

INDEX

Name of work:- Repair and Renovation of electrical distribution /Starter Panels of Experimental Dairy at ICAR-NDRI, Karnal.

<u>S.No</u>	<u>Description</u>	<u>PAGE</u>
1.	Information & Instructions for bidder for 'E' bidding	02-03
2.	NIT form CPWD-6, EMD Receipt	04-08
3.	Contract Form CPWD-7	09-10
4.	Schedule A to F, Table of Milestone Integrity Pact	11-19
5.	Terms & Conditions with Approved makes	21-28
6.	Schedule of work	29-40

Certified that this N.I.T. contains page 1 to 40

N.I.T. No. 13/EE(E)/KED/2026-27/Karnal is approved for Rs. 2800052/-

ASSISTANT ENGINEER-(E)-P

**EXECUTIVE ENGINEER (E),
KED, CPWD, Karnal**

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

INFORMATION AND INSTRUCTIONS FOR BIDDERS FOR e-TENDERING FORMING PART OF BID DOCUMENT AND TO BE POSTED ON WEBSITE

The Executive Engineer (E), Karnal Central Electrical Division, CPWD, 208-D, HSIIDC, Industrial Area, Sec-3, Karnal-132001 (Ph. 0184-2220460, Email- cpwdknl@yahoo.in) on behalf of President of India invites the online percentage rate tenders from approved and eligible Contractors of CPWD of appropriate class & **category** for the following work:-

Sr · No.	NIT No.	Name of work & Location	Estimated cost put to Bid	Earnest Money	Period of Completion	Last date & time of submission of bid, original EMD, copy of receipt for deposition of original EMD and other documents as specified in the NIT	Time & date of online opening of tender
1	2	3	4	5	6	7	8
1	13/EE(E)/KED/2 026-27/Karnal	Repair and Renovation of electrical distribution /Starter Panels of Experimental Dairy at ICAR-NDRI, Karnal.	Rs. 2800052/-	Rs. 56001/-	04 Months	On 14/07/2026	On 14/07/2026

- The enlistment of the contractors 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.
- 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.
- Information and Instructions for bidders posted on website shall form of bid document.
- The bid document consisting of plans, specifications, 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.etender.cpwd.gov.in** or **www.cpwd.gov.in** free of cost. Press notice will also be available on Central Public Procurement Portal (URL <http://eprocure.gov.in>) through system link.
- The bid can only be submitted after **deposition of original EMD either in the office of Executive Engineer inviting bids or division office of any Executive Engineer CPWD within the period of bid submission** and uploading the mandatory scanned documents such as Demand Draft or Pay-order or Banker's Cheque or Deposit at call Receipt or Fixed Deposit Receipts and Bank Guarantee of any Scheduled Bank towards EMD in favour of **Executive Engineer (E), Karnal Central Electrical Division, CPWD, Karnal as mentioned in NIT, receipt for deposition of original EMD to division office of any Executive Engineer, CPWD** and other documents as specified.
The contractors already registered on the e-tendering portal will have option to continue by paying tender processing fee upto one year from the date of registration, or to switch over to (new) registration without tender processing fee any time. All new registrations from 01-04-2015 will be without tender processing fee.
- Those contractors not registered on website mentioned above, are required to get registered beforehand. If needed they can be imparted training on online bidding process as per details available on the website.
- The intending bidders must have valid Class-III digital signature to submit the bid.
- On opening date of the financial bid, the contractor can login and see the bid opening process. After opening of bids he will receive the competitor bid sheets.
- Contractor can upload documents in the form of JPG format and PDF format.

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

11. Contractor must ensure to quote rate of each item. The column meant for quoting rate in figures appears in pink color and the moment rate is entered, it turns sky blue.
12. 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.
13. The contractor whose bid is accepted will also be required to furnish either copy of applicable licenses/registrations or proof of applying for obtaining labour licenses, registration with EPFO, ESIC and BOCW Welfare Board and Programme Chart (Time and Progress) within the period specified in Schedule F. The letter of award shall be issued to the lowest contractor only on receipt of applicable labour licenses, registration with EPFO, ESIC and BOWC Welfare Board or on submitting the proof of applying thereof. No Running Account Bill shall be paid for the work till the applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board, whatever applicable are received from the contractor by the Engineer-in-Charge.
14. In terms of OM No. DG/CON/255A dated 10.08.2011, it shall be mandatory to sign the Integrity Pact by the bidder failing which bidder will stand disqualified from the tendering process and the bid of the bidder would be summarily rejected in case of manual tendering. However; where e-tendering is followed, Integrity Pact of the bid document shall be signed between EE in-charge of Division and the successful bidder after acceptance of the bid.
15. The composite contractor shall have electrical license to execute the electrical work or he has to associate an electrical contractor to execute the electrical work.
16. **Note:- Contractors have to upload their Current address, E-mail ID, contact no. etc for future correspondence.**
17. **List of Documents to be scanned and uploaded on due date and time mentioned above:**

(i)	Treasury Challan/ Demand Draft / Pay Order or Banker's Cheque / Fixed Deposit Receipts/ Deposit at Call Receipt / Bank Guarantee of any scheduled bank against EMD. (As per OM No. DG/Manual-2024/22 dated 23.03.2026 i.e; EMD shall be made / issued only from the account of the bidder / tenderer submitting the bid/tender. EMD made/ issued from the account other than that of the bidder/ tenderer submitting the bid, shall not be accepted)
(ii)	Copy of receipt for deposition of original EMD <i>with division office of any Executive Engineer including NIT issuing EE, CPWD.</i>
(iii)	GST registration Certificate, if already obtained by the bidder. If the bidder has not obtained GST registration as applicable, then he shall scan and upload following undertaking along with bid documents. "If work is awarded to me, I/we shall obtain GST registration certificate, as applicable, within one month from the date of receipt of award letter or before release of any payment by CPWD, whichever is earlier, failing which I/we shall be responsible for any delay in payments which will be due towards me/us on account of the work executed and /or for any action taken by CPWD or GST department in this regard."
(iv)	Valid Enlistment order of the CPWD contractors in appropriate class in composite category.
(v)	Valid Electrical Contractor's License, if available with composite category contractor. If not, then the undertaking is to be submitted by composite category contractor to associate the agency with Valid electrical License for execution of EI work.
(vi)	ERP training Certificate
(vii)	Any other document as specified in the NIT.

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

CENTRAL PUBLIC WORKS DEPARTMENT

CPWD-6 FOR e-TENDERING

 सत्यमेव जयते	GOVERNMENT OF INDIA CENTRAL PUBLIC WORKS DEPARTMENT	 CPWD
---	--	---

1. **The Executive Engineer (E), Karnal Central Electrical Division, CPWD, 208-D, HSIIDC, Industrial Area, Sec-3, Karnal-132001 (Ph. 0184-2220460, Email- cpwdknl@yahoo.in)** on behalf of President of India invites the online Percentage Rate tenders from approved and eligible Contractors of CPWD registered in **appropriate class & category for the following work:-**

“Repair and Renovation of electrical distribution /Starter Panels of Experimental Dairy at ICAR-NDRI, Karnal.”

The enlistment of the contractors 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.

- 1.1 The work is estimated to costs **Rs. 2800052/-** This estimate, however, is given merely as a rough guide.

- 1.1.1 The authority competent to approve NIT for the combined cost and belonging to the major discipline will consolidate NITs for calling the bids. **Executive Engineer (E), Karnal Central Electrical Division, CPWD, Karnal** will deal with all matters relating to the invitation of bids.

- ~~1.1.2 For bid, besides indicating the combined estimated cost put to tender, should clearly indicate the estimated cost of each component separately. The eligibility of tenderer will correspond to the combined estimated cost of different components put to bid.~~

- 2 Agreement shall be drawn with the successful bidder on prescribed **Form No. CPWD 7** which is available as a Govt. of India Publication and also available on website **www.cpwd.gov.in**. Bidder shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.

- 3 The time allowed for carrying out the work will be **04 Months** whichever is later, in accordance with the phasing, if any, indicated in the tender documents.

- 4 (i) The site for the work is available.

- (ii) The architectural and structural drawings shall be made available in phased manner, as per the requirement of the same, as per approved programme of completion submitted by the contractor after award of work.

- 5 The bid document consisting of plans, specifications, 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 except Standard General Conditions of Contract Form can also be seen from website **www.etender.cpwd.gov.in** or **www.cpwd.gov.in** free of cost.

- 6 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 tender as notified.

- 7 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 tender as notified.

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

- 8(a) Earnest Money 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 favour of **Executive Engineer (Electrical), Karnal Central Electrical Division, CPWD, Karnal**) shall be scanned and uploaded to the e-Tendering website within the period of bid submission.

The original EMD should be deposited either in the office of Executive Engineer (E) inviting bids or division office of any Executive Engineer, CPWD, within the period of bid submission. The EMD receiving Executive Engineer (including NIT issuing EE) shall issue a receipt of deposition of earnest money deposit to the bidder in a prescribed format (enclosed) uploaded by tender inviting EE in the NIT.

This receipt shall also be uploaded to the e-tendering website by the intending bidder up to the specified bid submission date and time.

- 8(b) Copy of enlistment order and certificate of work experience and other documents as specified in the NIT shall be scanned and uploaded to the e-tendering website within the period of bid submission. **However, certified copy of all the scanned and uploaded documents as specified in NIT shall have to be submitted by the lowest bidder only within a week from the date of opening of the price bid physically in the office of tender opening authority.**

Online Bid Documents submitted by intending bidders shall be opened only of those bidders, **whose original EMD deposited with any division of CWPD and other documents scanned and uploaded are found in order.**

The bid documents shall be opened on **14/07/2026**.

9. The bid submitted shall become invalid if:-
- (i) The bidder is found ineligible.
 - (ii) The bidder does not deposit original EMD with division office of any Executive Engineer, CPWD.
 - (iii) The bidder does not upload all the documents (including GST registration and acknowledgement of upto date filed return) as stipulated in the bid document **including the copy of receipt of deposition of original EMD.**
 - (iv) If any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted **physically by the lowest bidder** in the office of tender opening authority.
 - (v) If a tenderer quotes nil rates against each item in percentage rate tender or does not quote any percentage above/below on the total amount of the tender or any section/sub head in Item Rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.
- 10 In case any discrepancy is noticed between the documents as uploaded at the time of submission of the bid online and hard copies as submitted physically in the office of Executive Engineer, then the bid submitted shall become invalid and the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further, the tenderer shall not be allowed to participate in the re-tendering process of the work.
11. The contractor whose bid is accepted will be required to furnish **performance guarantee of 5% (Five Percent) of the tender amount or Estimated Cost Put to Tender (ECPT) (Whichever is higher)** as mentioned in Schedule 'E'. This guarantee shall be in the form of 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 (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. In case the bidder fails to deposit the said performance guarantee within the period as indicated in Schedule 'F' including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor.

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

The earnest money deposited along with the tender shall be returned after receiving aforesaid performance guarantee. **The tenderer will be suspended for one year & shall not be eligible to bid for CPWD tenders from date of issue of suspension order.**

The contractor whose bid is accepted will also be required to furnish either copy of applicable licenses / registrations or proof of applying for obtaining labour licenses, registration with EPFO, ESIC and BOCW Welfare Board and Programme Chart (Time and progress) within the period specified in Schedule "F".

12. Intending bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders 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, 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 tender. A bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent upon any misunderstanding or otherwise shall be allowed. The bidders 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 Government and local conditions and other factors having a bearing on the execution of the work.
In addition to the above, bidders are to be advised to see for themselves the bridges existing on the approach passage to the site for assessing the position with regard to carriage of building materials and T&P, Nothing extra shall be payable to the successful bidder for any type of existing restricted conditions with regards.
13. The competent authority on behalf of the President of India does not bind itself to accept the lowest or any other tender and reserves to itself the authority to reject any or all the tenders received without the assignment of any reason. All tenders in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the tenderer shall be summarily rejected.
14. Canvassing whether directly or indirectly, in connection with tenderers is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.
15. The competent authority on behalf of President of India 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.
16. The contractor shall not be permitted to tender for works in the CPWD Circle Office 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). 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 Central Public Works Department or in the Ministry of Urban Development. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this department.
17. 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 previous permission of the Government of India in writing. This contract is liable to be cancelled 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 tender or engagement in the contractor's service.
18. **The bid for the works shall remain open for acceptance for a period of thirty (30) days from the date of opening of bid.** 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 Government shall, without prejudice to any other right or

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

remedy, be at liberty **to take suitable action as per rule.** ~~forfeit 50% of the said earnest money as aforesaid.~~ Further the bidders shall not be allowed to participate in the re-bidding process of the work.

19. This notice inviting bid shall form a part of the contract document. The successful bidder/contractor, on acceptance of his bid by the Accepting Authority shall within 15 days from the stipulated date of start of the work, sign contract consisting of: -

a) The Notice Inviting bid, all the documents including Special Conditions, General Specifications/ Additional Specifications/ Particular 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.

b) Standard **C.P.W.D. Form 7** (GCC for CPWD Works 2023) amended upto last date of submission of bid.

21. For Composite Bids

~~21.1.1 The EE in charge of the Division of the major component will call bids for the composite work. The cost of bid document and Earnest Money will be fixed with respect to the combined estimated cost put to tender for the composite tender.~~

21. The bid document will include following components:

PART-A: CPWD-6, CPWD form - 7 including schedule A to F for the work, Standard General Conditions of Contract for CPWD 2023 with all amendments/modifications upto date of submission of bid.

PART-B: General/ Special Conditions/Commercial & Technical, Particular Specifications of the work.

Part C:- Schedule of quantities of the work.

~~21.2 The eligible bidders shall quote rates for all items.~~

~~22.1.5 After acceptance of the bid by competent authority, the EE in charge of major component of the work shall issue letter of award on behalf of the President of India. After the work is awarded, the main contractor will have to enter into one agreement with EE in charge of major component and has also to sign two or more copies of agreement depending upon number of EE's in charge of minor components. One such signed set of agreement shall be handed over to EE in charge of minor components. EE of major component will operate **Part A, Part C and Part D of the agreement.** **EE in charge of minor component(s) shall operate Part B & Part D of the agreement.**~~

~~21.1.6 Entire work under the scope of composite bid including major and all minor components shall be executed under one agreement.~~

~~21.1.7 Security Deposit will be worked out separately for each component corresponding to the tendered amount of the respective component of works.~~

~~21.1.8 The main contractor has to associate agency(s) for work of VRV/VRF type Air Conditioning System conforming to eligibility criteria as defined in the tender document and has to submit detail of such agency(s) to Engineer in charge within prescribed time. Name of the agency(s) to be associated shall be approved by Engineer in charge of major component(s).~~

~~21.1.9 In case the main contractor intends to change any of the above agency/ agencies during the operation of the contract, he shall obtain prior approval of respective Engineer in charge/ DDH of the agreement. The new agency/ agencies shall also have to satisfy the laid down eligibility criteria. In case Engineer in charge of respective discipline is not satisfied with the performance of any agency, he can direct the contractor to change the agency executing such items of work and this shall be binding on the contractor.~~

~~21.1.10 The main contractor has to enter into agreement with contractor(s) associated by him for execution of audio/ video system. This agreement must contain terms and conditions of payment between the main contractor and associate contractor. Copy of such agreement shall be submitted to **EE (Elect.), KCED, CPWD, Karnal, in charge of major component.** In case of change of associate contractor, the main contractor has to enter into agreement/MoU with the new contractor associated by him with prior approval of Engineer in charge concern.~~

~~21.1.11 Running payment for the major component shall be made by EE of major discipline to the main contractor. Running payment for minor components shall be made by the Engineer in charge of the discipline of minor component directly to the main contractor.~~

~~21.1.12A. The composite work shall be treated as complete when all the components of the work are complete. The completion certificate of composite work shall be recorded by Engineer in charge of major component after record of completion certificate of all other components.~~

~~21.1.13B. Final bill of whole work shall be finalized and paid by the EE of major component. Engineer(s) in charge of minor component(s) will prepare and pass and paid the final bill for their component of work.~~

~~22. It will be obligatory on the part of the bidder to sign the bid documents for all components before the first payment is released.~~

~~23. 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.~~

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

24. List of documents to be scanned and uploaded within the period of bid submission:

(i)	Treasury Challan/ Demand Draft / Pay Order or Banker's Cheque / Fixed Deposit Receipts/ Deposit at Call Receipt / Bank Guarantee of any scheduled bank against EMD. (As per OM No. DG/Manual-2024/22 dated 23.03.2026 i.e; EMD shall be made / issued only from the account of the bidder / tenderer submitting the bid/tender. EMD made/ issued from the account other than that of the bidder/ tenderer submitting the bid, shall not be accepted)
(ii)	Copy of receipt for deposition of original EMD <i>with division office of any Executive Engineer including NIT issuing EE, CPWD.</i>
(iii)	GST registration Certificate, if already obtained by the bidder. If the bidder has not obtained GST registration as applicable, then he shall scan and upload following undertaking along with bid documents. "If work is awarded to me, I/we shall obtain GST registration certificate, as applicable, within one month from the date of receipt of award letter or before release of any payment by CPWD, whichever is earlier, failing which I/we shall be responsible for any delay in payments which will be due towards me/us on account of the work executed and /or for any action taken by CPWD or GST department in this regard."
(iv)	Valid Enlistment order of the CPWD contractors in appropriate class in composite category.
(v)	Valid Electrical Contractor's License, if available with composite category contractor. If not, then the undertaking is to be submitted by composite category contractor to associate the agency with Valid electrical License for execution of EI work.
(vi)	Any other document as specified in the NIT.
(vii)	ERP training Certificate

25. Receipt of deposition of original EMD

Receipt No. _____ dated _____

1.	Name of work	:	Repair and Renovation of electrical distribution /Starter Panels of Experimental Dairy at ICAR-NDRI, Karnal.
2.	NIT No.	:	13/EE(E)/KED/2026-27/Karnal
3.	Estimated Cost	:	Rs.2800052/-
4.	Amount of Earnest Money Deposit	:	Rs. 56001/-
5.	Last date of submission of bid	:	14/07/2026

(*To be filled by / EE at the time of issue of NIT and uploaded alongwith NIT)

1. Name of Contractor :
2. Form of EMD#
3. Amount of original Bank guarantee as :#
Earnest Money Deposit
4. Date of submission of EMD :#

Signature, Name and Designation of EMD
receiving Officer (EE/AE(P)/AE/AAO)
alongwith Office Stamp

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

CPWD FORM NO.7
GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT

STATE: Haryana
BRANCH: E&M

Circle: Karnal Circle
DIVISION: KED, Karnal

PERCENTAGE RATE TENDER & CONTRACT FOR WORKS

(A) Tender for the work of: -

“Repair and Renovation of electrical distribution /Starter Panels of Experimental Dairy at ICAR-NDRI, Karnal.”

- i) To be submitted/uploaded online on 14/07/2026 through website **www.etender.cpwd.gov.in** or **www.cpwd.gov.in** to **Executive Engineer (E) Karnal Electrical Division, CPWD, Karnal.**
- ii)
- iii) To be opened online in presence of tenderers who may be present on 14/07/2026 in the office of **Executive Engineer (E) Karnal Electrical Division, CPWD, Karnal.**

T E N D E R

I/We have read and examined the Notice Inviting Tender, Schedule A, B, C & D Specifications applicable, Drawings & Designs, General Rules and Directions, Conditions of Contract, Clauses of Contract, Special Conditions, Schedule of Rate and 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 President of India within the time specified in Schedule 'F', viz. Schedule of Quantities and in accordance in all respects with the Specifications / Special conditions, Designs, Drawings and instructions in writing as referred to in this tender document and with such materials as are provided for, by and in respects in accordance with, such conditions so far as applicable.

We agree to keep the tender open for **(30) thirty Days** from the date of opening of tender and not to make any modifications in its terms and conditions.

A sum of **Rs.56001/-** is hereby forwarded in Cash / Receipt Treasury Challan / FDR/ Deposit at Call Receipt of a Scheduled Bank/ FDR of a Scheduled Bank / Demand Draft of a Scheduled Bank/ Bank guarantee issued by a schedule bank as earnest money. If I/we fail to furnish the prescribed Performance Guarantee within prescribed period, I/we agree that the said President of India or his successor in office shall without prejudice to any other right or remedy be at liberty to forfeit the said Earnest Money absolutely. Further, if I/we fail to commence the work as specified. I/we agree that President of India or his successors 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 in the tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be ordered, upto 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 & 12.3 of the tender form. **Further, I/We agree that in case of forfeiture of earnest money or both Earnest Money or Performance Guarantee as aforesaid, I/We shall be debarred for participation in the re-tendering process of the work.**

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

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 from the tendering in CPWD in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit/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 therefrom to any person other than a person to whom I/we/am/are may authorized to communicate the same or use the information in any manner prejudicial to the safety of the State.

Dated: ☐	}	Signature of Contractor	}
Witness: - ☐		Postal Address: -	
Address: - ☐			
Occupation: - ☐			
		Telephone No.	
		Fax:-	
		E-Mail:-	

ACCEPTANCE

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for and on behalf of the President of India for a sum of Rs..... (Rupees.....)

The letters referred to below shall form part of this contract agreement.

For & on behalf of the President of India.

- i) ☐
- ii) ☐
- iii) ☐
- iv) ☐

Signature ☐

Dated: -

Executive Engineer

☐
☐

To be filled in by the Executive Engineer
To be filled in by the contractor

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

SCHEDULES (A to F)

SCHEDULE 'A'

Schedule of quantities

- **As per BOQ**

Estimated Cost put to tender

- **Rs. 2800052/-**

SCHEDULE 'B'

Schedule of materials to be issued to the contractor

S.No.	Description of item.	Quantity.	Rate in figures & words at which the material will be charged to the contractor	Place of issue
(1)	(2)	(3)	(4)	(5)
			NIL	

SCHEDULE 'C'

Tools and plants to be hired to the contractor

S.NO.	DESCRIPTION.	HIRE CHARGES PER DAY	PLACE OF ISSUE
		NIL	

SCHEDULE 'D'

Extra schedule for specific requirements/ documents for the work, if any.

NIL

SCHEDULE 'E'

Reference to General Conditions
of Contract:

General Conditions of contract 2023 for CPWD works
amended up to date of submission of tender.

1.1 Name of Work:

**“Repair and Renovation of electrical
distribution /Starter Panels of Experimental
Dairy at ICAR-NDRI, Karnal.”**

1.2 Estimated Cost of work: -

Rs. 2800052/-

1.3 Earnest Money: -

Rs. 56001/-

1.4 Performance Guarantee

**(a) 5% of Tender Value or Estimated Cost Put to
Tender (ECPT) (Whichever is higher)**

**(b) Where the tendered amount is less than
eighty percent (80%) of the Estimated Cost Put to
Tender (ECPT), the Performance Guarantee, in
addition to the requirement under (a) above, shall
be increased by an amount equal to the
difference between eighty percent (80%) of the
ECPT and the tendered amount**

1.5 Security Deposit

2.50% of tendered value.

SCHEDULE 'F':-

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

General Rules & Directions:-

Officer Inviting Tender

Executive Engineer (E), KED, CPWD, KARNAL

Definitions:-

2(i) Engineer-In-Charge

Executive Engineer (E), KED, CPWD, Karnal.

2(ii) Accepting Authority

Executive Engineer (E), KED, CPWD, Karnal.

2(iii) Percentage on cost of materials and Labour to cover all overheads and Profits

15%

2(iv) Standard Schedule of Rates

Delhi Schedule of Rates 2025 & MR

2(v) Department

Central Public Works Department

2(vi) Standard CPWD Contract Form

GCC 2023 maintenance and CPWD Form 7 as amended/ modified up to the date of submission of tender.

Clause-1:

(i) Time allowed for submission of Performance guarantee after date Of issue of letter of acceptance

07 days

(ii) Maximum allowable extension with late fee @0.1% per day of the Performance guarantee amount beyond the period provided in (i) above

3 days**Clause-2:**

Authority for fixing compensation Under Clause 2

Superintending Engineer, CPWD, Karnal

Clause – 2A:

Whether clause-2A shall be Applicable.

Not applicable

Clause-5:

Number of days from the date of issue of letter of acceptance for reckoning date of start

10 days

Mile Stone

Refer Para (A) Table of Milestones

Time allowed for execution of work

04 Months**Authority to decide**

i. Extension of time for completion of work.

Executive Engineer (E), KED, CPWD, Karnal.

Clause-6:-

Clause applicable- (6):-

Clause 6A**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**Rs. 07 lacs****Clause-7A:-** Regarding applicability of labour laws:- Related to labour license, registration of

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

Contractor with EPFO, ESIC and BOCW
Welfare board

Yes, Applicable

Clause-10A:-

NA

Clause-10-B (ii).

Whether clause 10-B (ii) shall be
applicable

Not, Applicable

Clause-10C:- Component of labour expressed
as percentage of value of work

15%

Clause 10 CA

N/A

Materials covered under this clause:	Nearest material (other than cement, reinforcement bars and structural steel) for which All India Whole sale Price Index to be followed	Base Price of the materials covered under 10 CA. (January, 2016)
Nil	Nil	Nil

Clause-10-CC: -

Component of Materials of Civil work (except
materials covered under clause 10CA)
Component of Labour expressed as %age
of total value of work-----
Component of POL expressed as %age of total
value of Civil work

Not Applicable.

Nil

NIL

NIL

Clause-11:- Specifications to be followed
for execution of work.

C.P.W.D. Specifications General Specification
for Electrical Works Part I Internal - 2023.
CPWD General Specification for Electrical Works
(Part II External)-2023
CPWD General Specification for Electrical
Works (Part III Lifts & Escalators)-2003
CPWD General Specification for Electrical
Works Part IV Substation - 2013.
CPWD General Specification for Electrical
Works Part V Wet riser & sprinkler system -
2020. CPWD General Specifications for
Electrical Works Part VI Fire Detection and
Alarm System – 2018.
CPWD General Specification for Electrical
Works Part VII DG Sets - 2013.
CPWD General Specification for Electrical
Works Part VIII Gas Based Fire Extinguishing
System - 2013.
CPWD General Specification for Heating
Ventilation & Air-Conditioning-2024 (as amended
up to date).

Clause-12:- Type of Work:

Maintenance Work

12.2 & 12.3 Deviation limit beyond which
clause 12.2 & 12.3 shall apply

No Limit

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

- 12.5 for building work in superstructure.
- (i) Deviation limit beyond which clause 12.2 & 12.3 shall apply for foundation works (except items mentioned in earth work Sub-Head in DSR and related items) NA
- (ii) Deviation limit for items in Earth work Sub-head of DSR and related items NA

(As per Modifications made in GCC 2023 via office memorandum no. DG/CON/ Maintenance 2023/03 dated 18.12.2023)

Clause-16:- Competent Authority for Deciding reduced rates. Superintending Engineer, CPWD, KNL.

Clause 18:- List of mandatory machinery, tools & plants to be deployed by the Contractor at site As required for timely execution of work

Clause-25:

Constitution of Dispute Redressal Committee (DRC)	Component Authority to appoint DRC
DRC shall constitute one Chairman and two members.	Chief Engineer or Additional Director General

Clause-32 (i): Requirement of Technical Representative(s) and Recovery Rates

Sl. No.	Minimum Qualification of Technical Representative	Discipline	Designation	Minimum Experience	Number	Rate at which recovery shall be made from contractor in the event of non deployment.	
						Figures	Words
1.	Graduate Engineer or Diploma Engineer	Elect.	Project Planning/ Site/ Billing Engineer	2Years or 5Years	1 No.	Rs. 15000/- Per Month	Rs. Fifteen Thousand Per Month.

Assistant Engineers retired from Government Services that are holding Diploma will be treated at par with Graduate Engineers

Diploma holder with minimum 10 years relevant experience with a reputed construction co. can be treated at par with Graduate Engineers for the purpose of such deployment subject to the condition that such diploma holders should not exceed 50% of requirement of degree engineers.

Clause-42:-

- i) a) Schedule / Statement for determining theoretical quantity of cement & bitumen As per Delhi Schedule of Rates 2014 with amendments upto the date of submission of tender.
- ii) Variations permissible on theoretical quantities.
- a) Cement for works with estimated cost put to tender for more than ` 5 Lacs. 2% plus / minus.
- b) Steel Reinforcement and structural steel sections for each diameter, section and category. 2% plus / minus.
- c) All other materials. Nil.
- d) Bitumen for all work. 2.5% Plus only and NIL on minus side.

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

INTEGRITY PACT

To,

.....,
.....,
.....

Sub: NIT No. **13/EE(E)/KED/2026-27/Karnal** for the work: **“Repair and Renovation of electrical distribution /Starter Panels of Experimental Dairy at ICAR-NDRI, Karnal.”**

Dear Sir,

It is here by declared that CPWD is committed to follow the principle of transparency, equity and competitiveness in public procurement. The subject Notice Inviting Tender (NIT) is an invitation to offer made on the condition that the Bidder will sign the integrity Agreement, which is an integral part of tender/bid documents, failing which the tenderer/bidder will stand disqualified from the tendering process and the bid of the bidder would be summarily rejected.

This declaration shall form part and parcel of the Integrity Agreement and signing of the same shall be deemed as acceptance and signing of the Integrity Agreement on behalf of the CPWD.

Yours faithfully

Executive Engineer

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

INTEGRITY PACT

To,
Executive Engineer,
.....,
.....

Sub: Submission of Tender for the work of: **“Repair and Renovation of electrical distribution /Starter Panels of Experimental Dairy at ICAR-NDRI, Karnal.”**

Dear Sir,

I/We acknowledge that CPWD is committed to follow the principles thereof as enumerated in the Integrity Agreement enclosed with the tender/bid document.

I/We agree that the Notice Inviting Tender (NIT) is an invitation to offer made on the condition that I/We will sign the enclosed integrity Agreement, which is an integral part of tender documents, failing which I/We will stand disqualified from the tendering process. I/We acknowledge that THE MAKING OF THE BID SHALL BE REGARDED AS AN UNCONDITIONAL AND ABSOLUTE ACCEPTANCE of this condition of the NIT.

I/We confirm acceptance and compliance with the Integrity Agreement in letter and spirit and further agree that execution of the said Integrity Agreement shall be separate and distinct from the main contract, which will come into existence when tender/bid is finally accepted by CPWD. I/We acknowledge and accept the duration of the Integrity Agreement, which shall be in the line with Article 1 of the enclosed Integrity Agreement.

I/We acknowledge that in the event of my/our failure to sign and accept the Integrity Agreement, while submitting the tender/bid, CPWD shall have unqualified, absolute and unfettered right to disqualify the tenderer/bidder and reject the tender/bid in accordance with terms and conditions of the tender/bid.

Yours faithfully

(Duly authorized signatory of the Bidder)

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

To be signed by the bidder and same signatory competent / authorized to sign the relevant contract on behalf of CPWD.

INTEGRITY AGREEMENT

This Integrity Agreement is made at on this day of 20.....

BETWEEN

President of India represented through Executive Engineer,,
(Name of Division)
CPWD,, (Hereinafter referred as the
(Address of Division)

'Principal/Owner', which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

AND

.....
(Name and Address of the Individual/firm/Company)
through (Hereinafter referred to as the

(Details of duly authorized signatory)

"Bidder/Contractor" and which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

Preamble

WHEREAS the Principal / Owner has floated the Tender (NIT No.)
.....) (hereinafter referred to as **"Tender/Bid"**) and intends to award, under laid down organizational procedure, contract for

.....
(Name of work)

hereinafter referred to as the **"Contract"**.

AND WHEREAS the Principal/Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Bidder(s) and Contractor(s). AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as **"Integrity Pact"** or **"Pact"**), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Pact witnesses as under:

Article 1: Commitment of the Principal/Owner

- 1) The Principal/Owner commits itself to take all measures necessary to prevent corruption and to observe the following principles:
 - (a) No employee of the Principal/Owner, personally or through any of his/her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - (b) The Principal/Owner will, during the Tender process, treat all Bidder(s) with equity and reason. The Principal/Owner will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the Tender process or the Contract execution.
 - I The Principal/Owner shall endeavour to exclude from the Tender process any person, whose conduct in the past has been of biased nature.
- 2) If the Principal/Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal/Owner will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

Article 2: Commitment of the Bidder(s)/Contractor(s)

- 1) It is required that each Bidder/Contractor (including their respective officers, employees and agents) adhere to the highest ethical standards, and report to the Government / Department all suspected acts of

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

fraud or corruption or Coercion or Collusion of which it has knowledge or becomes aware, during the tendering process and throughout the negotiation or award of a contract.

- 2) The Bidder(s)/Contractor(s) commits himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender process and during the Contract execution:

a) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal/Owner's employees involved in the Tender process or execution of the Contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the Tender process or during the execution of the Contract.

b) The Bidder(s)/Contractor(s) will not enter with other Bidder(s) into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process.

c) The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act. Further the Bidder(s)/Contract(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal/Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

d) The Bidder(s)/Contractor(s) of foreign origin shall disclose the names and addresses of agents/representatives in India, if any. Similarly Bidder(s)/Contractor(s) of Indian Nationality shall disclose names and addresses of foreign agents/representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent participate in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.

d) The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract.

3) The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

4) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practice **means a willful misrepresentation or omission of facts or submission of fake/forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the Government interests.**

5) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm use Coercive Practices (means the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his/ her reputation or property to influence their participation in the tendering process).

Article 3: Consequences of Breach

Without prejudice to any rights that may be available to the Principal/Owner under law or the Contract or its established policies and laid down procedures, the Principal/Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/Contractor(s) and the Bidder/ Contractor accepts and undertakes to respect and uphold the Principal/Owner's absolute right:

- (i) If the Bidder(s)/Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his reliability or credibility in question, the Principal/Owner after giving 14 days notice to the contractor shall have powers to disqualify the Bidder(s)/Contractor(s) from the Tender process or terminate/determine the Contract, if already executed or exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal/Owner. **Such exclusion may be forever or for a limited period as decided by the Principal/Owner.**

- 2) **Forfeiture of EMD/Performance Guarantee/Security Deposit:** If the Principal/Owner has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or terminated/determined the Contract or has accrued the right to terminate/determine the Contract according to Article 3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Guarantee and Security Deposit of the Bidder/Contractor.

- 3) **Criminal Liability:** If the Principal/Owner obtains knowledge of conduct of a Bidder or Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitutes corruption

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

within the meaning of IPC Act, or if the Principal/Owner has substantive suspicion in this regard, the Principal/Owner will inform the same to law enforcing agencies for further investigation.

Article 4: Previous Transgression

- 1) The Bidder declares that no previous transgressions occurred in the last 5 years with any other Company in any country confirming to the anticorruption approach or with Central Government or State Government or any other Central/State Public Sector Enterprises in India that could justify his exclusion from the Tender process.
- 2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the Tender process or action can be taken for banning of business dealings/ holiday listing of the Bidder/Contractor as deemed fit by the Principal/ Owner.
- 3) If the Bidder/Contractor can prove that he has resorted / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion, revoke the exclusion prematurely.

Article 5: Equal Treatment of all Bidders/Contractors/Subcontractors

- 1) The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact. The Bidder/Contractor shall be responsible for any violation(s) of the principles laid down in this agreement/Pact by any of its Subcontractors/ sub-vendors.
- 2) The Principal/Owner will enter into Pacts on identical terms as this one with all Bidders and Contractors.
- 3) The Principal/Owner will disqualify Bidders, who do not submit, the duly signed Pact between the Principal/Owner and the bidder, along with the Tender or violate its provisions at any stage of the Tender process, from the Tender process.

Article 6- Duration of the Pact

This Pact begins when both the parties have legally signed it. It expires for the Contractor/Vendor 12 months after the completion of work under the contract or till the continuation of defect liability period, whichever is more and for all other bidders, till the Contract has been awarded. If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pacts as specified above, unless it is discharged/determined by the Competent Authority, CPWD.

Article 7- Other Provisions

- 1) This Pact is subject to Indian Law, place of performance and jurisdiction is the **Head quarters of the Division** of the Principal/Owner, who has floated the Tender.
- 2) Changes and supplements need to be made in writing. Side agreements have not been made.
- 3) If the Contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a Company, the Pact must be signed by a representative duly authorized by board resolution.
- 4) Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 5) It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement / Pact, any action taken by the Owner/Principal in accordance with this **Integrity Agreement/ Pact or interpretation thereof shall not be subject to arbitration.**

Article 8- LEGAL AND PRIOR RIGHTS

All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender/Contact documents with regard any of the provisions covered under this Integrity Pact. IN WITNESS WHEREOF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presence of following witnesses:

.....
(For and on behalf of Principal/Owner)

.....
(For and on behalf of Bidder/Contractor)
WITNESSES:

(ii)
(signature, name and address)

(iii)
(signature, name and address)

Place:

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

GENERAL TERMS AND CONDITIONS

Name of work:- “Repair and Renovation of electrical distribution /Starter Panels of Experimental Dairy at ICAR-NDRI, Karnal.”

- 1.0** All the works shall be carried out as per CPWD General specification for Electrical Works, Part-I (Internal)-2023; Part-II (External)-2023; Part-IV (Sub-Station)-2013, amended up to date and should also comply with relevant provisions of the Indian Electricity Rules and Acts as applicable, amended up to date.
- 2.0** The contractors are advised to visit the site of work to have an idea of the execution of the work; failure to do so shall not absolve their responsibility to do the work as specified in agreement.
- 3.0 Rates:**
- 3.1.** The work shall be treated as on works contract basis and the rates tendered shall be for complete items of work inclusive of all taxes (including GST), duties, and levies etc. and all charges for items contingent to the work, such as packing, forwarding, insurance, freight and delivery at site for the materials to be supplied by the contractor, watch and ward of all materials for the work at site etc
- 4.0 Taxes and Duties:**
- 4.1.** The works contract tax, Labour Welfare Cess shall be deducted from the bills of the contractor as applicable in the State in which the work is carried out, at the time of payments.
- 5.0 Mobilization Advance:**
No mobilization advance shall be paid for the work.
- 6.0 Completeness of Tender:**
All sundry fittings, assemblies, accessories, hardware items, foundation bolts, termination lugs for electrical connections as required, and all other sundry items which are useful and necessary for proper assembly and efficient working of the various components of the work shall be deemed to have been included in the tender, whether such items are specifically mentioned in the tender documents or not.
- 7.0 Works to be done by the contractor:**
Unless and otherwise mentioned in the tender documents, the following works shall be done by the contractor, and therefore their cost shall be deemed to be included in their tendered cost:-
- (i) Cutting and making good all damages caused during installation and restoring the same to their original finish.
 - (ii) Sealing of all floor openings provided by him for pipes and cables, from fire safety point of view, after laying of the same.
 - (iii) Painting at site of all exposed metal surfaces of the installation other than pre-painted items like fittings, fans, switchgear/distribution gear items, cubicle switchboard etc. Damages to finished surfaces of these items while handling and erection, shall however be rectified to the satisfaction of the Engineer-in-Charge.
 - (iv) Testing and commissioning of completed installation.

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

- (v) Storage space for all equipments, components and materials for the work.
- (vi) **Dismantling of existing overhead line, feeder pillars/LT Panels/Meter Boards, LT cables, LED Fittings, HT cables & all misc. items as & when encountered during the execution of work/laying of new cable & shifting the same to Client/JE store. Nothing extra on account of this shall be paid.**
- (vii) **During the execution of work if any damaged such as Sewerage Pipe line, Water supply pipe line, existing LT/HT cable, LAN cable & other type of works in the campus to be repaired immediately. Nothing extra on account of this shall be paid.**

8.0 Storage and Custody of Materials:

The contractor has to make his own arrangement for the storage of the material at site & necessary watch and ward of the electrical installation during the execution of work till the same is handed over to the department. No extra payment will be made on this account. The storage space shall however be arranged by the department at site, if available.

The contractor shall however be responsible for proper storage and safe custody of the same till their installation and handing over to the department.

9.0 Electric Power Supply and Water Supply:

Power and water supply will be arranged by the contractor at his own at the site for installation purpose. Contractor will take due care to ensure safety of electrical installation during execution of work.

10.0 Tools for handling and Erecting:

All tools and tackles required for handling of equipments and materials at site of work as well as for their assembly and erection and also necessary test instruments shall be the responsibility of the contractor.

11.0 Payment Terms:

Payment shall be made as per the relevant clauses of form PWD 7/8 forming part of the tender documents.

11.1. Care of buildings/Campus:

Care shall be taken by the contractor to avoid damage to the building/Campus during execution of his part of the work. He shall be responsible for repairing all damages and restoring the same to their original finish at his cost. He shall also remove, at his costs, all unwanted and waste materials arising out of his work, from the site.

12.0 Structural Alterations to Buildings:

- (i) No structural member in the building shall be damaged/altered, without prior approval from the competent authority through the Engineer-in-charge.
- (ii) Structural provisions like openings, cutouts, if any, provided by the department for the work, shall be used. Where these required modifications, or fresh provisions are required to be made, such contingent works shall be carried out by the contract at his cost.
- (iii) All such openings in floors provided by the department shall be closed by the contractor after installing the cables/conduits/rising mains etc. as the case may be, by any suitable means as approved by the Engineer-in-charge without any extra payment.
- (iv) All chases required in connection with the electrical works shall be provided and filled by the contractor at his own cost to the original architectural finish of the buildings.

13.0 Addition to an installation:

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

Any addition, temporary or permanent, to the existing electrical installation shall not be made without a properly worked out scheme/design by a qualified Electrical Engineer to ensure that such addition does not lead to overloading, safety violation of the existing system.

14.0 Drawings:

- i) The work shall be carried out in accordance with the drawings and the tender documents and also in accordance with modification thereto from time to time as approved by the Engineer-in-charge.
- ii) ~~All wiring diagrams shall be deemed to be 'Drawings' within the meaning of the term as used in Clause 11 of the conditions of contract (PWD 7 or PWD 8). They shall indicate the main switch board, the distribution boards (with circuit numbers controlled by them), the runs of various mains and sub mains and the position of all points with their controls.~~
- iii) ~~All circuits shall be indicated and numbered in the wiring diagram and the points shall be given the same number as the circuit to which they are electrically connected.~~
- iv) After award of the work, the firm will be required to submit the drawings for the proposed work with layout of cables, location of feeder pillar etc as per satisfaction of Engineer-in-Charge.

15.0 Conformity to IE act, IE Rules, and standards:

- 15.1.** All electrical works shall be carried out in accordance with the provisions of Indian Electricity Act, 1910 and Indian Electricity Rules, 1956 amended up to date (Date of call of tender unless specified otherwise)

16.0 General requirements of components:

- 16.1. Quality of material:** All materials and equipments supplied by the contractor shall be new. They shall be of such design, size and materials as to satisfactorily function under the rated conditions of operation and to withstand the environmental conditions at site.

17.0 Inspection of materials and equipments:

- 17.1.** Adequate care to ensure that only tested and genuine materials of proper quality are used in work shall be ensured by firm. The firm shall ensure that:
- i) As and when the order is placed for the Wires/Cables, LT Panel/Feeder Pillar etc its copy shall be endorsed to the CPWD Engineer-in-charge.
 - ii) The firm will be required to procure material like Wires/Cables & LT Panel/ Feeder Pillar etc directly from the manufacturer/ authorized dealers to ensure genuineness & quality and as per the approved makes only. Proof in this regard shall be submitted by the contractor.
 - iii) Inspection at factory or at godown of the manufacturer of feeder pillar/cables/major items, if required, shall be arranged by the firm on a mutually agreed date. Certificate for genuineness of the material shall have to provide duly signed by the manufacturer's authorized representative.
 - iv) Delivery of material shall be taken up only with the consent of department, after clearance of the material.
 - v) Department shall reserve the right to waive inspection in lieu of suitable test certificate, at its discretion.

18.0 Ratings of components:

- 18.1.** All components in a wiring installation shall be of appropriate ratings of voltage, current and frequency, as required at the respective sections of the electrical installations in which they are used.

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

- 18.2.** All conductors, switches and accessories shall be of such size as to be capable of carrying the maximum current, which will normally flow through them, without their respective ratings being exceeded.
- 19.0 Conformity to standards:**
- 19.1.** All components shall conform to relevant Indian Standard Specifications wherever existing. Materials with ISI certification mark shall be preferred.
- 19.2.** Relevant Indian Standards including amendments or revisions thereof up to the date of tender acceptance shall be applicable in the respective contracts for respective items, firm to ensure its compliance.
- 20.0 Workmanship:**
- 20.1.** Good workmanship is an essential requirement to be complied with. The entire work of manufacture/fabrication, assembly and installation shall conform to sound engineering practice.
- 20.2. Proper supervision/skilled workmen:** The contractor shall be a licensed electrical contractor of appropriate class suitable for execution of the electrical work. He shall engage suitably skilled/licensed workmen of various categories for execution of work supervised by supervisors / Engineer of appropriate qualification and experience to ensure proper execution of work. They will carry out instruction of Engineer-in-charge and other senior officers of the Department during the progress of work.
- 20.3. Use of quality materials:** Only quality materials of reputed make as specified in the tender will be used in work.
- 21.0 Testing:**
All testes prescribed in this General Specification, to be done before, during and after installation, shall be carried out, and the test results shall be submitted to the Engineer-in-charge in prescribed Performa, forming part of the Completion Certificate.
- 22.0 Commissioning on completion:**
After the work is completed, it shall be ensured that the installation is tested and commissioned.
- 23.0 Completion plan and completion certificate:**
- 23.1.** Completion certificate after completion of work shall be submitted to the Engineer-in-charge.
- ~~**23.2.** Completion plan drawn to a suitable scale indicating the complete work executed on site.~~
- 24.0 GUARANTEE/WARRANTEE:-** The installation will be handed over to the department after necessary testing and commissioning. The equipments or components, or any part thereof, so found defective during guarantee period shall be forthwith rectified/ repaired or replaced free of cost, to the satisfaction of the Engineer-in-Charge. In case it is felt by the department that undue delay is being caused by the contractor in doing this, the same will be got done by the department at the risk and cost of the contractor. The decision of the Engineer-in-charge in this regard shall be final & binding on the contractor.
The contractor shall submit the relevant test certificates at the time of supply of equipment/Material.
- 25.0** Nothing extra shall be paid on account of dismantling of material such as overhead line, feeder pillar/electrical panel, fittings/fan etc.
- 26.0 Payment Terms:**

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

The following percentage of contract rates shall be payable against the stage of work shown herein.

- i) 70% against supply, as per items of the schedule of work, after delivery at site in good condition.
- ii) 20% after completion of installation/laying as per items in the schedule of work at specified locations in all respect.
- iii) Balance 10% will be paid only after testing, commissioning, submission of completion drawings.

ADDITIONAL SPECIFICATIONS FOR ELECTRICAL WORKS

(A) GENERAL:-

1. All the works shall be executed strictly as per relevant CPWD Specifications as amended up to date **by a contractor having valid Electrical Contractor's License.**
2. All repairs & patch work shall be neatly carried out to match with the original finish & all damages caused to the building installation during the execution of work shall have to be made good by the contractor immediately at his own cost to the entire satisfaction of Engineer-in-charge. In case contractor fails to comply with the instructions of the Engineer-in-charge, Engineer-in-charge shall be at liberty to get the work done by any other agency and recover such amount as paid to the other agency from the bill(s) of the contractor. Contractor shall have no claim, whatsoever, on the extent of such amount.
3. Contractor shall provide polythene/PVC plastic cover for all MDB's/SDB's/DB's to protect them from rust/damages, during execution of work till the work is actually completed and handed over to the department.
4. All debris/malba resulting due to electrical work shall be removed on daily basis and completion of the work shall only be accepted after the site has been cleaned of all malba. In case, contractor fails to comply, the same shall be got removed by the other agency and the payment so made shall be recovered from the bill(s) of the contractor.
5. The contractor shall have to make arrangements, at his own risk and cost, for transportation of materials from the point of issue of stores to site of work, if any.
6. Makes of all items that are not covered in the schedule of work/additional specifications shall be got approved from the Engineer-in-charge and shall conform to relevant Indian Standard as applicable.
7. The contractor shall ensure that the staff employed by him for execution of the electrical work, possess the valid electrical license issued by competent authority. Consequences arising due to the default of the contractor in not complying with the above condition shall be the responsibility of the contractor.
8. Copper lugs shall be provided for terminating copper/I/GI earth wire to all switchboards for which nothing extra shall be paid. All multistranded/ stranded wires shall be terminated through copper lugs.

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

9. All concealed work and earthing shall be done in the presence of the Engineer-in-charge or his authorized representative.
10. The work shall be carried out according to drawing approved by the Engineer-in-charge. The layout once approved can only be changed by the Engineer-in-charge as per requirement at site. It shall be the responsibility of the contractor to plan the layout and get the approval from the Engineer-in-charge before laying the conduits etc.
11. Contractor shall have to check the Site Order Book for any instructions of the Engineer-in-charge or his authorized representative and sign the site order book. He shall be bound to ensure compliance with the instructions recorded therein.
12. Conduit layout as per switching arrangement shall be prepared by contractor and got approved from the Engineer-in-Charge before slab casting.
13. To facilitate drawing of wires 16/18 SWG G.I fish wire shall be provided along with laying of recessed conduit for which no extra payment shall be made to contractor.
14. Conduit and termination to SDB and main board adapter box i/c connection wires to MCB,s inter connection between SDB and main board etc shall be included in the tendered rates and nothing extra shall be paid for the same.
15. The contractor shall provide junction boxes / looping boxes of required sizes and such boxes shall be measured as part of conduit / batten wiring without any extra payment.
16. Only brass screws along with brass washers will be used for fixing Phenolic laminated sheet covers and at other places aluminum alloy/ brass / cadmium plated screws will be used.
17. In wiring items like point wiring / wiring for light and power plug /circuit wiring / submain wiring, the item includes the cost of conduit also.
18. All material to be used on this work by the contractor shall be got approved from the Engineer-in-charge before installation at site.
19. The entire installation shall be at the risk and responsibility of the contractor until the same are tested and handed over the department. However if there is any delay in construction from the department side the installation may be taken over in parts but decision on the same shall rest with Engineer-in-charge which shall be binding on the contractor.
20. The connection, interconnection earthing and inter-earthing shall be done by the contractor wherever required to be done for energisation of the installation and nothing extra shall be paid on this account.
21. The contractor shall make his own arrangement for storage of material either brought by or issued to him by the department.
22. Cement for this bonafide work is to be arranged and used by the contractor himself and nothing extra will be paid on this account.
23. The power supply and water supply required for the execution of work shall have to be arranged by the contractor themselves however the power supply for testing of the equipments shall be made available by the department at one single point free of cost.

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

24. All existing termination of cables submain/circuit wires & copper/GI /Earth wires into SDB shall be done using lugs/ferrules only & nothing extra shall be paid on this account this condition shall not apply if wiring has been done with solid single conductor wire.
25. Loss of life/damages/accident etc. shall be the sole responsibility of the contractor and no compensation shall be payable by the department.
26. All chases in wall shall be made through electrically operated chase cutting machine.
27. Testing of materials shall be done at approved laboratories as per the direction of the Engineer-in-Charge. The charges of testing of materials approved in the laboratories shall be reimbursed to the contractor and the charges of testing of materials failed during testing shall be borne by the contractor.
28. Watch & Ward of material procured or issued by the department is the sole responsibility of contractor. Nothing extra will be paid.
29. If any material is issued by the department for stipulation then no T & P and shifting changes whatsoever will be issued/paid additionally by the department. Contractor has to comply the instruction as given by site incharge.
30. If any work arises on account of occurrence of faults then the contractor has to respond immediately and undertake the work and ensure resumption of services with short possible time.
31. For laying of cable/pipe across road, road cutting to be avoided crossing to be entered by Boki/Trenchless.
32. **To get repair cables or piping if damaged during resumption of cabling work is the sole responsibility of contractor. If this condition is not get complied by agency, then suitable recovery will be done from the bills of contractor.**
- ~~33. The agency has to supply all the items given in item no. 18 & 19 within 15 days of receiving the award letter.~~
- ~~34. For Testing of Transformer oil and dehydration and other type of high potential tests, the agency shall engage the specialized agency with sufficient experience. So, relevant documents and records like experience certificates, BOQS, HT electrical license etc. to be submitted by the lowest rates quoted agency prior to execution of work.~~
- ~~35. The work of servicing of Sub station i/c all items are mentioned in item no. 11,12,13,14,15 & 16 shall be carried out within 15 days of receiving the award letter as the work is of urgent nature.~~
- ~~36. The agency will provide cable route marker to mark the layout of cable at site.~~

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

LT PANEL/Feeder Pillar WORKS:-

1. The size of the bus bar will be as per relevant CPWD specifications.
2. The LT Panel shall be powder coated with mat finish. The colour of the panel shall be Siemens grey (color code IS:952).
3. **CABLE TERMINATIONS:-** Suitable double compression type, brass cable glands with check nuts, rubber sealing ring and brass washers mounted on a removable gland plate shall be provided to support all cables entering the switchgear. Cable Termination will be measured under separate item in the schedule of quantities.
4. **INTERNAL WIRING:-** Wiring inside the panel shall be carried out with 660/1100 V grade, single core, PVC insulated, stranded copper conductor wires. Minimum size of conductor for power circuits is 2.5 sq. mm. Not more than two connections shall be made on any one terminal. All internal wiring shall be properly ferruled at the both termination. All control cables shall be terminated with crimping types lugs with colored PVC shrouds and shall have identification labels.
5. **TERMINAL BLOCKS:-** Terminal blocks shall be of heavy duty and comprising of finely threaded pairs of brass studs of at least 6 mm diameter, links between each pair of studs, washers, nuts and locknuts. The studs shall be securely locked within the mounting base to prevent their turning. Insulated barriers shall be provided between adjacent terminals. Terminals shall be shrouded. Terminal blocks shall be adequately rated to carry the current of the associated circuit. Minimum rating of the terminal block shall be 10 A.
6. **LABELS:-**
 1. Labels shall be provided for LT Panel designation. Danger Notice Boards shall also be provided.
 2. All non current carrying metal and hinged doors shall be earthed to the earth bar.
7. **TESTING, MANUFACTURER'S TESTS, PRE-COMMISSIONING TESTS AND COMPLETE COMMISSIONING:-** The General intent of this specification is to mention the relevant tests to be done and furnished to the Engineer-in-Charge by the Contractor. These are guidelines. However the Contractor shall carry out all such tests and complete all formalities as per relevant Indian Standard Specifications, Fire Insurance Requirements and/or Electricity Rules and Regulations as per Government Gazette and Publications.
8. **TESTING OF EQUIPMENT:** All equipment before installing on the site work shall be tested and all such results produced to the Engineer-in-Charge. Nothing shall absolve the Contractor from re-performing any tests that the Contractor may be called upon specifically by the Engineer-in-Charge or Supply Company or electrical inspector. All equipment shall be tested jointly with the Engineer-in-Charge as required by various sections of the specifications and test data shall be furnished as required.
9. Suitable size foundation /MS Stand as per site requirement will be provided by contractor. Nothing extra on part of foundation shall be paid.

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

LIST OF APPROVED MAKES

Only the following makes of equipment/accessories which should comply with the relevant specifications given in the BOQ/tender documents shall be acceptable.

DESCRIPTION	MAKES
PVC/M.S. CONDUIT ISI MARKED) & Accessories	BEC/AKG/ STEEL CRAFT/ NIC
PVC INSULATED FRLS COPPER CONDUCTOR CABLES 1.1 KV GRADE (ISI MARKED)	FINOLEX/ POLYCAB / HAVELLS / KEI/GRANDLAY
MODULAR PLATE TYPE SWITCH / SOCKET/ GI BOXES / FAN REGULATOR/ /TELEPHONE / RJ- 45/RJ-11 MODULAR SOCKET/Call bell/ Blanking Plate	SCHNEIDER / LEGRAND / ABB / L&T / MK/ CABTREE/ NORTHWEST/ INDOASIAN
MCB / ISOLATOR / MCB DB'S / RCCB / ELCB / MODULER TYPE BELL/ MCCB/DP Sheet Enclosure	LEGRAND / SCHNEIDER / ABB /SIEMENS / HAVELLS /INDOASIAN/ L&T
DWC HDPE PIPE (ISI MARKED)	REX / DURALINE /TRUPATI / GEMINI / AKG
1.1 /11 KV XLPE CABLE (ISI MARKED)	FINOLEX/ POLYCAB / HAVELLS / KEI/GRANDLAY
Telephone Wires	Finolex/ Belden/ Havells/ Delton
Cable Gland/ Lugs/ Thimbles/ End Termination	Commet/ Jainson /Dowells/ Raychem/ Gripwell
MS/GI Pipe (ISI marked)	Tata/Jindal (Hisar)/SAIL
Feeder Pillars/Electrical panels	SPC Electrotech Pvt Ltd/ Tricolite/Adlec/ Neptune/ Advance Power Control System/Associated Switchgears Pvt. Ltd. / RP Control/Mile Stone/ Precision System Control
Digital Indicating / Measuring Instruments/ Multifunction Meters / CT/ Power Contractor/ Over load relay/ Single phase preventer/ Selector Switch/Ammeter	L&T/Schneider/Conzerv/AE/ABB/Siemens/Krykard/Neptune/Kappa
Indication Lamp / Push Buttons	BCH/ L&T/Siemens/ Schneider / ABB/Salzer
Cable Tray & Accessories	Venus/ Slotco/ Pilco/ Rceco/ Rmcon

Note:-

1. For materials/equipment to be used in items of work for which approved makes are not given herein, the makes of such materials/equipment shall be as decided by Engineer –in-charge.

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

SCHEDULE OF QUANTITY

Name of Work:- Repair and Renovation of electrical distribution /Starter Panels of Experimental Dairy at ICAR-NDRI, Karnal.

Sl.No.	Description	Qty	Rate	Unit	Amount	Remarks
1	Supplying, installation, testing & commissioning of cubical type LT panel suitable for 415 V, 3 Phase, 4 Wire 50 Hz AC supply system having front surface area approx.5.04 Sq Mtr & 450 mm deep fabricated in compartmentalized (preferably) design from CRCA sheet steel of 2 mm thick for frame work and covers, 3 mm thick for gland, plates i/c cleaning & finishing complete with 7 tank process for powder coating in approved shade, having 600 Amp capacity extensible type TPN aluminium alloy bus bars of high conductivity, DMC / SMC bus bars of high conductivity, DMC/ SMC bus bar supports, with short circuit withstand capacity of 31 MVA for 1 Sec., bottom base channel of MS section not less than 100 mm x 50 mm x 5 mm thick, fabrication shall be done in transportable sections, entire panel shall have a common copper earth bar of size 2 X 20 mm x 3 mm at the rear with 2 Nos. earth stud, solid connections from main bus bar to switch gears with required size of Al. bus bars and control wiring with 2.5 sq. mm.FRLS PVC insulated copper conductor cable, cable gland plates in two half, i/c providing following switchgears therein including making necessary foundation and connections etc. complete as required. (Drawing shall be got approved from Engineer-incharge before fabrication) (Note-All MCCBs shall have rotary handle and spreader links, All indicating lights and measuring instruments shall be protected by suitable MCBs) For all MCCB's Ics=100 %Icu)					
	A) Incomer					
	4 pole MCCB,400A, 50kA breaking capacity with thermal magnetic release with rotary handle and spreader links-01 No.					
	3 Nos. indicating lams LED type (R,Y,B) protected by SP MCBs-3					
	MF Digital Meter (96 mm x 96 mm) VAF+PF with CL 0.5 & RS 485 port with suitable CT's (3 Nos) for above switch					

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

	gear - 1 Set					
	Busbar:					
	Four Strips aluminium bus bars of minimum of 600 Amps capacity with heat shrinkable coloured sleeves and including DMC/SMC bus bars supports at required intervals complete for cross section,size support & their spacing etc. for with standing fault level of 31 MVA for one second - 01 Set.					
	B) Outgoing					
	4 pole MCCB, 250A, 36kA breaking capacity with thermal magnetic release with rotary handle and spreader links -01 Nos.					
	4 pole MCCB, 200A, 36kA breaking capacity with thermal magnetic release with rotary handle and spreader links -03 Nos.					
	03 Phase DOL Starter (5 HP) comprising of TP MCB, TP Power Contactor, Overload Relay, Single Phase Preventer, Start/Stop Push Button, ON/OFF indicating light, SP MCB, Add-ON block, Auto-manual Selector switch, Ammeter etc. - 16 Nos.	1.00	439470	Job	439470.00	MR
2	Supplying, installation, testing & commissioning of cubical type LT panel suitable for 415 V, 3 Phase, 4 Wire 50 Hz AC supply system having front surface area approx. 2.23 Sq Mtr & 350 mm deep fabricated in compartmentalized (preferably) design from CRCA sheet steel of 2 mm thick for frame work and covers, 3 mm thick for gland, plates i/c cleaning & finishing complete with 7 tank process for powder coating in approved shade, having 400 Amp capacity extensible type TPN aluminium alloy bus bars of high conductivity, DMC / SMC bus bars of high conductivity, DMC/ SMC bus bar supports, with short circuit withstand capacity of 31 MVA for 1 Sec., bottom base channel of MS section not less than 100 mm x 50 mm x 5 mm thick, fabrication shall be done in transportable sections, entire panel shall have a common copper earth bar of size 2 X 20 mm x 3 mm at the rear with 2 Nos. earth stud, solid connections from main bus bar to switch gears with required size of Al. bus bars and control wiring with 2.5 sq. mm.FRLS PVC insulated copper conductor cable, cable gland plates in two half, i/c providing					

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

following switchgears therein including making necessary foundation and connections etc. complete as required. (Drawing shall be got approved from Engineer-in-charge before fabrication) (Note- All MCCBs shall have rotary handle and spreader links, All indicating lights and measuring instruments shall be protected by suitable MCBs) For all MCCB's Ics=100 %Icu)					
A) Incomer					
4 pole MCCB, 250A, 36kA breaking capacity with thermal magnetic release with rotary handle and spreader links-01 No.					
3 Nos. indicating lamps LED type (R,Y,B) protected by SP MCBs-3					
MF Digital Meter (96 mm x 96 mm) VAF+PF with CL 0.5 & RS 485 port with suitable CT's (3 Nos) for above switch gear - 1 Set					
Busbar:					
Four Strips aluminium bus bars of minimum of 400 Amps capacity with heat shrinkable coloured sleeves and including DMC/SMC bus bars supports at required intervals complete for cross section, size support & their spacing etc. for with standing fault level of 31 MVA for one second - 01 Set.					
B) Outgoing					
4 pole MCCB, 100A, 30kA breaking capacity with thermal magnetic release with rotary handle and spreader links -04 Nos.					
03 Phase DOL Starter (5 HP) comprising of TP MCB, TP Power Contactor, Overload Relay, Single Phase Preventer, Start/Stop Push Button, ON/OFF indicating light, SP MCB, Add-ON block, Auto-manual Selector switch, Ammeter etc.- 4 Nos.	1.00	178749	Job	178749.00	MR

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

3	Supplying, installation, testing & commissioning of cubical type LT panel suitable for 415 V, 3 Phase, 4 Wire 50 Hz AC supply system having front surface area approx. 3.15 Sq Mtr & 450 mm deep fabricated in compartmentalized (preferably) design from CRCA sheet steel of 2 mm thick for frame work and covers, 3 mm thick for gland, plates i/c cleaning & finishing complete with 7 tank process for powder coating in approved shade, having 600 Amp capacity extensible type TPN aluminium alloy bus bars of high conductivity, DMC / SMC bus bars of high conductivity, DMC/ SMC bus bar supports, with short circuit withstand capacity of 31 MVA for 1 Sec., bottom base channel of MS section not less than 100 mm x 50 mm x 5 mm thick, fabrication shall be done in transportable sections, entire panel shall have a common copper earth bar of size 2 X 20 mm x 3 mm at the rear with 2 Nos. earth stud, solid connections from main bus bar to switch gears with required size of Al. bus bars and control wiring with 2.5 sq. mm.FRLS PVC insulated copper conductor cable, cable gland plates in two half, i/c providing following switchgears therein including making necessary foundation and connections etc. complete as required. (Drawing shall be got approved from Engineer-in-charge before fabrication) (Note- All MCCBs shall have rotary handle and spreader links, All indicating lights and measuring instruments shall be protected by suitable MCBs) For all MCCB's $I_{cs}=100\%I_{cu}$)					
	A) Incomer					
	4 pole MCCB,400A, 50kA breaking capacity with thermal magnetic release with rotary handle and spreader links-01 No.					
	3 Nos. indicating lamps LED type (R,Y,B) protected by SP MCBs-3					
	MF Digital Meter (96 mm x 96 mm) VAF+PF with CL 0.5 & RS 485 port with suitable CT's (3 Nos) for above switch gear - 1 Set					
	Busbar:					

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

	Four Strips aluminium bus bars of minimum of 600 Amps capacity with heat shrinkable coloured sleeves and including DMC/SMC bus bars supports at required intervals complete for cross section, size support & their spacing etc. for with standing fault level of 31 MVA for one second - 01 Set.					
	B) Outgoing					
	4 pole MCCB, 200A, 36kA breaking capacity with thermal magnetic release with rotary handle and spreader links -05 Nos.					
	03 Phase DOL Starter (5 HP) comprising of TP MCB, TP Power Contactor, Overload Relay, Single Phase Preventer, Start/Stop Push Button, ON/OFF indicating light, SP MCB, Add-ON block, Auto-manual Selector switch, Ammeter etc - 8 Nos.	1.00	320876	Job	320876.00	MR
4	Supplying, installation, testing & commissioning of cubical type LT panel suitable for 415 V, 3 Phase, 4 Wire 50 Hz AC supply system having front surface area approx. 3.675 Sq Mtr & 450 mm deep fabricated in compartmentalized (preferably) design from CRCA sheet steel of 2 mm thick for frame work and covers, 3 mm thick for gland, plates i/c cleaning & finishing complete with 7 tank process for powder coating in approved shade, having 900 Amp capacity extensible type TPN aluminium alloy bus bars of high conductivity, DMC / SMC bus bars of high conductivity, DMC/ SMC bus bar supports, with short circuit withstand capacity of 31 MVA for 1 Sec., bottom base channel of MS section not less than 100 mm x 50 mm x 5 mm thick, fabrication shall be done in transportable sections, entire panel shall have a common copper earth bar of size 2 X 20 mm x 3 mm at the rear with 2 Nos. earth stud, solid connections from main bus bar to switch gears with required size of Al. bus bars and control wiring with 2.5 sq. mm. FRLS PVC insulated copper conductor cable, cable gland plates in two half, i/c providing following switchgears therein including making necessary foundation and connections etc. complete as required. (Drawing shall be got approved from Engineer-in-charge before fabrication) (Note- All MCCBs shall have rotary handle and spreader links, All indicating lights and					

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

	measuring instruments shall be protected by suitable MCBs) For all MCCB's Ics=100 %Icu)					
	A) Incomer					
	4 pole MCCB,630A, 50kA breaking capacity with thermal magnetic release with rotary handle and spreader links -01 No.					
	3 Nos. indicating lams LED type (R,Y,B) protected by SP MCBs-3					
	MF Digital Meter (96 mm x 96 mm) VAF+PF with CL 0.5 & RS 485 port with suitable CT's (3 Nos) for above switch gear - 1 Set					
	Busbar:					
	Four Strips aluminium bus bars of minimum of 900 Amps capacity with heat shrinkable coloured sleeves and including DMC/SMC bus bars supports at required intervals complete for cross section,size support & their spacing etc. for with standing fault level of 31 MVA for one second - 01 Set.					
	B) Outgoing					
	4 pole MCCB, 400A, 50kAbreaking capacity with thermal magnetic release with rotary handle and spreader links -01 Nos.					
	4 pole MCCB, 250A, 36kA breaking capacity with thermal magnetic release with rotary handle and spreader links -01 Nos.					
	4 pole MCCB, 200A, 36kA breaking capacity with thermal magnetic release with rotary handle and spreader links -02 Nos.					
	03 Phase Star-Delta Starter (15 HP) comprising of TP MCB, TP Power Contactor, Overload Relay, Single Phase Preventer, Start/Stop Push Button, ON/OFF indicating light, SP MCB, Add-ON block, Auto-manual Selector switch, Ammeter, Star Delta Timer etc.- 2 Nos					
	03 Phase DOL Starter (5 HP) comprising of TP MCB, TP Power Contactor, Overload Relay, Single Phase Preventer, Start/Stop Push Button, ON/OFF indicating light, SP MCB, Add-ON block, Auto-manual Selector switch, Ammeter etc - 10 Nos.	1.00	419782	Job	419782.00	MR

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

5	Supplying, installation, testing & commissioning of cubical type LT panel suitable for 415 V, 3 Phase, 4 Wire 50 Hz AC supply system having front surface area approx. 3.57 Sq Mtr & 350 mm deep fabricated in compartmentalized (preferably) design from CRCA sheet steel of 2 mm thick for frame work and covers, 3 mm thick for gland, plates i/c cleaning & finishing complete with 7 tank process for powder coating in approved shade, having 400 Amp capacity extensible type TPN aluminium alloy bus bars of high conductivity, DMC / SMC bus bars of high conductivity, DMC/ SMC bus bar supports, with short circuit withstand capacity of 31 MVA for 1 Sec., bottom base channel of MS section not less than 100 mm x 50 mm x 5 mm thick, fabrication shall be done in transportable sections, entire panel shall have a common copper earth bar of size 2 X 20 mm x 3 mm at the rear with 2 Nos. earth stud, solid connections from main bus bar to switch gears with required size of Al. bus bars and control wiring with 2.5 sq. mm. FRLS PVC insulated copper conductor cable, cable gland plates in two half, i/c providing following switchgears therein including making necessary foundation and connections etc. complete as required. (Drawing shall be got approved from Engineer-in-charge before fabrication) (Note- All MCCBs shall have rotary handle and spreader links, All indicating lights and measuring instruments shall be protected by suitable MCBs) For all MCCB's $I_{cs}=100\%I_{cu}$)					
	A) Incomer					
	4 pole MCCB, 250A, 36kA breaking capacity with thermal magnetic release with rotary handle and spreader links -01 No.					
	3 Nos. indicating lamps LED type (R,Y,B) protected by SP MCBs-3 Nos.					
	MF Digital Meter (96 mm x 96 mm) VAF+PF with CL 0.5 & RS 485 port with suitable CT's (3 Nos) for above switch gear - 1 Set					
	Busbar:					

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

	Four Strips aluminium bus bars of minimum of 400 Amps capacity with heat shrinkable coloured sleeves and including DMC/SMC bus bars supports at required intervals complete for cross section, size support & their spacing etc. for with standing fault level of 31 MVA for one second - 01 Set.					
	B) Outgoing					
	4 pole MCCB, 100A, 30kA breaking capacity with thermal magnetic release with rotary handle and spreader links -02 Nos.					
	03 Phase DOL Starter (5 HP) comprising of TP MCB, TP Power Contactor, Overload Relay, Single Phase Preventer, Start/Stop Push Button, ON/OFF indicating light, SP MCB, Add-ON block, Auto-manual Selector switch, Ammeter etc.- 14 Nos.	2.00	291769	Job	583538.00	MR
6	Supplying, installation, testing & commissioning of cubical type LT panel suitable for 415 V, 3 Phase, 4 Wire 50 Hz AC supply system having front surface area approx. 2.97 Sq Mtr & 350 mm deep fabricated in compartmentalized (preferably) design from CRCA sheet steel of 2 mm thick for frame work and covers, 3 mm thick for gland, plates i/c cleaning & finishing complete with 7 tank process for powder coating in approved shade, having 400 Amp capacity extensible type TPN aluminium alloy bus bars of high conductivity, DMC / SMC bus bars of high conductivity, DMC/ SMC bus bar supports, with short circuit withstand capacity of 31 MVA for 1 Sec., bottom base channel of MS section not less than 100 mm x 50 mm x 5 mm thick, fabrication shall be done in transportable sections, entire panel shall have a common copper earth bar of size 2 X 20 mm x 3 mm at the rear with 2 Nos. earth stud, solid connections from main bus bar to switch gears with required size of Al. bus bars and control wiring with 2.5 sq. mm. FRLS PVC insulated copper conductor cable, cable gland plates in two half, i/c providing following switchgears therein including making necessary foundation and connections etc. complete as required. (Drawing shall be got approved from Engineer-incharge before fabrication) (Note- All MCCBs shall have rotary handle and spreader links, All indicating lights and					

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

	measuring instruments shall be protected by suitable MCBs) For all MCCB's Ics=100 %Icu)					
	A) Incomer					
	4 pole MCCB,250A, 36kA Ib breaking capacity with thermal magnetic release with rotary handle and spreader links-01 No.					
	3 Nos. indicating lams LED type (R,Y,B) protected by SP MCBs-3					
	MF Digital Meter (96 mm x 96 mm) VAF+PF with CL 0.5 & RS 485 port with suitable CT's (3 Nos) for above switch gear - 1 Set					
	Busbar:					
	Four Strips aluminium bus bars of minimum of 400 Amps capacity with heat shrinkable coloured sleeves and including DMC/SMC bus bars supports at required intervals complete for cross section,size support & their spacing etc. for with standing fault level of 31 MVA for one second - 01 Set.					
	B) Outgoing					
	4 pole MCCB, 200A, 36kA breaking capacity with thermal magnetic release with rotary handle and spreader links -02 Nos.					
	03 Phase DOL Starter (5 & 7.5 HP) comprising of TP MCB, TP Power Contactor, Overload Relay, Single Phase Preventer, Start/Stop Push Button, ON/OFF indicating light, SP MCB, Add-ON block, Auto-manual Selector switch, Ammeter etc-(5+3) = 8 Nos.	1.00	237679	Job	237679.00	MR

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

7	Supplying, installation, testing & commissioning of cubical type LT panel suitable for 415 V, 3 Phase, 4 Wire 50 Hz AC supply system having front surface area approx. 1.815 Sq Mtr & 300 mm deep fabricated in compartmentalized (preferably) design from CRCA sheet steel of 2 mm thick for frame work and covers, 3 mm thick for gland, plates i/c cleaning & finishing complete with 7 tank process for powder coating in approved shade, having 200 Amp capacity extensible type TPN aluminium alloy bus bars of high conductivity, DMC / SMC bus bars of high conductivity, DMC/ SMC bus bar supports, with short circuit withstand capacity of 31 MVA for 1 Sec., bottom base channel of MS section not less than 100 mm x 50 mm x 5 mm thick, fabrication shall be done in transportable sections, entire panel shall have a common copper earth bar of size 2 X 20 mm x 3 mm at the rear with 2 Nos. earth stud, solid connections from main bus bar to switch gears with required size of Al. bus bars and control wiring with 2.5 sq. mm.FRLS PVC insulated copper conductor cable, cable gland plates in two half, i/c providing following switchgears therein including making necessary foundation and connections etc. complete as required. (Drawing shall be got approved from Engineer-in-charge before fabrication) (Note- All MCCBs shall have rotary handle and spreader links, All indicating lights and measuring instruments shall be protected by suitable MCBs) For all MCCB's $I_{cs}=100\%I_{cu}$)					
	A) Incomer					
	4 pole MCCB, 125A, 36kA breaking capacity with thermal magnetic release with rotary handle and spreader links-01 No.					
	3 Nos. indicating lams LED type (R,Y,B) protected by SP MCBs-3					
	MF Digital Meter (96 mm x 96 mm) VAF+PF with CL 0.5 & RS 485 port with suitable CT's (3 Nos) for above switch gear - 1 Set					
	Busbar:					

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

	Four Strips aluminium bus bars of minimum of 200 Amps capacity with heat shrinkable coloured sleeves and including DMC/SMC bus bars supports at required intervals complete for cross section, size support & their spacing etc. for with standing fault level of 31 MVA for one second - 01 Set.					
	B) Outgoing					
	6A, to 32 A, ratings, TP MCB, "C" curve, 10 KA breaking capacity					
	03 Phase DOL Starter (5 HP) comprising of TP MCB, TP Power Contactor, Overload Relay, Single Phase Preventer, Start/Stop Push Button, ON/OFF indicating light, SP MCB, Add-ON block, Auto-manual Selector switch, Ammeter etc.= 4 Nos.	1.00	100735	Job	100735.00	MR
8	Supplying of following sizes XLPE insulated and PVC sheathed aluminium/copper conductor armoured power cable of 1.1 KV grade as required.					
8.1	3 x 2.5 sq mm (Copper)	105	330	Mtr	34650.00	MR
8.2	4 x 2.5 sq mm (Copper)	140	426	Mtr	59640.00	MR
8.3	3.5 x 35 sq mm (Al)	30	584	Mtr	17520.00	MR
8.4	3.5 x 120 sq mm (Al)	40	1684	Mtr	67360.00	MR
8.5	3.5 x 185 sq mm (Al)	40	2485	Mtr	99400.00	MR
9	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing masonry open duct as required.					
9.1	Upto 35 sq. mm	30	36	Mtr	1080.00	10.6.2
9.2	Above 95 sq. mm and upto 185 sq. mm	5	80	Mtr	400.00	10.6.4
10	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on cable tray as required.					
10.1	Upto 35 sq. mm (clamped with 1mm thick saddle)	245	53	Mtr	12985.00	10.8.1
10.2	Above 95 sq. mm and upto 185 sq. mm (clamped with 25/40x3mm MS flat clamp)	75	138	Mtr	10350.00	10.8.3
11	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.					
11.1	3½ X 35 sq. mm (32mm)	2	437	Each	874.00	11.1.21
11.2	3½ X 120 sq. mm (45mm)	2	710	Each	1420.00	11.1.25
11.3	3½ X 185 sq. mm (57mm)	2	1001	Each	2002.00	11.1.27

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil

12	Earthing with G.I. earth pipe 4.5 Meter long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/coke and salt as required.	16	7658	Set	122528.00	5.2
13	Providing and laying earth connection from earth electrode with 6 SWG dia G.I. Wire in 15 mm dia G.I. pipe from earth electrode including connection with G.I. thimble excavation and re-filling as required.	30	313	Mtr	9390.00	5.12
14	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing as required.	86	84	Mtr	7224.00	5.16
15	Supplying and installing following size of perforated Hot Dipped Galvanised Iron cable tray (Galvanisation thickness not less than 50 microns) with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with two numbers GI Suspenders i/c base of suitable size GI angle, GI bolts & nuts, fastner etc as required.					
15.1	150 mm width X 50 mm depth X 1.6 mm thickness	25	803	Mtr	20075.00	4.6.2
16	Dismantling of LT Panel (3x5 Meter (approx)) i/c interconnecting cable, foundation, starter, wire mesh with supporting MS angles & shifting the same to the client store room complete etc as required.	7	7475	Nos.	52325.00	MR
	Total				2800052.00	

EXECUTIVE ENGINEER (E)

Correction—Nil

Deletion—Nil

Insertion—Nil

Overwriting—Nil