARRANGEMENT:

Arrangements shall be provided for proper sealing of the meter cover so that access to the working parts shall not be possible without breaking the seal. The sealing arrangement and number of seals shall be as per relevant IS/ requirement of utility.

16. METER BOX:

The Meter Box if required by utility/purchaser, would be provided as per requirement of the utility/ purchaser and the material of the Meter Box should be such that it does not hamper communications.

17. PACKING

The meters shall be suitably packed for vertical/horizontal support to withstand handling during transportation. The meter shall be packed appropriately to ensure safe transportation, handling, identification and storage. All packing materials shall be as per environment law in force. The primary packing shall ensure protection against humidity, **dust, grease and safeguard the meter’s** performance until its installation. The secondary packing shall provide protection during transportation. The packing case shall indicate **“Fragile in nature” and direction of placement of box.** The packing shall indicate marking details like **Manufacturer’s** name, S.No. of meters, quantity etc.

18. TRANSPORTATION

- ❖ The meter shall be compact in design. The meter block unit shall be capable of withstanding stresses likely to occur in actual service and rough handling during transportation.
- ❖ The meter shall be convenient to transport and immune to shock and vibration during transportation and handling.
- ❖ The meter should not be exposed to undue shock and mishandling during transportation.
- ❖ The stacking of box inside transport media should be such as to avoid their free movement.
- ❖ The packing should also be protected from rain and dust by transport media.
- ❖ The Bidder shall be responsible for any damage during transit due to inadequate or improper packing.

19. TESTING AND MANUFACTURING FACILITIES AT MANUFACTURER'S PLACE

The manufacturer shall have facilities of conducting Acceptance Testing as per IS 16444 Part 1.

20. INSPECTION

- ❖ The meters shall be sealed as per the mutual agreement of the supplier and the purchaser
- ❖ The utility/ purchaser may inspect the meter randomly as per sampling plan for acceptance test as per IS 16444 Part 1. The meters shall be tested for acceptance test as per IS 16444 Part 1.

7.2 TECHNICAL SPECIFICATIONS FOR WHOLE CURRENT A.C. THREE PHASE FOUR WIRE SMART ENERGY METER OF ACCURACY CLASS 1.0 WITH Bi DIRECTIONAL COMMUNICATION FACILITY WITH CONNECT/ DISCONNECT SWITCH

1. SCOPE

The specification covers the design, manufacturing, testing, supply and delivery of AC whole current 3 phase 4 wires Smart Energy Meter with bidirectional communication facility suitable for Advanced Metering Infrastructure (AMI) with connect/disconnect switch. The meter shall communicate with Head End System (HES) on any one of the communication technologies mentioned in IS16444 Part 1, as per the requirement of the utility / authorized system integrator.

2. BASIC FEATURES

The Smart Meter would have the following minimum basic features-

- Measurement of electrical energy parameters
- Bidirectional Communication
- Integrated Load limiting switch /relay
- Tamper event detection, recording and reporting
- Power event alarms as per IS 16444 Part 1
- Remote firmware upgrade
- Pre Paid features at MDM end (as per 15959 part 2)
- TOD feature
- Net Metering(kWh) features (optional as per requirement of utility)
- On demand reading

3. GENERAL STANDARDS APPLICABLE FOR METERS

The performance and testing of the meters shall conform to the following standards with latest amendments thereof:

S.No.	Standard No.	Title
1	IS 13779 with latest amendments	AC Static Watt-hour Meter class 1& 2
2	IS 15884 with latest amendments	Alternating Current Direct Connected Static Prepayment Meters for Active
3	IS 16444 Part 1 with latest amendments	A.C. Static Direct Connected Watt Hour Smart Meter Class 1 and 2- Specification

4	IS 15959 Part 1 & Part 2 with latest amendments	Data Exchange for Electricity Meter Reading, Tariff and Load Control- Companion Standards
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4. COMMUNICATION

Meter shall have the ability to communicate with Head End System (HES) on any one of the communication technologies mentioned in IS16444 Part 1 (RF/PLC/ Cellular) in a secure manner. The selection of communication technology should be as per the site conditions and as per design requirement of AMI Implementing agency to meet the performance as per agreed Service Level Agreements (SLAs). In case of Cellular based meter, the meter shall accommodate SIM card of any service provider. In case of Plug-in type communication module, the meter shall log communication module removal /non responsive event with snapshot.

4.1 REMOTE CONNECT/DISCONNECT/LOAD LIMITING: *Remote*
Connect/disconnect/Load control facilities would be as per IS 16444 Part 1.

5. OTHER SPECIFICATIONS

Particulars	Specification
Applicable Standards	The meters shall comply with IS 16444 Part 1 for all requirements.
Reference Voltage	As per relevant IS
Current Rating	10-60 A 20-100 A (Other Current ratings shall be approved by EIC)
Category	UC1
Starting Current	As per IS 16444 Part 1
Accuracy	Class 1.0 as per IS 16444 Part 1
Limits of error	As per IS 16444 Part 1
Operating Temperature range	As per IS 16444 Part 1
Humidity	As per IS 16444 Part 1
Frequency	As per IS 16444 Part 1
Influence Quantities	As per IS 16444 Part 1
Power Consumption of meter	As per IS 16444 Part 1
Current and Voltage Circuit	As per IS 16444 Part 1
Running at No Load	As per IS 16444 Part 1
Test output device	As per IS 16444 Part 1
Meter Display	As per IS 16444 Part 1

Name Plate & marking Meter Display	As per IS 16444 Part 1
Parameters to be measured	As per IS 16444 Part 1 / As per IS 15959 Part-2
Maximum Demand resetting	As per IS 15959 Part-2
Time of Use registers	As per IS 15959 Part-2
Power Quality Information	As per IS 15959 Part-2
LED/LCD Indicators	As per IS 16444 Part 1
Load Survey/Interval Data	As per IS 15959 Part-2
Tamper/ Event Recording	As per IS 15959 Part-2
Measuring Elements	As per Is 16444 Part 1
Alarm	As per IS 16444 Part 1 / As per IS 15959 Part-2
Load Control	As per IS 16444 Part 1
Connect/Disconnect switch	UC1 as per IS 16444 Part 1
Status of Load switch	As per IS 16444 Part 1
Programmability	As per IS 16444 Part 1
Communication	As per IS 16444 Part 1
Communication Protocol	As per IS 16444 Part 1
Remote Firmware upgrade	As per IS 15959 Part-2
Time Synchronization	<p>As per IS 16444 Part 1 / IS 15959 Part 1 & Part 2</p> <p>The clock day/date setting and synchronization shall only be possible through password/Key code command from one of the following:</p> <ul style="list-style-type: none"> • From remote server through suitable communication network. • Hand Held Unit (HHU) or Meter testing work bench and this shall need password enabling for meter,
Data Retention	As per CEA regulations

Battery Backup	Meter shall be supplied with adequate separate battery backup for RTC.
Guarantee	The meter which are found defective/inoperative at the time installation or become inoperative/defective within the guarantee period, the same shall be replaced/repared by the manufacturer/supplier within one month of receipt of report. (as per agreement with utility)
First Breath(Power on) and Last gasp(Power off) condition detection and communication to HES	As per IS 16444 Part 1
Plug-in Module Communication	The Smart Meters shall be have a dedicated sealable slot for accommodating plug-in type bi - directional communication module which shall integrate the respective communication technology (RF/PLC/ Cellular) with the smart meters, leading to easy adaptability for network interfaces (WAN/NAN).The Plug-In module shall be field swappable/ replaceable.

5.1 DATA DISPLAY FACILITY (AUTO/MANUAL)

Data Display shall be in two modes-

1. Auto Scroll
2. Scroll with Push Button

The display Parameters shall be-

☐ **Auto Scroll**

- Display Check
- Date and Time
- Last Recharge Amount
- Last Recharge Time
- Current Balance Amount
- Current Balance Time
- Cumulative Active Energy kWh with legend.

- Cumulative Active Energy kVAh with legend.
- Current month MD in kW with legend.
- Current month average Power Factor
- Instantaneous voltage V_{RN}
- Instantaneous voltage V_{YN}
- Instantaneous voltage V_{BN}
- Instantaneous current I_R
- Instantaneous current I_Y
- Instantaneous current I_B
- Instantaneous current I_N
- Instantaneous Load kW and kVA
- Instantaneous average Power Factor

These parameters should be displayed on the LCD/LED continuously for a period of 10 seconds on Auto scroll.

□ **Scroll with Push-button**

All Parameters mentioned under Auto-Scroll mode should be displayed. Additionally, the following Parameters shall also be displayed:

- Internal diagnostics (display check)
- Meter Serial No
- Cumulative Energy in kVAh Lag/ Lead with legend
- Cumulative Active Energy kWh ToD wise with legends.
- Cumulative Active Energy kVAh ToD wise with legends.
- Current month MD in kVAh with legends
- Last month cumulative kWh with legends
- Last month cumulative kVAh with legends
- Last month MD in kW with legends
- Last month Average Power Factor

Further, the Meter should display High Resolution energy values with resolution of 3 digits before decimal and 2 digits after decimal in push button mode.

The meter's display should return to default display mode (continues auto scroll) if push button is not operated for more than 10 seconds. (The order of display may be as per the requirement of utility). Meter display should not go in to sleep mode during Power-On condition.

6. ANTI TAMPER FEATURES

The meter shall continue recording energy under temper conditions as defined in IS 15959 Part 2 and would log the event and send alarm at Head End System after detection of the defined theft features as per IS 15959 Part 2.

7. TESTS

7.1 Type Tests & Test Certificates

Smart meter shall be type tested for tests as per IS: 16444 Part 1 (latest version) in a third party independent lab. The number of sampling for testing of meters and criteria for conformity would be as per IS 16444 Part 1.

Necessary copies of test certificates shall be submitted as per agreement with the utility.

7.2 Routine & Acceptance Tests

The Factory Acceptance and Routine tests shall be carried out as per IS 16444 Part 1.

Test as per requirement of utility: The Meter (without Communication Module) shall be immune under external magnetic influences and shall be tested for high voltage discharge as per CBIP 325)

8. GENERAL & CONSTRUCTIONAL REQUIREMENTS

8.1 Meter shall be BIS marked as per IS 16444 Part 1.

8.2 General & construction requirement shall be as per IS 16444 Part 1 /IS 13779.

9. METER BASE & COVER-

The meter Base & cover shall be as per IS 16444 Part 1 /IS 13779. The meter base and cover shall be 'Break to open' design. The material for meter base and cover shall be made of high grade polycarbonate.

10. TERMINAL BLOCK & COVER - As per IS 16444 Part 1 /IS 13779

11. DESIGN

Voltage circuit, sealing arrangement, terminal block, terminal cover and nameplate etc. shall be in accordance with IS-16444 Part 1 (latest version).

The meter shall be compact and reliable in design, easy to transport and immune to vibration and shock involved in transportation and handling.

12. NAME PLATE AND MARKING

The meter should bear a name plate clearly visible, effectively secured against removal and indelibly/distinctly marked in accordance with relevant IS. **In addition, "Name of the Utility", purchase order no. & year/month of manufacturing shall be provided on the meter name plate.** The rating plate information shall be as per relevant IS.

13. CONNECTION DIAGRAM: As per IS 16444 Part 1

14. FIXING ARRANGEMENTS:

The meter shall be mounted type. The Meter should have three fixing holes, one at top and two at the bottom. The Top hole should be such that the holding screw is not accessible to the consumer after fixing the meters. The lower screws should be provided under sealable terminal cover. The requisite fixing screws shall be supplied with each meter.

15. SEALING ARRANGEMENT:

Arrangements shall be provided for proper sealing of the meter cover so that access to the working parts shall not be possible without breaking the seal. The sealing arrangement and number of seals shall be as per relevant IS/ requirement of utility.

16. METER BOX: The Meter Box if required, would be provided as per requirement of the utility/ purchaser and the material of the Meter Box should be such that it does not hamper communications.

17. PACKING

- The meters shall be suitably packed for vertical/horizontal support to withstand handling during transportation.
- The meter shall be packed appropriately to ensure safe transportation, handling, identification and storage.
- All packing materials shall be as per environment law in force. The primary packing shall ensure protection against humidity, dust, grease and **safeguard the meter's** performance until its installation.
- The secondary packing shall provide protection during transportation.
- The packing case shall indicate "**Fragile in nature**" and direction of placement of box.
- The packing shall indicate marking details like **Manufacturer's** name, S.No. of meters, quantity etc.

18. TRANSPORTATION

- The meter shall be compact in design. The meter block unit shall be capable of withstanding stresses likely to occur in actual service and rough handling during transportation.
- The meter shall be convenient to transport and immune to shock and vibration during transportation and handling.

- The meter should not be exposed to undue shock and mishandling during transportation.
- The stacking of box inside transport media should be such as to avoid their free movement.
- The packing should also be protected from rain and dust by transport media.
- The Bidder shall be responsible for any damage during transit due to inadequate or improper packing.

19. TESTING AND MANUFACTURING FACILITIES AT MANUFACTURER'S PLACE

The manufacturer shall have facilities of conducting Acceptance Testing as per IS 16444 Part 1.

20. INSPECTION

- ❖ The meters shall be sealed as per the mutual agreement of the supplier and the purchaser
- ❖ The utility/ purchaser may inspect the meter randomly as per sampling plan for acceptance test as per IS 16444 Part 1. The meters shall be tested for acceptance test as per IS 16444 Part 1.

7.3 SPECIFICATION FOR THE ELECTRICAL INSTALLATION WORK

The following specifications will apply under all circumstances to the equipment to be 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 purpose of making the tender and for entering into a contract keeping in view the specification and inspection of site etc.

The tendered rates shall include for the cost of material erection, connection, commissioning, labour, supervision, tools, transport all taxes, contingencies, breakage, wastage, sundries, scaffolding, maintenance of installations for defect liability period i.e. they should be for an item complete in all respects.

The general specifications of electrical works for internal-2023, general specifications for DG sets-2013 and general specifications for Sub-station works-2013 of CPWD including amendments shall be followed.

1. SITE CONDITIONS: the equipment to be erected and commissioned should be suitable for the site conditions, it is estimated that the maximum temperature as site will be 50°C.

2. L.S.SPECIFICATIONS:

The following Indians standard specifications will apply to the equipment and the contract unless specified otherwise.

a)	Transformer	IS 2026-1977 & 1981
b)	Low tension air-circuit breakers and MCCB	IS 2516-1965
c)	Switch fuse unit on cubicle switch boards etc.	IS 4047-1967
d)	Switch fuse unit on industrial boards etc	IS 4064-1967
e)	Switch gear bus bars	IS 375-1963
f)	HRC fuse links	IS 2208-1962
g)	Distribution fuse boards	IS 2675-1966
h)	Degree of protection provided by enclosure For low voltage switchgear	IS 2147-1962
i)	PVC cables.	IS 1954-1962
j)	11,000 volt paper insulated lead sheathed cables	IS 692-1965
k)	Tubular fluorescent lamps for general lighting Service.	IS 2418-1965
l)	Tungsten filament lamps for general service.	IS 418-1963
m)	Ceiling fans	IS 374-1966
n)	Flood light	IS 1947-1961
o)	Well glass flame proof electric light fitting	IS 2206-1962 Part-I
p)	XLPE cables	IS 7098-Part-II
q)	Industrial light fittings with metal reflectors.	IS 1971-1961
r)	Water tight electric light fittings	IS 3533-1966
s)	Fittings for rigid steel conduits	IS 2667-1964
t)	Rigid steel conduits for electrical wiring	IS 1958-1964
u)	Accessories for rigid steel conduit for electrical Wiring.	IS 3873-1966
v)	Switch socket outlets.	IS 4615-1963
w)	Three pin pug and socket outlets`	IS 1233-1967
x)	Switches for domestic and similar purpose	IS 3858-1966
y)	AC electricity meters	IS 722-1977/1980+86

CODE FOR PRACTICE

Earthing	IS 3043-1966
Electrical wiring installations	IS 732-1963
Lighting protection	IS 2309-1969

7.4 List of Approved Makes for Electrical Works

S.No	Items	Makes
1	MS Conduit (ISI marked)with heavy duty accessories	BEC/AKG/ RM CON /Steel Krafts
2	PVC/ XLPE insulated aluminium / copper conductor armoured unarmoured MV cables upto 1100 V(ISI Marked)	Havells / Finolex/ KEI/ Grandlay/ Polycab/Gloster/ RR Kabel
3	FRLS PVC insulated copper conductor stranded flexible wire i/c control cables(ISI Marked)	Havells/Finolex/KEI/ Grandlay/Polycab/Gloster/ RR Kabel
4	Cable Raceway floor/wall mounted and accessories	Legrand / MK (Honeywell) / OBO/Excel
5	Cable Tray & Accessories	Venus / MEM / BEC / RM CON/ Indeana/Excel
6	Modular Switch & Socket & Accessories	Legrand(Myrus)/M.K. (Element) /Schneider (Zencelo) / legrand (Arteor)/ ABB, approved by EIC
7	Metal clad Industrial Socket outlet and sheet steel Enclosure for MCCB/ MCB	Legrand/Siemens/Schneider/Hager
8	Cable Glands	Dowells/Commet/Gripwell/Raychem
9	Lugs and end termination	Dowells/Commet/Braco
10	Change over switch	L&T / Socomac / ABB / Schneider
11	Distribution Boards	Siemens (Betagard), / Hager / Schneider (Acti9) / Legrand (Ekinox3 ³ / L&T (Exora / ABB (Elegence)
12	Protection Device (MCB/RCCB/RCBO/ELCB)	Siemens (5SL), Hager / Schneider (Acti9) / Legrand (DX 3) / ABB (S200M) / L&T
13	Current transformer / potential transformer	AEL / Gilbert & Maxwell / Pragati / Precise / L&T/ Kappa
14	Indicating Lamps LED type, Push Button	Siemens / L&T / Schneider / Legrand
15	Electronic Digital Meters	Schnider (conzerv) / L&T / Secure / Siemens / ABB / Legrand/ elmeasure/Genus
16	MCCBs	Siemens (3VL) / L&T (D sine) / Schneider (CVS) / Legrand (DPX3) ABB (T max)
17	Power Contactor	L&T (MNX)/ Schneider (Tsys) / Legrand (CTX ³) ABB (Ax)
18	Surge Protection Devices	Siemens/L&T/Schneider / Legrand/ OBO

19	Selector Switch	Salzer/Seimens /BCH/ Kaycee / L&T
20	Auxiliary Relays	Siemens/L&T/Schneider/Legrand/ABB
21	LED Lighting Fixture	Philips/ Wipro/Havells/Crompton
22	Emergency Lighting/ Exit Sign boards	Bajaj / Prolite / Glo-Line
23	Ceiling Fan, Fresh Air Fan, Exhaust Fan	Havells/Crompton/ Usha / Orient/ Atomberg
24	Paint	Nerolac/Asian/Berger/ICI
25	Lighting Protech System	OBO/ Cape Electric/ Infinite / APS/ Jeff Techno/ Axis
26	G.I Pipe	Tata, Jindal-Hissar, Prakash Surya
27	Rubber Mat (ISI Marked)	Jyoti / Deep Jyoti/ Premier
28	Fire Extinguisher	Minimax/ Life Guard / Cease Fire / Newage
29	CU/ GI Strip & GI wire for earthing	Jeff Techno/ Axis / OBO
30	MS Conduit (ISI marked)	BEC/AKG/NIC/ Steel craft/ M-Key, SK (E.R.W)
31	PVC Conduit and accessories	Polycab/ AKG / Asian
32	1.1 KV aluminium armoured XLPE insulated and PVC sheathed cable (LT cable)	Havells /KEI/ Finolex/ Grandlay/ Gloster
33	Modular Switch & Socket	Legrand (Myrus) MK (Element) Schneider (Zencelo India) / Havells/ ABB
34	Metal Clad Industrial Socket	Legrand / Siemens/Schneider/ C&S/ ABB
35	Cat-6 cable	Beldon/Siemon/Legrand/Penduit (Pannet)
36	Crimp Patch Cord	Beldon/Siemon/Legrand/Penuit (Pannet)
37	Panel Accessories	Siemens/ L&T/ Schneider / Legrand / Tecnic/ ABB/ C&S/ Neptune
38	LED/ Metal Halide / Fluorescent Internal Lighting Fixtures	Philips/ Wipro/Havells/Crompton
39	External Lighting Fixture	Philips/ Wipro/Havells/Crompton
40	Ceiling Fan (ISI marked & BEE rated 5 star)	Havells / Almonard/ Orient/ Usha/ Bajaj
41	Advance lighting protections System (Early Streamer Emission Type)	LPI (Australia)-by allied power/ SGI (Duval Messien/ Satellite(France) by SGI/ Bradlay (USA) -by JMV/ Erico (USA) by security shoppe/ ABB

42	Main LT Panels/ MCC Panel	(Main LT panel / MCC Panel board should be IEC 61439 part-1 and II manufacturer has to produce the relevant test certificate as per IEC code for the same failing which panel shall be rejected). L&T /Siemens / Schneider/ ABB/ Legrand or their authorized channel partners for IEC 61439 compliant panels
43	Air Circuit Breaker	Siemens / Schneider/ L&T/ Legrand/ C&S/ ABB
44	Surge Voltage Protection	Siemens/L&T/Schneider / ABB
45	Earth fault module	Siemens/Schneider/L&T/Legrand
46	Protection relays	Siemens/ Areva/ L&T/ Legrand
47	C.Ts and PTs	Kappa / AE/ Matrix
48	Digital Meters	Siemens (PAC)/ Schneider/ (conzerv) / Secure Enersol / L&T/ Neptune/HPL/ ABB/ elmeasure /Genus
49	Indicating lamps	ESBEE/Schneider/Siemens/Vaishno/Neptune
50	Power capacitors	Epcos/ Neptune / Legrand /ABB/ L&T
51	Automatic Power factor correction relay/controller	Epcos/Siemens (PAC) /Schneider (Conzerv)/L&T/Neptune
52	Sealed Maintenance Free Batteries	Exide/Panasonic/Amara Raja/HBL
53	Battery charger	Caldyne/Chhabi Electricals/Statcon/Max Power
54	Cable Trays (Factory Fabricated/ Overhead & Floor Raceways	Legrand/MEM/OBO/ Milestone/ Neptune
55	HDPE underground cable duct	Rex Polyextrusion/ Tirpura/ Plasomatics/ Duraline
56	Insulation Mats	DL Miller & Co. Ltd./Premier Polyfilm Ltd./RMG Polyvinyl India Ltd/Jyoti
57	Smoke/Heat detectors	Apollo/ System Sensor/ Agni
58	Manual Call point	PRD/System-Tek/ Simplex/ System Sensor/ Agni
59	Response indicators	PRD/System-Tek/ Simplex/ System Sensor /Agni
60	Fire Exit Signs	System-Tek/ Simplex/ Agni
61	Fire Control Panel	System-Tek/ Morley /Agni
62	Speaker / Hooter	System-Tek/ Philips /Agni
63	Occupancy Sensors/ Movement Sensor	Legrand/ Philips/ Wipro
64	Flush type switch /socket	Anchor/ Kinjal/ SSK/ Havells Reo
65	Fuse switches unit / switch	L&T / Siemens/ Havells/ C&S

	<i>fuse unit /HRC fuse</i>	
66	<i>Exhaust fan</i>	<i>Almonard/ Alstom/ Crompton/ Havells</i>
67	<i>XLPE insulated HT cables</i>	<i>KEI/Havells</i>
68	<i>Cable lug</i>	<i>Ascon (Heavy gauge) Jainson Dowells</i>
69	<i>Telephone wires/Telephone Cable / jelly filled telephone cables</i>	<i>Finolex /Delton/Havell's</i>
70	<i>Telephone tag blocks</i>	<i>Krone/ Pouyet</i>
71	<i>Telephone outlet</i>	<i>MK Electric /Legrand (Mosaic)/Crabtree (Piccadilly)</i>
72	<i>GI raceways</i>	<i>Milestone Engineering /Legrand/ MDS/ Neptune Systems Pvt. Ltd./MK</i>
73	<i>PVC raceways</i>	<i>Legrand/ MK</i>
74	<i>Electronic ballast</i>	<i>Philips / Wipro/ Bajaj/ Decon/Crompton/Havells</i>
75	<i>DLP plastic trunking</i>	<i>Legrand/MK</i>
76	<i>Geysers</i>	<i>Recold /Venus /Usha Lexus /Sphere hot</i>
77	<i>Tower Light</i>	<i>Ligman/Simes/Bega</i>
78	<i>HT/LT transformers</i>	<i>ABB/Schneider /CGL (Crompton Greaves Ltd.)</i>
79	<i>HT SF-6 circuit breakers / VCB</i>	<i>Siemens/ ABB/ CGL / Schneider</i>
80	<i>Programmable Logic Controller (PLC)</i>	<i>Siemens /Allen-Bradley/ Schneider</i>
81	<i>Earthing (Chemical Earthing Plate Earthing</i>	<i>JMV/ As per CPWD Norms</i>
82	<i>Octagonal Pole</i>	<i>Bajaj / Crompton / Phillips</i>
83	<i>11 kV HT panel Incoming relay</i>	<i>CGL/Schneider/ABB/ Siemens</i>
84	<i>Control Relay Panel</i>	<i>CGL/Schneider/ABB</i>
85	<i>Lightning Arrestor</i>	<i>ABB/Alltec/JMV</i>
86	<i>Temp. Gauge</i>	<i>Guru</i>
87	<i>Gate Valve</i>	<i>Leader/Sant</i>
88	<i>Electrical Backup</i>	<i>Spare hot/ Racold</i>
89	<i>PVC Tank</i>	<i>Syntex/ Polycon</i>
90	<i>Thermostat</i>	<i>ISI Marked</i>
91	<i>Flat Collector Plate</i>	<i>Solocrome/ Tata BP/ Racold</i>
92	<i>S.S Sheet</i>	<i>Jindal / National</i>
93	<i>HT/LT cable joints (Straight through/outdoor/indoor)</i>	<i>3M/ Denson/ M Seal/Raychem/ Cabseal</i>
94	<i>Alternator</i>	<i>STAMFORD/Crompton Greaves/Kirlosker/Leroy Somer</i>

95	<i>DG set engine</i>	Kirlosker/ Cummins/ Greaves Cotton/Baudouin/Caterpillar/Perkins
96	<i>DG Set (Preferred makes)</i>	<i>Sterling Generator/ Kirlosker /Caterpillar/Cummins Power / Greaves Cotton/Jackson</i>
97	<i>Makes of accessories of HT / LT Panel / Transformers</i>	<i>As per standard practice of manufacturer/ Channel partner of L&T /Siemens / Schneider/ ABB/Legrand/Crompton Greaves</i>
98	<i>Bus Trunking</i>	<i>C&S / L&T/ Schneider as per standard practice of OEM manufacturer / channel partner</i>
99	<i>HT panel 11 KV</i>	<i>ABB/ Schneider/ CGL (Crompton Greaves Ltd.)</i>
100	<i>Bus Duct</i>	<i>Neptune / Milestone/ Tricolite</i>
101	<i>Lamp Holder (Brass)</i>	<i>Kay/ SSK/ Kinjal</i>
102	<i>UPS</i>	<i>APC(Schneider)/Vertiv/ABB/Numeric/Delta/Tmei c</i>
103	<i>AMF Panel</i>	<i>L&T/ Siemens/ ABB/ Excel Control/ Modern Switchgear</i>

8. Special Conditions of Contract

8.1 Special Conditions for the minor works under the contract

1. The contract will be used only to execute original works/ minor works/ repair works of urgent nature. It can also be used for any works of restoration as a result of a disaster in campus causing damage to institute infrastructure/ works related to emergency services/ works of institute importance/ works concerned to safety health and environment of campus community. The works undertaken through such contracts are categorized as time bound and should be executed as per Table 6.
2. The contractor should always keep his establishment ready to commence the work immediately after the issue of the work of any amount. The schedule for the issued works under the contract should be as per Table 6. Work requests of urgent nature shall be started at the earliest after receiving orders from the engineer-in-charge but it should be documented with photo and video evidence for all hidden items. Submission of this evidence is mandatory for all works executed.
3. During the execution, the noise creation should be minimized to the extent possible and the works may be carried at odd hours and more than one shift as per requirement.
4. The performance of the instruments or tools to be used should be checked precisely before using them on site.
5. The contractor and his/her personnel has to build a well- coordinated system with the users regarding execution of the works.

8.2 Timely Completion

1. All work components must be started simultaneously and has to be delivered together or early within the given time schedule.
2. The contractor has to deploy the labor and supervisory staff in shifts to meet the targeted completion date. The work may be executed in extended shifts or two shifts.
3. Number of days from the date of issue of letter of acceptance for reckoning date of start shall be as per Schedule. *If the Contractor commits default in commencing the execution of the work as aforesaid, the performance guarantee shall be forfeited.*
4. The contractor shall procure the required materials in advance so that there is sufficient time for testing of the materials and approval of the same before use in the work, as required.

8.3 Rates

1. Unless otherwise provided in the schedule of quantities of the work the rates tendered by the contractor shall be all inclusive and shall apply to all heights, lifts, leads and depths of the building (Inclusive of GST) and nothing extra shall be payable to him on this account.
2. The rates for all items of work shall, unless clearly specified otherwise, include cost of all labours, materials, testing charges and other inputs involved in the execution of the item irrespective of whether they have been specifically mentioned in the tender document or not.

3. In case the same item (s) appear more than once in the schedule of work / BOQ under the same sub head or among the different subhead of works, the lowest rate quoted for that item (s) shall be considered for the particular item(s) wherever appeared in any part of BOQ / Schedule of works for the purpose of tender evaluation although web generated e-price bid may incorporate different quoted rate for same item(s) as per the quoting pattern of the tenderer. The tendered amount thus worked out shall be final & shall be binding on the contractor.
4. No double scaffolding is payable in single story houses including parapet wall. In multistoried houses the payment of double scaffolding shall be made after 3.5 meter from plinth protected level. The necessary deductions for single scaffolding be made from the items. Contractors are advised to visit the site & quote the rates accordingly.
5. The rates quoted by the contractor will be deemed to be inclusive of any extra expenditure of this reason. The contractor has to increase the manpower or other tools etc. to do the work as per the quantum of work provided to him at his own expenses. Nothing shall be paid on this account.
6. The contractor shall provide at his own cost suitable weighing, surveying and leveling and measuring arrangements as may be necessary at site for checking. All such equipment shall be got calibrated in advance from laboratory, approved by the Engineer-in-Charge. Nothing extra shall be payable on this account.
7. Other agencies may also simultaneously execute and install the works and the contractor shall afford necessary facilities for the same. The contractor shall leave such recesses, holes, openings, trenches etc. as may be required for such related works (for which inserts, sleeves, brackets, conduits, base plates, clamps etc. shall be available as specified elsewhere in the contract) and the contractor shall fix the same at the time of casting of concrete, stone work and brick work, if required, and nothing extra shall be payable on this account.
8. All material shall only be brought at site as per program finalized with the Engineer-in-Charge. Any pre-delivery of the material not required for immediate consumption shall not be accepted and thus not paid for.
9. **MCCB's, switches, sockets, wires, cable, light fixtures, earthing's** and other electrical items covered under the contract should conform to approved manufacturers specifications, where CPWD Specifications are not applicable. The contractor should get the materials (fixtures/fittings) tested from approved labs wherever required at his own cost.
10. The contractor shall be responsible for the watch and ward / guard of the buildings, safety of all fittings and fixtures including sanitary and water supply fittings and fixtures provided by him against pilferage and breakage during the period of installations and thereafter till the building is physically handed over to the client department. No extra payment shall be made on this account.
11. The rates quoted by the Contractor are deemed to be inclusive of site clearance, setting out work, profile, establishment of reference bench mark(s), taking spot levels, construction of all safety and protection devices, barriers, preparatory works, working during monsoon, working at all depths, height, lead, lift and location etc until / unless specified otherwise and any other incidental works required to complete this work. Nothing extra shall be payable on this account.

8.4 Quality and Workmanship

1. The contractor shall be entirely responsible and answerable for all the works done by him regarding quality, adherence to the laid down specifications, terms and conditions, warranty/guarantee etc. and he shall be liable to bear any compensation that may be levied by the department under any of the clauses of the agreement.
2. The materials having ISI mark shall have precedence over the one conforming to IS Specifications.
3. The proposed buildings are Institute housing and quality of work is paramount importance. Contractor shall have to engage well experienced skilled labour and deploy modern T&P and other equipment to execute the work.
4. Samples of all materials and fittings to be used in the work in respect of brand manufacturer and quality shall be approved from the Engineer-in-Charge, well in advance of actual execution and shall be preserved till the completion of the work.
5. All materials used in the work shall be new and of good quality, conforming to the relevant specifications as per good engineering practice. All the materials proposed to be used in the work should be approved from Engineer in Charge before use in work.
6. Articles bearing BIS certifications mark shall only be used unless no manufacturer has got BIS/ISI mark for the particular material. Any material/fitting whose sample has not been approved in advance and any other unapproved material brought by the contractor shall be immediately removed as soon as directed. Where the make of any particular material is not specified in the Contract document, the material shall be supplied as per makes desired by the engineer-in-charge.
7. It will be the responsibility of the contractor / bidder to ensure use of genuine materials in the work. The department reserves the right to get (any / all materials / components) inspected by the manufacturer or their authorized representatives at any stage of the execution of work. If any of the materials, supplied and used in work is found spurious at any stage, then the department reserves the right to ask the contractor to replace it by genuine one and make suitable recovery till it is done, even if any payment against that material is already made.
8. The contractor should get the make/TDS documents approved before procuring any material at site. The TDS/Make once approved shall not be changed without any valid recorded reasons. No material to be brought and used at site without the prior knowledge & approval of Engineer-in-Charge.
9. The department may ask for any valid document like **manufacturer's test certificate**, document for purchase of the material, document for import/shipment of imported materials etc. as deemed fit by the engineer-in-charge to ascertain genuineness of material supplied by/used in the work by the contractor. The contractor shall remain bound to submit all such documents to the department failing which payment may not be made or if already paid may be recovered/ withheld from subsequent running account payment.
10. All equipment and their components, and all the materials to be used in the work shall be suitable for the environmental conditions at the location of the work.
11. The contractor shall ensure quality control measures on different aspects of construction including materials, workmanship and correct construction methodologies to be adopted. He shall have to submit quality assurance programme within two weeks of the award of work. The quality assurance programme should include method statement for various items of work to be executed along with check lists to enforce quality control.

12. The contractor shall get the source of all other materials, not specified elsewhere in the document, approved from the Engineer-in-Charge. The contractor shall stick to the approved source unless it is absolutely unavoidable. Any change shall be done with the prior approval of the Engineer-in-Charge for which tests etc. shall be done by the contractor at his own cost. Similarly, the contractor shall submit brand/ make of various materials not specified in the agreement, to be used for the approval of the Engineer-in-Charge along with samples and once approved, he shall stick to it.
13. Other Laboratories: The contractor shall arrange carrying out of all tests required under the agreement through the laboratory as approved by the Engineer-in-Charge and shall bear all charges in connection therewith including fee for testing. The said cost of tests shall be borne by the contractor/department in the manner indicated below.
 - (a) By the contractor, if the results show that the test does not conform to relevant CPWD Specifications / BIS code or specification mentioned elsewhere in the documents.
 - (b) By the department, if the results conform to relevant CPWD Specifications / BIS code or specification mentioned elsewhere in the documents.

If the tests, which were to be conducted in the site laboratory, are conducted in other laboratories for whatever the reasons, the cost of such tests shall be borne by the contractor.
14. Sample of materials fittings and other articles required for execution of work shall be got approved from the Engineer-in-Charge. Articles manufactured by companies of repute and approved by the Engineer-in-Charge shall only be used. Articles bearing BIS certification mark shall be used in case the above are not available, the quality of samples brought by the contractor shall be judged by standards laid down in the relevant BIS specifications. All materials and articles brought by the contractor to the site for use shall conform to the samples approved by the Engineer-in-Charge which shall be preserved till the completion of the work.
15. The contractor shall ensure quality construction in a planned and time bound manner. Any sub-standard material/work beyond set out tolerance limit shall be summarily rejected by the Engineer-in-Charge.
16. BIS marked materials except otherwise specified shall be subjected to quality test at the discretion of the Engineer-in-Charge besides testing of other materials as per the specifications described for the item/materials. Wherever BIS marked materials are brought to the site of work, the contractor shall if required, by the Engineer-in-Charge furnish manufacturers test certificate or test certificate from approved testing laboratory to establish that the material produced by the contractor for incorporation in the work satisfies the provisions of BIS codes relevant to the material and/or the work done. The contractor shall procure all the materials at least in advance so that there is sufficient time to testing and approving of the materials and clearance of the same before use in work.
17. All materials brought by the contractor for use in the work shall be got checked from the Engineer-in-Charge or his authorized representative of the work on receipt of the same at site before use.
18. The contractor shall be fully responsible for the safe custody of the materials issued to him even if the materials are in double lock and key system.

8.5 Natural calamity

No payment will be made to the contractor for any damage caused by rain, snow fall, floods,

dampness, fire, sun or any other natural cause whatsoever during the execution of work. The damage to the work due to above reason, if any, shall have to be made good by the contractor at his own cost and no claim on this account shall be entertained.

8.6 Safety and Security

1. The contractor has to follow all safety norms as laid down in National Building Code of India. All the workers shall be equipped with the required safety gadgets while working at site such as ISI marked helmets, Shoes and safety belts, gumboots, gloves etc. The contractor, the authorized representative(s), workmen etc., shall strictly observe orders pertaining to fire precautions prevailing in the area.
2. The contractor shall be fully responsible for the safe custody of materials brought by him/ issued to him even though the materials may be under double lock key system.
3. Contractor will arrange proper metal ladders, M.S. double scaffolding (for working, painting, etc. at higher levels) at his own cost and will take all safety measures like double harness safety belt, mechanized electrically operated platform etc. If it is observed that work is proceeding without adequate safety precautions, work may be stopped by Engineer-in-charge and in such cases, contractor will be solely responsible for delay and its consequences thereof.
4. The contractor shall be responsible for the watch and ward/guard of the buildings, safety of all fittings and fixtures including sanitary and water supply fittings and fixtures provided by him against pilferage and breakage during the period of installations and thereafter till the building is physically handed over to the department. No extra payment shall be made on this account.
5. The contractor shall take all precautions to avoid accidents by exhibiting necessary caution boards day and night speed limit boards red flags, red lights and providing barriers. He shall be responsible for all dangers and incidents caused to existing / new work due to negligence on his part. No hindrances shall be caused to traffic during the execution of the work.
6. It shall be ensured by the contractor that no electric live wire is left exposed or unattended to avoid any accidents in this regard.
7. The Institute shall not have any responsibility or liability in case of any accident injury to the personnel to the contractor at work site or to the general public at the work site due to mishandling equipment by the personnel of the contractor or any other similar reason. The responsibilities and liabilities for such accidents and incidents shall be borne by the contractor.

8.7 Approach to Site

1. The tenderer shall see the approaches to the site. In case any approach from main road is required at site or existing approach is to be improved and maintained for cartage of materials by the contractor, the same shall be provided, improved and maintained by the contractor at his own cost.
2. Contractor shall take all precautionary measures to avoid any damage to adjoining property. All necessary arrangement shall be made at his own cost.

8.8 Acts and Laws

1. The Contractor shall keep himself fully informed of all acts and laws of the Central & State Governments, all orders, decrees of statutory bodies, tribunals having any jurisdiction or authority, which in any manner may affect those engaged or employed and anything related to carrying out the work. All the rules & regulations and bye-laws laid down by Collector / MC etc. and any other statutory bodies shall be adhered to, by the contractor, during the execution of work.
2. The Contractor shall also adhere to all traffic restrictions notified by the local authorities.
3. All statutory taxes, levies, charges (including water and sewerage charges, charges for temporary service connections and / or any other charges, as applicable) payable to such authorities for carrying out the work, shall be borne by the Contractor.
4. The Contractor shall arrange to give all notices as required by any statutory / regulatory authority and shall pay to such authority all the fees that is required to be paid for the execution of work. He shall protect and indemnify the Institute and its officials & employees against any claim and /or liability arising out of violations of any such laws, ordinances, orders, decrees, by himself/herself or by his/her employees or his/her authorized representatives. Nothing extra shall be payable on these accounts.
5. The fee payable to statutory authorities for obtaining the various permanent service shall be borne by the Institute.

8.9 Labour and Laws

1. The Contractor shall display all permissions, licenses, registration certificates, bar charts, other statements etc. under various labour laws and other regulations applicable to the works, at his site office.
2. Huts for labour are not permitted within the premises of the Institute. No extra cost shall be payable even if the contractor provides such accommodation at a place as is acceptable to the local body.

8.10 Nondisclosure Agreement

1. The Agency shall take all precautions not to disclose, divulge and/or disseminate to any third party any confidential information, proprietary information on the Institute business or security arrangements (including but not limited to the Assignment instructions, Schedules and other subsequent Arrangements) and/or business of the Institute. The obligation is not limited to any Scope and the Agency shall be held responsible in case of **breach of the confidentiality of Institute's information.**
2. If the Agency receives enquiries from Press/Media/Radio/Television or other bodies/persons, the same shall be referred by the Agency to Institute immediately on receipt of such queries.

8.11 Indemnification:

1. The agency shall be directly responsible to indemnify the Institute against all charges, dues, claims, etc. arising out of the disputes relating to the dues and employment of the personnel deployed and further for any claim/compensation against all damages and accidents caused due to negligence on the part of the agents, employees and other personnel of the agency.
2. That the contractor shall keep the IITK indemnified against all claims whatsoever in respect

of the employees deployed by the contractor. In case any employee of the contractor so deployed enters in dispute of any nature whatsoever, it will be the primarily responsibility of the contractor to contest the same. In case IITK is made party and is supposed to contest the case, IITK will be reimbursed for the actual expenses incurred towards Counsel Fee and other expenses which shall be paid in advance by the Contractor to IITK on demand. Further, the contractor shall ensure that no financial or Any other liability comes on IITK in this respect of any nature whatsoever and shall keep IITK indemnified in this respect.

8.12 Force Majeure:

If at any time, during the continuance of this contract, the performance in whole or in part by either party of any obligation under this contract is prevented or delayed by reasons of any war, hostility, acts of public enemy, civil commotion, sabotage, fires, floods, explosion, epidemics quarantine restriction, strikes, lockouts or acts of god (hereinafter referred to as events) provided notice of happenings of any such event, is served by party seeking concession to the other as soon as practicable, but within 21 days from the date of occurrence and termination thereof. Provided the Party satisfies Institute adequately of the measures taken by it. Neither party shall, by reason of such event, be entitled to terminate this contract, nor shall either party have any claim for damages against **the** other in respect of such non-performance or delay in performance. Further, the services under the contract shall be resumed as soon as practicable after such event has come to an end or ceased to exist and the decision of Institute as to whether the services have to resume or not shall be final and conclusive, provided further, that if the performance in whole or in part of any obligation under this contract is prevented or delayed by reason of any such event for a period exceeding 60 days, Institute may at his option, terminate the contract.

8.13 Dispute resolution

1. The institute reserves the right to amend rules whenever and wherever considered necessary and appropriate. The same shall be intimated to the agency in due course.
2. Any dispute arising out of and in relation to this agreement shall be referred to the arbitration by sole arbitrator to be appointed by Director of the Institute. The arbitration would be conducted and governed by and under the provisions of Arbitration Act, 1996 and its amendments. Any legal dispute will be subject to jurisdiction of Kanpur Courts only and no other court shall have the jurisdiction.
3. Any dispute arising out of and in relation to this agreement shall be referred to the arbitration by sole arbitrator to be appointed by Director of the Institute. The arbitration would be conducted and governed by and under the provisions of Arbitration Act, 1996. Any legal dispute will be subject to jurisdiction of Kanpur Courts only and no other court shall have the jurisdiction.

8.14 Arbitration

1. Except as otherwise provided anywhere in this Agreement, if any dispute, difference, the question of disagreement or matter, whatsoever, arises between the parties, as to the meaning, operation or effect of the Agreement or out of or relating to the Agreement or breach thereof, the same shall be referred to a Sole Arbitrator, to be appointment by the Director of the Institute at the time of the dispute.
2. If the Arbitrator, to whom the matter is originally referred, dies or refuses to act or resigns for any reasons from the position of arbitration, it shall be lawful for the Director of the Institute to appoint another person to act as Arbitrator in the manner aforesaid. Such

person shall be entitled to proceed with the reference from the stage at which it was left by its predecessor, provided both the parties consent to this effect, failing which, the arbitrator shall be entitled to proceed on the matter de- novo.

3. It is a term of the Agreement that the party invoking the arbitration shall specify all disputes to be referred to arbitration at the time of invocation of arbitration under the clause.
4. It is a term of the contract that the cost of arbitration shall be borne by the parties themselves.
5. The place of the arbitration shall be Kanpur Nagar, Uttar Pradesh, India.
6. Subject as aforesaid, the provisions of the Arbitration and Conciliation Act, 1996 and any statutory modifications, amendments or re-enactment thereof and rules made thereunder and for the time being in force, shall apply to the arbitration proceeding under this clause.
7. Except as otherwise provided anywhere in this Agreement, the Arbitration proceedings shall be conducted in English and the Agreement shall be constructed, interpreted and governed by the law of India, for the time being in force.

8.15 Jurisdiction of Courts

The court(s) at Kanpur Nagar, Uttar Pradesh, shall have the exclusive jurisdiction to try any as all the disputes(s) between the parties arising out this Agreement.

8.16 E&M Works

1. In interpreting the specifications, the following order of decreasing importance shall be followed in case of contradictions:
 - (a) Schedule of quantities
 - (b) Technical specifications of the NIT
 - (c) Approved Drawing (If any)
 - (d) CPWD General specification Part – I (Internal) 2014, BIS Codes amended up to date, practices
 - (e) CPWD General Specifications for Electrical Works—Part-II(External), 2014 amended up to date.
 - (f) Relevant IS or other international code in case IS code is not available.
 - (g) Indian Electricity Act 2003 and Indian Electricity Rules 1956 amended up to date.
 - (h) Local Fire Regulations applicable at the place of installation. Relevant and applicable foreign standards and specifications amended up to date.
 - (i) Any other relevant act or rules and local by-laws.
2. contractor will identify one of the supervisors for taking care of implementation of Safety systems.
3. Smoking is strictly prohibited at workplace.
4. Nobody is allowed to work without wearing safety helmet. Chinstrap of safety helmet shall be always on. Drivers, helpers and operators are no exception.
5. No one is allowed to work at or more than three meters height without wearing safety belt and anchoring the lanyard of safety belt to firm support preferably at shoulder level.
6. No one is allowed to work without adequate foot protection.
7. Usage of eye protection equipment shall be ensured when workmen are engaged for grinding, chipping, welding and gas-cutting. For other jobs as and when site safety co-coordinator insists eye protection has to be provided.
8. All safety appliances like Safety shoes, Safety gloves, Safety helmet, Safety belt, Safety goggles etc. shall be arranged before starting the job. .
9. All excavated pits shall be barricaded & barricading to be maintained till the backfilling is done. Safe approach to be ensured into every excavation.
10. Adequate illumination at workplace shall be ensured before starting the job at night.
11. All the dangerous moving parts of the portable / fixed machinery being used shall be adequately guarded.
12. Ladders being used at site shall be adequately secured at bottom and top. Ladders shall not be used as work platforms.
13. Material shall not be thrown from the height. If required, the area shall be barricaded and one person shall be posted outside the barricading for preventing the trespassers from entering the area.

14. Other than electricians no one is allowed to carry out electrical connections, repairs on electrical equipment or other jobs related thereto.
15. All electrical connections shall be made using 3 or 5 core cables, having a earth wire.
16. Inserting of bare wires for tapping the power from electrical sockets is completely prohibited.
17. A tools and tackles inspection register must be maintained and updated regularly.
18. Debris, scrap and other materials to be cleared from time to time from the workplace and at the time of closing of work every day.
19. All the unsafe conditions, unsafe acts identified by contractors, reported by site supervisors and / or safety personnel to be corrected on priority basis.
20. No children shall be allowed to enter the workplace.
21. All the lifting tools and tackles shall be stored properly when not in use.
22. Clamps shall be used on Return cables to ensure proper earthing for welding works.
23. Return cables shall be used for earthing.
24. All the pressure gauges used in gas cutting apparatus shall be in good working condition.
25. Proper eye washing facilities shall be made in areas where chemicals are handled.
26. Connectors and hose clamps are used for making welding hose connections.
27. All underground cables for supplying construction power shall be routed using conduit pipes.
28. Spill trays shall be used to contain the oil spills while transferring / storing them.
29. Tapping of power by cutting electric cables in between must be avoided. Proper junction boxes must be used.
30. All the E&M works shall be carried out as per direction and to the satisfaction of the Engineer-in-charge.
31. If the specifications for any item or its component are not available in the CPWD specifications cited above, relevant BIS specification as amended up to date shall be followed, whether or not the specific reference of a particular BIS specification has been made in this specification/ tender document.
32. Wherever any reference to any Indian Standard specification occurs in the document relating to this contract the same shall be inclusive of all amendments issued there to or revisions thereof, if any, up to the date of opening of tenders.
33. All materials should conform to relevant BIS specifications wherever the same exists in absence of stipulation in this tender document.
34. Where manufacturers furnish specific instructions / recommendations relating to the materials used in this job and/or their installation, covering points not specifically mentioned in these documents, these instructions shall be followed in all cases and shall be deemed to be included in the schedule of work whether they have been specifically mentioned or not.

35. All chase cuttings in the wall, for recessed conduits & boxes and drilling the holes shall be done with power operated machines only. No chase shall be allowed to be cut manually with the use of hammer & chisel.
36. All cuttings in cement plaster and brick shall be made good by using cement mortar 1:3 (1 part cement, 3-part coarse sand) The cut surfaces shall be repaired by an experienced mason only so as to match the repaired plaster with the original. All such repaired surfaces shall be cured for 3 to 4 days to keep the surfaces wet, using water spray machine (hand/motor operated) and avoid unnecessary flooding of the area.
37. The structural and architectural drawings shall at all times be properly co-related before executing any work.
38. For the purpose of recording measurements and preparing running account bills, the abbreviated nomenclature indicated in the publications Abbreviated Nomenclature of Items of DSR 2022 shall be accepted. The abbreviated nomenclature shall be taken to cover all the materials and operations as per the complete nomenclature of the relevant items in the agreement and relevant specifications. In case of items for which abbreviated nomenclature is not available in the aforesaid publication and also in case of extra and substituted items for which abbreviated nomenclature are not provided for in the agreement, full nomenclature of item shall be reproduced in the measurement books and bill forms for running account bills. For the final bill, however, full nomenclature of all the items shall be adopted in preparing abstract in the electronic measurement books and in the bill forms.
39. The following drawings must be submitted to Executive Engineer within seven days of award of work.
 - (a) G.A and schematic drawings of MV switchgear/distribution /conduit layout/wiring drawing, Fire Alarm panel showing material and size of sheet steel/bus bars / inter connections and make and ratings of switchgear i/c details of protection, metering, indicating and inter lock etc
 - (b) Conduit layout for lights, fans, socket outlets, telephone outlets, network & fire alarm system and sub mains showing size of conduits, no. of wires and size of wires in each run, location and size of accessories like junction boxes, ceiling boxes for hooks, draw boxes and switch boxed etc.
 - (c) Cable routing drawings showing details of size, type and no. of cables and mode of installation.
40. On completion of works and before issuance of completion certificate, the contractor submit completion drawings in the form of three complete set of originals (reproducible).
 - (a) As built GA and schematic drawings of MV panels, distributions boards, wiring, cable laying with sizes, earthing details, fire alarm panels, etc. showing material and size of sheet steel/bus bars/ connections and make and rating of switchgear i/c details of protection, meter indicating and interlocks etc.
 - (b) Technical literature, test certificates and operation and maintenance manuals required
41. Works Inspection and Testing of Equipment: Prior to dispatch of equipment the Institute reserves the right to inspect the same at the **manufacturer's** works and the contractor shall provide and secure every reasonable access and facility at the manufacturers works for inspection, for witness of all acceptance and routine tests as per relevant Indian Standards.

Contractor shall give a reasonable notice of about 15 days for the purpose of test, and witness of all major equipment's.

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42. Pre-commissioning test: All routine tests shall be carried out on the electrical equipment. **Protective & measuring devices should be checked for calibration of MCCB's/MCB's,** panel & cable meggar, earthing measurements etc.

केन्द्रीय लोक निर्माण विभाग
कार्यालय ज्ञापन

No. DG/MAN/410

ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI

DATED: 22.10.2021

Subject: Addition of new Para 4.10.2 in CPWD Works Manual 2019 regarding testing charges to be borne by contractor.

It has been noticed that following provisions are sometimes being made in the NITs / Agreements by the NIT approving authorities:

"The cost of test shall be borne by contractor/ department in the manner as below:

- By the contractor, if the result shows that material does not conform to the relevant codes/ specification.
- By the department, if the results show that the material conforms to relevant codes/ specification."

It has been decided by the competent authority that testing charges shall be borne by the contractor in all cases. Accordingly following new para is added in CPWD Works Manual -2019.

Existing Provision	Modified Provision
4.10 Preparation of NIT	4.10 Preparation of NIT
4.10.2 No Provision	4.10.2 Testing charges to be borne by contractor Following provision shall be incorporated by the NIT approving authority in the NIT: All expenditure to be incurred for testing of samples e.g. packaging, sealing, transportation, loading, unloading etc. including testing charges shall be borne by the contractor. The NIT shall have list of approved laboratories for testing as approved by ADG / SDG.

This issues with the approval of competent authority.

(वी.पी. साहू) 22/10/2021

अधीक्षण अभियंता(सी.एंड.एम.)

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प्रतिलिपि: सभी केलोनिवि तथा लोनिवि दिल्ली के अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु। (केलोनिवि वेबसाइट के माध्यम से)।