



GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT
O/o. The Executive Engineer(E) ,Coimbatore
Central P.W.D., Press Colony Post ,
Coimbatore – 641 019.



Name of Work:	Providing 1 no 62.5 KVA DG set, replacement of outlived fans and fittings and SDBs etc at GST Building, Tuticorin.	
Sl.No.	Description	Page
	PART-A	
1	Index page	1
2	Press Notice	2
3	Information and instructions for contractors for e-tendering	3-4
4	List of Mandatory Documents to be scanned and uploaded	5-6
5	C.P.W.D – 6 for e-Tendering	7-14
6	CPWD – 7	15-16
7	Acceptance	17
8	Performa of Schedules	18-24
9	Guarantee bonds:	
	(a) Bank Guarantee Bond	25-26
10	Special conditions	27
11	MOU	28
12	Willingness Certificate	29
	PART –B	30
13	Additional Conditions of contract and specifications for electrical works	31-44
14	Additional Conditions and Specifications for the work of DG set works	45-51
15	List of mandatory machinery, tools and plants to be deployed by the contractor at site	52
16	List of preferred makes of electrical installations	53-56
	PART –C	57
17	Schedule of Quantity for Electrical Works	58-68
18	General Abstract	69

NIT document containing pages 1to 69 (Sixty Nine only)is approved.

EE(E) (Coimbatore)
CPWD, Coimbatore

Press Notice
CENTRAL PUBLIC WORKS DEPARTMENT

Notice Inviting E-Tender

The Executive Engineer(E), Coimbatore, C.P.W.D., Coimbatore on behalf of President of India invites online percentage rate tender from approved and eligible contractors of CPWD in building category for the following work(s):

NIT No.43/EE(E)/COIMBATORE/CPWD/2026-27

Name of work:- Providing 1 no 62.5 KVA DG set, replacement of outlived fans and fittings and SDBs etc at GST Building, Tuticorin.

Estimated Cost :Rs. 10,67,059.00/-

Earnest Money : Rs . 21,341.00/-

Period of Completion: 4 months

Last date & time of submission of bid through e- tendering is Upto 03.00 pm on 15.09 .2026

Subsequent Corrigendum (if any) shall be available on website only. No Press Notice shall be issued for any corrigendum.

The bid forms and other details can be obtained from the website <https://etender.cpwd.gov.in/>. The press notice is also available on www.eprocure.gov.in

Executive Engineer(E),COIMBATORE

CPWD, Coimbatore

**INFORMATION AND INSTRUCTIONS FOR CONTRACTORS FOR
e-TENDERING FORMING PART OF NIT AND TO BE POSTED ON WEBSITE**

The Executive Engineer (E), **Coimbatore, C.P.W.D., Coimbatore** on behalf of President of India invites online percentage rate tender from approved and eligible contractors of **building category of CPWD** for the following work(s):

S. No.	NIT NO.	Name of work and location	Estimated cost put to tender	Earnest Money	Stipulated Period of Completion of work (in months)	Last date of online submission of tender and other documents as specified in the tender document.	Time & date of opening of tender
1	43/EE(E)/COIMBATORE/CPWD/2026-27	Providing 1 no 62.5 KVA DG set, replacement of outlived fans and fittings and SDBs etc at GST Building, Tuticorin.	Rs. 10,67,059.00/-	Rs. 21,341.00/-	4 Months	Upto 03.00 pm on 15.09.2026	03.30 Pm on 15.09.2026

The enlistment of the contractors should be valid on the last date of submission of tenders.

In case the last date of submission of tender is extended, the enlistment of contractor should be valid on the original date of submission of tenders.

1. The intending tenderer must read the terms and conditions of CPWD-6 carefully. He should only submit his tender if he considers himself eligible and he is in possession of all the documents required.
2. Information and Instructions for tenderer posted on website shall form part of tender document.

3. The tender 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.tenderwizard.com/CPWD or www.cpwd.gov.in or www.eprocure.gov.in free of cost.
4. Those contractors not registered on the website mentioned above, are required to get registered beforehand. If needed they can be imparted training on online tendering process as per details available on the website.
5. The intending tenderer must have valid class-III digital signature to submit the tender.
6. On opening date, the contractor can login and see the tender opening process. After opening of tenders, he will receive the competitor tender sheets.
7. Contractor can upload documents in the form of JPG format and PDF format.
8. Contractor must ensure to quote rate in the prescribed column (5) meant for quoting rate in figures appears in pink colour and the moment rate is entered, it turns sky blue.

In addition to this, while selecting any of the cells a warning appears that if any cell is left blank the same shall be treated as "0". Therefore, if any cell is left blank and no rate is quoted by the tenderer, rate of such item shall be treated as "0" (ZERO). However, If a tenderer quotes nil rates against each item in item rate tender or does not quote any percentage above/below on the total amount of the tender or any section / sub head in percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.

9. SC/ST contractors enlisted under class V category are exempted from processing fee payable to ITI.
10. Integrity pact of the tender document shall be signed between Engineer-in-Charge and the successful bidder after acceptance of the tender.
11. **All composite category contractors are renamed as building & roads category contractors with no change in their class as per new rules for enlistment of contractors in CPWD, 2023.**

List of Mandatory Documents to be scanned and uploaded on due date and time mentioned above:

1. **Valid Enlistment Order** of the Contractor.
2. Treasury Challan / Demand Draft / Pay order or Banker's Cheque / Deposit at Call Receipt / Bank Guarantee / Fixed Deposit Receipt of any Scheduled Bank against EMD.
3. Copy of receipt for deposition of original EMD issued from Division office of any Executive Engineer, CPWD.
4. 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 a/c of the work executed and/or for any action taken by CPWD or GST department in this regard."
5. Valid electrical license if already obtained by the bidder.
If the bidder has not obtained valid electrical license as applicable, then he shall scan and upload following under taking along with bid documents "If the work is awarded to me, I/We shall obtain valid electrical license as applicable from the competent authority or I/We will associate the CPWD agency of appropriate class who is having valid electrical license with in 7days of receipt of letter of commencement , failing which I/we shall be responsible for any action taken by CPWD in this regard."
6. VALID ERP TRAINING CERTIFICATE
7. Any other document as specified in this NIT

Executive Engineer(E),Coimbatore

CPWD, Coimbatore

**GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT**

No. 69(1)/EE(E) Coimbatore/2026/701

Date: 07.09.2026

NIT No :43/EE(E)/COIMBATORE/CPWD/2026-27

Name of Work :Providing 1 no 62.5 KVA DG set, replacement of outlived fans and fittings and SDBs etc at GST Building, Tuticorin.

Copy forwarded for information and put to Notice Board for wide publication to :-

1. The Chief Engineer (Madurai), CPWD, Madurai
2. The Executive Engineer (Coimbatore), CPWD, Coimbatore
3. The Executive Engineer (Madurai), CPWD, Madurai
4. All Assistant Engineer (Elect.), Under Coimbatore, CPWD, Coimbatore for information.
5. Assistant Accounts Officer, O/o EE (Coimbatore), CPWD, Coimbatore.
6. The Divisional Cashier, O/o EE (Coimbatore), CPWD, Coimbatore.
7. Notice Board (Through Head Clerk)

Encl : CPWD-6

Executive Engineer(E),COIMBATORE

CPWD, Coimbatore

CPWD-6 FOR e-Tendering

1. *Percentage rate 'e' bids are invited on behalf of President of India from the eligible firms / contractors in **single bid system** for the following work **Providing 1 no 62.5 KVA DG set, replacement of outlived fans and fittings and SDBs etc at GST Building, Tuticorin.***

The enlistment of the contractors should be valid on the last date of submission of tenders.

In case the last date of submission of tender is extended, the enlistment of contractor should be valid on the original date of submission of tender.

- 1.1 *The work is estimated to cost **Rs. 10,67,059.00/-**This estimate, however, is given merely as a rough guide.*

2. *Agreement shall be drawn with the successful tenderers on prescribed Form No. CPWD 7 (or other Standard Form as mentioned) which is available as a Govt. of India Publication and also available on website www.cpwd.gov.in. Tenderers 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 **4 months** from the date of start as defined in schedule 'F' or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the tender documents.*
4. (i) *The site for the work is available.**

OR

~~The site for the work shall be made available in parts as mentioned in Schedule 'F'.~~*

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 be seen on website www.tenderwizard.com/CPWD or www.cpwd.gov.in free of cost.*
6. *After submission of the bid the contractor can re-submit revised tender 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.*
8. *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 favor of Executive Engineer, civil ,***

Coimbatore central Division, C.P.W.D., Coimbatore.) shall be scanned and uploaded to the e-tendering website within the period of tender submission.

The original EMD should be deposited either in the office of Executive Engineer inviting tenders or division office of any Executive Engineer, CPWD within the period of tender submission. The EMD receiving Executive Engineer shall issue a receipt of deposition of earnest money deposit to the tenderer 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 tenderer up to the specified tender submission date and time.

A part of earnest money is acceptable in the form of bank guarantee also. In such case, minimum 50% of earnest money or 20 lac Rupees, whichever is less, shall have to be deposited in shape prescribed above, and balance may be deposited in shape of Bank Guarantee of any scheduled bank having validity for six months or more from the last date of receipt of tenders which is to be scanned and uploaded by the intending tenderers.

Copy of Enlistment Order and certificate of work experience and other documents as specified in the press notice shall be scanned and uploaded to the e-Tendering website within the period of tender submission. However, certified copy of all the scanned and uploaded documents as specified in press notice shall have to be submitted by the lowest tenderer only along with physical EMD of the scanned copy of EMD uploaded within a week physically in the office of tender opening authority.

Online tender documents submitted by intending tenderers shall be opened only of those tenderers, whose EMD deposited with any division office CPWD and other documents scanned and uploaded are found in order.

- 9A The contractors registered prior to 01.04.2015 on e-tendering portal of CPWD shall have to deposit tender processing fee at existing rates, or they have option to switch over to the new registration system without tender processing fee any time.**

The bid submitted shall be opened at Providing 1 no 62.5 KVA DG set, replacement of outlived fans and fittings and SDBs etc at GST Building, Tuticorin.

9. *The tender submitted shall become invalid and e-Tender processing fee shall not be refunded if:*
- (i) The tenderer is found ineligible.*
 - (ii) The tenderer does not upload scanned copies of all the documents stipulated in the tender document.*

- (iii) *If any discrepancy is noticed between the documents as uploaded at the time of submission of tender and hard copies as submitted **physically by the lowest tenderer** in the office of tender opening authority.*
 - (iv) ***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.***
10. *The contractor whose tender is accepted will be required to furnish performance guarantee of **5% (Five Percent)** of the tendered amount (**drawn in favor of Executive Engineer, civil , Coimbatore civil Division, C.P.W.D., Coimbatore.**) within the period specified in Schedule F. This guarantee shall be in the form of cash (in case guarantee amount is less than Rs.10,000/-) or Deposit at Call receipt of any scheduled bank/Banker's cheque of any scheduled bank/Demand Draft of any scheduled bank/Pay order of any Scheduled Bank (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 contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F', including the extended period if any, the bidder shall be suspended for one year and shall not be eligible to bid for CPWD tenders from date of issue of suspension order.***

*The Contractor whose tender 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 **including provident fund code no. if applicable and also ensure the compliance of aforesaid provisions by the sub-contractors, if any engaged by the contractor for the said work** and Programme Chart (Time and Progress) within the period specified in Schedule F.*

11. The description of the work is as follows: Providing 1 no 62.5 KVA DG set, replacement of outlived fans and fittings and SDBs etc at GST Building, Tuticorin.

Intending Tenderers 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 tenderers shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The tenderers 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 tender by a tenderers 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.

12. *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 tenderers shall be summarily rejected.*
13. *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 for rejection.*
14. *The competent authority on behalf of President of India reserves to himself the right of accepting the whole or any part of the tender and the tenderers shall be bound to perform the same at the rate quoted.*
15. *The contractor shall not be permitted to tender for works in the CPWD Circle (Division in case of contractors of Horticulture/Nursery category) responsible for award and execution of contracts, in which his near relative is posted a 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.*
16. *No Engineer of Gazetted Rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the prior permission of the Government of India in writing. This contract is liable to be 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.*
17. *The tender for the works shall remain open for acceptance for a period of **Thirty(30) days** from the date of opening of tenders. If any tenderer withdraws his tender before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the tender which are not acceptable to the department, then 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 tenderers shall not be allowed to participate in the retendering process of the work.*
18. *This Notice Inviting Tender shall form a part of the contract document. The successful tenderers/contractor, on acceptance of his tender by the Accepting Authority shall within 15 days from the stipulated date of start of the work, sign the contract consisting of:-*

a) *The Notice Inviting Tender, all the documents including additional conditions, specifications and drawings, if any, forming part of the tender as uploaded at the time of invitation of tender and the rates quoted online at the time of submission of tender and acceptance thereof together with any correspondence leading thereto.*

b) *Standard C.P.W.D. Form 7 or other Standard C.P.W.D. Form as applicable.*

19. For composite bids

19.1.1 *The Executive Engineer in charge of the major component will call tenders for the building work. The cost of tender document and Earnest Money will be fixed with respect to the combined estimated cost put to tender for the building tender.*

19.1.2 *The tender document will include following three components:*

Part A:-

CPWD-6, CPWD-7 including schedule A to F for the major component of the work, Standard General Conditions of Contract for CPWD 2020 (for construction works) as amended/modified up to last date of submission of tender including extension, if any.

Part B:-

General/specific conditions, specifications and schedule of quantities applicable to major component of the work.

Part C:-

Schedule of Quantity for Electrical work

19.1.3 *The tenderers must associate himself, with agencies as per NIT conditions.*

19.1.4 *The eligible tenderers shall quote rates for all items of major component as well as for all items of minor components of work.*

19.1.5 *After acceptance of the tender 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/DDH in charge of minor components. One such signed set of agreement shall be handed over to EE/DDH in charge of minor component(s). EE of major component will operate part A and part B of the agreement. EE/DDH in charge of minor component(s) shall operate Part C along with Part A of the agreement.*

19.1.6 *Entire work under the scope of building tender including major and all minor components shall be executed under one agreement.*

19.1.7 *Security Deposit will be worked out separately for each component corresponding to the estimated cost of the respective component of works.*

- 19.1.8 *The main contractor has to associate agency(s) for specialize component(s) conforming to eligibility criteria as defined in the tender document and has to submit detail of such agency(s) to Engineer-in-charge of relevant component(s) within prescribed time. Name of the agency(s) to be associated shall be approved by Engineer-in-charge of relevant component(s).*
- 19.1.9 *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 Engineer-in-charge of relevant specialized component(s).*
The new agency/agencies shall also have to satisfy the laid down eligibility criteria. In case Engineer-in-charge 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.
- 19.1.10 *The main contractor has to enter into MoU with agencies(s) associated by him. Copy of such MoU shall be submitted to EE/DDH in charge of each relevant component as well as to EE in charge of major component. In case of change of associate contractor, the main contractor has to enter into MoU/ agreement with the new contractor associated by him.*
- 19.1.11 *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.*
- 19.1.12A. *The building work shall be treated as complete when all the components of the work are complete. The completion certificate of the building work shall be recorded by Engineer-in-Charge of major component after record of completion certificate of all other components.*
- 19.1.12B. *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 the final bill for their component of work and pass on the same to the EE of major component for including in the final bill for building contract.
20. *GST and all other tax as applicable, IT, Education Cess, **TN construction worker's welfare Cess** etc. shall be payable by the contractor and Government will not entertain any claim whatsoever in respect of the same.*

Signature of the Divisional officer

For & on behalf of President of India.

INFORMATION & INSTRUCTIONS FOR TENDER INVITING AUTHORITY FOR e-TENDERING

1. The Executive Engineer / Engineer-In-Charge / DDH of any Divisions/ Projects of CPWD or any other Officer designated by CPWD Directorate from time to time, are authorized to receive EMDs. These authorities should receive the original EMD for their tenders or tenders of any other Division / Projects.
2. The NIT approving authority / Tender inviting authority at the time of issue of NIT also fills and upload the following prescribed format of receipt of deposition of Original EMD along with NIT:-

RECEIPT OF DEPOSITION OF ORIGINAL EMD (Receipt No...../Date:.....)	
1.	Name of Work: <i>Providing 1 no 62.5 KVA DG set, replacement of outlived fans and fittings and SDBs etc at GST Building, Tuticorin.</i>
2.	NIT No.: 43/EE(E)/COIMBATORE/CPWD/2026-27
3.	Estimated Cost: Rs. 10,67,059.00/-
4.	Amount of Earnest Money Deposit: Rs. 21,341.00/-
5.	Last date of submission of Bid: Upto 03.00 pm on 15.09.2026
(*To be filled by Tender inviting authority / NIT approving authority at the time of issue of NIT and uploaded along with NIT).	
1.	Name of the Contractor:#
2.	Form of EMD:#
3.	Amount of Earnest Money Deposit:#
4.	Date of submission of EMD:#
Signature, Name and Designation of EMD receiving Officer along with Office Stamp (# To be filled by EMD receiving EE / DDH)	

3. The Authority receiving EMD in original form shall examines the EMD deposited by the bidder and issue a receipt of deposition of earnest money to the agency in a given format uploaded by tender inviting authority. The receipt can also be issued by any subordinate gazetted authority as authorized by the EE / Engineer-In-Charge / DDH.
4. The authority receiving original EMD also intimates tender inviting authority about deposition of EMD by the agency by email / fax / telephonically.
5. The original EMD receiving authority releases the EMD to unsuccessful bidders after the expiry of stipulated bid validity period or immediately after acceptance of the successful bidder, whichever is earlier, after verification from the e-tendering portal website (www.tenderwizard.com>tender free view>advance search>awarded tenders) that the particular contractor is not L-1 tenderer and work is awarded.

The tender inviting authority calls for original EMD of the L-1 tenderer from EMD receiving authority immediately

GOVERNMENT OF INDIA**CENTRAL PUBLIC WORKS DEPARTMENT**

STATE	Tamil Nadu	Zone	CE, Madurai
BRANCH	B&R	DIVISION	Executive Engineer (E) , C.P.W.D., Coimbatore

PERCENTAGE RATE TENDER & CONTRACT FOR WORKS

(A)	Tender for the work of :	Providing 1 no 62.5 KVA DG set, replacement of outlived fans and fittings and SDBs etc at GST Building, Tuticorin.
-----	--------------------------	---

- (i) To be uploaded online by Upto 03.00 pm on 15.09.2026.
- (ii) To be opened in presence of tenderers who may be present at 03.30 Pm on 15.09.2026 in the office of the Executive Engineer(E) , Coimbatore, C.P.W.D., Coimbatore.

TENDER

I/We have read and examined the notice inviting tender, schedule A, D, E & F

Specifications applicable, Drawings & Designs, General Rules and Directions, Conditions of Contract, clauses of contract, Special conditions, Schedule of Rate & other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.

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

*I/We agree to keep the tender open for **30 (Thirty) days** from the due date of its opening and not to make any modification in its terms and conditions.*

*A copy of Performa of EMD declaration is scanned and uploaded. If I/We, fail to furnish the prescribed performance guarantee within prescribed period, I/We agree that the said President of India or his successors, in office shall without prejudice to any other right or remedy, be at liberty to **shall be suspended for one year and shall not be eligible to bid for CPWD tenders from date of issue of suspension order**. Further, if I/We fail to commence work as specified, I/ We agree that President of India or the successors in office shall without prejudice to any other right or*

remedy available in law, be at liberty to forfeit the said performance guarantee absolutely. The said Performance Guarantee shall be a guarantee to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form.

Further, I/We agree that in case of forfeiture of Performance Guarantee as aforesaid, I/We shall be debarred for participation in the re-tendering process of the work.

I/We undertake and confirm that eligible similar work(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of Department, then I/We shall be debarred for tendering in 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 there from to any person other than a person to whom I/We am/are authorized to communicate the same or use the information in any manner prejudicial to the safety & integrity of the State.

Dated:

Signature of Contractor

Witness:

Postal Address

Address:

Occupation:

ACCEPTANCE

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

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

(a)

(b)

(c)

For & on behalf of President of India

Signature

Dated:

Designation

SCHEDULE 'A'

Schedule of Quantities (as per PWD-3) – Particular Condition and Specification enclosed

SCHEDULE 'B'

Schedule of materials to be issued to the contractor:

S.No.	Description of item	Quantity	Rates 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
1	2	3	4
-----NIL-----			

SCHEDULE 'D'

Extra schedule for specific requirements / document for the work, if any:	As attached intender form
---	---------------------------

Name of work: Providing 1 no 62.5 KVA DG set, replacement of outlived fans and fittings and SDBs etc at GST Building, Tuticorin.

SCHEDULE 'E'

Reference to General Conditions of Contract:	General Conditions of contract for CPWD-2023 for Construction works (with all amendments up to last date receipt of tender including extension, if any)
i. Estimated cost of work:	
Electrical Items of Work	Rs. 10,67,059.00/-

ii. Earnest money:	Rs. 21,341.00/-
iii. Performance Guarantee:	5% of the tendered value of the work
iv. Security deposit:	2.5% of the tendered value of the work

GENERAL RULES & DIRECTIONS:

Officer inviting tender:	<i>Executive Engineer(E) (Coimbatore), CPWD, Coimbatore.</i>
Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2 & 12.3	<i>See below</i>
*To be filled in by Executive Engineer	

SCHEDULE 'F'

2(v)	Engineer-in-Charge For Electrical Items of Work	<i>Executive Engineer (E)(Coimbatore), CPWD, Coimbatore.</i>
2(vii)	Accepting Authority	<i>Executive Engineer (E)(Coimbatore), or successor thereof</i>
2(x)	Percentage on cost of materials and labour to cover all overheads and profits	<i>15%</i>
2(xi)	Standard Schedule of Rates: Electrical Items of Work	DSR (E&M) 2025 with correction slips up to last date of submission of tender including extension, if any.
2(xii)	Department	<i>Central Public Works Department</i>
9(ii)	Standard CPWD contract Form:	General Conditions of contract for CPWD-2023 for Construction works (with all amendments up to last date receipt of tender including extension, if any)

Clause 1	<i>i.</i> Time allowed for submission of Performance Guarantee, Programme Chart (Time and Progress) and applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board or proof of applying thereof from the date	
-----------------	--	--

	of issue of letter of acceptance.	7 days	
	ii. Maximum allowable extension with late fee @ 0.1% per day of Performance Guarantee amount beyond the period provided in (i) above	3 days	
Clause 2	Authority for fixing Compensation under Clause 2	CE, MADURAI, CPWD or successor thereof	
Clause 5	Number of days from the date of issue of letter of acceptance for reckoning date of start	7 days	
Clause 5	Description of milestone(physical)	Time allowed from date of start	Amount to be withheld for non achievement of milestone
	Supply of fittings, fans	20 days	2.5% of tendered amount
	Installation, testing and commissioning of fittings and fans and complete in all respects including handing over	2 month	2.5% of tendered amount

Authority to decide:

(i) Extension of time	Executive Engineer (E) , CPWD, Coimbatore or his successor thereof
(ii) Rescheduling of milestones	CE, MADURAI, CPWD or his successor thereof

Clause 6		
Clause applicable - (6) - EMB through CPWD ERP Portal		
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	5 Lakhs
Clause 7A	Whether Clause 7A shall be applicable	Yes

Clause 7B	Whether Clause 7B shall be applicable	Yes
Clause 8A	<i>Authority to decide compensation on account if the contractor fails to submit Completion Plans</i>	<i>EE (E) Coimbatore</i>
	<i>The amount to be payable by the contractor , if he fails to submit completion plans</i>	5000/- for Electrical works
Clause 10A	List of testing equipments to be provided by the contractor at site lab	As per direction of Executive Engineer (Elect.)
Clause 10 B (ii)	Whether clause 10-B (ii) shall be applicable.	<i>Not applicable</i>
Clause 10 C	Component of labour expressed as percent of value of work	<i>Not applicable</i>
Clause 10 CA		<i>Not applicable</i>
Material covered under this clause	Nearest Materials (other than cement, reinforcement bars and the structural steel) for which All India Wholesale Price Index to be followed	Base Price excluding GST of Materials, covered under clause 10 CA
<i>Not applicable</i>		
Clause 10 CC	Clause 10CC to be applicable in contracts with stipulated period of completion exceeding the period shown in next column	<i>Not applicable</i>
	Schedule of component of other Material, labour, POL etc. for price escalation.	
	i) Component of E&M construction Material, expressed as percent of total value of component work	<i>Not applicable</i>
	ii) Component of Labour, expressed as percent of total value of component work. NOTE: Payment under this clause is admissible when contractor submits proof of having paid wages due to every worker through bank or ECS or online transfer to his bank account.	<i>Not applicable</i>
	iii) Component of P.O.L, expressed as percent of total value of component work.	<i>Not applicable</i>
Clause 11	Specification to be followed for execution of work - For Electrical Items	CPWD General Specifications for Electrical Works Part I Internal –2023 with upto date amendments.

	of Work	CPWD General Specifications for Electrical Works Part II External –2023 with uptodate amendments. CPWD General Specifications for Electrical Works Part-IV: Substation 2013 with uptodate amendments CPWD General Specifications for Electrical Works Part-VII (D.G.Sets) 2013 with uptodate amendments General Operation & Maintenance guidelines as specified by the OEM / Manufacturer of E&M equipments.
All above Specifications shall be applicable with correction slips up to the last date of submission / uploading of bid.		

Clause 12		
12.2	Deviation limit beyond which clause 12.2 & 12.3 shall apply for building work	NA ; All the deviated quantities shall be paid at agreement rates.
12.5	Deviation limit beyond which clause 12.2 & 12.3 shall apply for foundation work	<i>NIL</i>

Clause 16	Competent Authority for Deciding reduced rates - For Electrical Items of Work	CE Madurai CPWD Or successor thereof
Clause 18	List of mandatory machinery, tools& plants to be deployed by the contractor at site	As mentioned in page no.46
Clause 19C	Authority to decide for each default	Engineer-in-Charge
Clause 19D	Authority to decide for each default	Engineer-in-Charge
Clause 19G	Authority to decide for each default	Engineer-in-Charge

Clause 25	
i) Conciliator	The Special Director General, Region Chennai, CPWD, Chennai
ii) Arbitrator Appointing Authority	Chief Engineer, CPWD, Madurai or his successor.
iii) Place of arbitration	Madurai.

Clause 32		Requirement of Technical Representative(s) and Recovery Rate					
Sl. No.	Minimum Qualification of Technical Representative	Discipline	Designation (Principal Technical/Technical representative	Minimum experience	number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of Clause 32 Per person	
						Figures (Rs. Per person)	Words (Rs. Per person)
1	i) Graduate Engineer or Diploma Engineer	Electrical	Project Planning / quality/ Site/ Billing Engineer	2 Years or 5 years respectively	1	15,000/- per month per person	Fifteen Thousand per month per person

Assistant Engineers retired from Government services that are holding Diploma will be treated at par with Graduate Engineers. Diploma holder with minimum 10 year 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 38

(i)	(a)	Schedule/statement for determining theoretical quantity of cement, bitumen etc on the basis of Delhi Schedule of Rates	<i>Not applicable</i>
(ii)		Variations permissible on theoretical quantities:	
	(a)	Cement	<i>Not applicable</i>
	(b)	Bitumen for all works	<i>Not applicable</i>

	(c)	Steel Reinforcement and structural steel sections for each dia, Mtr, section and category	<i>Not applicable</i>
	(d)	All other materials	NIL

RECOVERY RATES FOR QUANTITIES BEYOND PERMISSIBLE VARIATION

S. No	Description of items	Rates in figures and words at which recovery shall be made from the contractor	
		Excess beyond permissible variation	Less use beyond the permissible variation
NIL			

~~* To be filled in by Executive Engineer~~

On Non judicial stamp paper of minimum Rs. 100

(Guarantee offered by Bank to CPWD in connection with the execution of contracts)

Form of Bank Guarantee for Earnest Money Deposit /performance Guarantee/Security Deposit/Mobilization Advance

1. Whereas the Executive Engineer..... (Name of division)..... CPWD on behalf of the President of India (hereinafter called "The Government") has invited bids under (NIT number).....dated.....for.....(name of work)..... The Government has further agreed to accept irrevocable Bank Guarantee for Rs. (Rupees.....only) valid upto(date)*.... as **Earnest Money Deposit** from (name and address of contractor)....., (hereinafter called "the contractor") for compliance of his obligations in accordance with the terms and conditions of the said NIT.

OR**

Whereas the Executive Engineer...(name of division)...., CPWD on behalf of the President of India (hereinafter called "The Government") has entered into an agreement bearing number.....with (name and address of the contractor)..... (hereinafter called "the Contractor") for execution of work..... (name of work).... The Government has further agreed to accept an irrevocable Bank Guarantee for Rs. (Rupees .. only) valid upto(date).... as **Performance Guarantee/security Deposit/Mobilization Advance** from the said Contractor for compliance of his obligations in accordance with the terms and conditions of this agreement.

2. We, (indicate the name of the bank)....(herein after referred to as "the Bank"), hereby undertake to pay to the Government an amount not exceeding Rs..... (Rupees..... only) on demand by the Government within 10 days of the demand.
3. We,(indicate the name of the Bank)...., do here by undertake to pay the amount due and payable under this guarantee without any demur, merely on a demand from the Government stating that the amount claimed is required to meet the recoveries due or likely to be due from the said contractor. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs..... (Rupeesonly)
4. We,(indicate the name of the Bank)....., further undertake to pay the Government any money so demanded notwithstanding any dispute or disputes raised by the contractor in any suit or proceeding pending before any court or Tribunal, our liability under this Bank Guarantee being absolute and unequivocal. The payment so made by us under this Bank Guarantee shall be a valid discharge of our liability for payment there under and the contractor shall have no claim against us for making such payment.
5. We, (indicate the name of the Bank)....., further agree that the Government shall have the fullest liberty without our consent and without affecting in any manner our obligation here under to vary any of the terms and conditions of the said agreement or to extend time of performance by the said contractor from time to time or to postpone for any time or from time to time any of the powers exercisable by the Government against the said contractor and to forbear or enforce any of the terms and conditions relating to

the said agreement and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said contractor or for any forbearance, act of omission on the part of the Government or any indulgence by the Government to the said contractor or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. We,(indicate the name of the Bank)....., further agree that the Government at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor at the first instance without proceeding against the contractor and notwithstanding any security or other guarantee the Government may have in relation to the Contractor's liabilities.
7. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor.
8. We,.....(indicate the name of the Bank).... undertake not to revoke this guarantee except with the consent of the Government in writing.
9. This Bank Guarantee shall be valid up to Unless extended on demand by the Government. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs..... (Rupees..... Only) and unless a claim in writing is lodged with us within the date of expiry or extended date of expiry of this guarantee, all our liabilities under this guarantee shall stand discharged.

Date:

Witnesses:

- | | |
|---------------------------------------|--|
| 1. Signature.....
Name and address | Authorized signatory
Name

Designation

Staff code no.

Bank seal |
| 2. Signature.....
Name and address | |

*Date to be worked out on the basis of validity period of 90 days where only financial bids are invited and 180 days for two/three bid system from the date of submission of tender.

**In paragraph 1, strike out the portion not applicable. Bank Guarantee will be made either for earnest money or for performance guarantee/security deposit/mobilization advance, as the case may be.

SPECIAL CONDITIONS

The 1st lowest tenderer have to submit the following documents for association of electrical contractor at least 7 days after to depositing performance guarantee.

1. The applicant should submit the willingness from an eligible electrical contractor to get associated with the applicant for execution of the electrical component of works in wholesome manner and as per the conditions set out in the MOU to be entered into, between the one who is awarded the work and the associated eligible electrical contractor.
2. In support of the eligibility conditions of the proposed associated electrical contractor, copy of their registration documents, Electrical Contractor's License, GST Documents duly attested by the applicants (Main Contractor) shall be submitted to the EE(E). Each such electrical contractor will certify that they are not debarred as on the day of application for sale of tender.
3. The main contractor will submit MOU signed on non-judicial paper with eligible registered electrical contractor of CPWD) only. The MOU in the enclosed form shall be signed by both the parties i.e. main contractor as 1st party and associated electrical contractor as 2nd party.
4. In the event of the concerned E&M agency not performing satisfactorily or failure of associate sub-contractor to complete the E&M work, the main contractor on the written direction of the department, shall remove the Associate/sub-contractor deployed on the work and shall submit name of new associate who fulfill the conditions mentioned in NIT to execute the leftover work without any loss of time or variation in cost to the department in this regard. Such associates shall also enter into tripartite Agreement/Contract along with the main tenderer and the departmental officer and shall meet all the guarantee for the equipment's already supplied for which payment has been released by the Deptt. in part. If any equipment supplied for the work, during the currency of the earlier Associate/sub-contractor and paid partly by the Deptt. ,becomes redundant /not in a position to be installed and commissioned and put to beneficial use due to change in agency for execution of E&M work, the main contractor shall be liable for replacement of the equipment(s) at no cost to Department. No change of Electrical Contractor will be allowed without prior approval of the department.
5. Executive Engineer (E) shall be the Engineer-in-charge as far as electrical works are concerned. Separate tender schedule abbreviated CPWD-8 and Special Conditions for Electrical Work are appended with this tender It will be obligatory on the part of the contractor/tenderer to sign the tender documents for all the component parts.
6. The main contractor shall be responsible and liable for proper and complete execution of the Electrical work and ensure coordination and completion of both civil and electrical work.
7. The associate or sub-contractor shall sign a tripartite Agreement/Contract along with the main tenderer and the departmental officer, for technical compliance of specification, guarantee etc.
8. The associate or sub-contractor shall attend the inspection of the work by the Engineer-in-Charge of E&M works as and when required.

MEMORANDUM OF UNDERSTANDING [M.O.U] BETWEEN
(TO BE SUBMITTED BEFORE START OF WORK)

1] M/S [Name of the firm with full address]

Enlistment Status

Valid Up to:

[Henceforth called the main contractor]

And

2] M/S [Name of the firm with full address]

Enlistment Status

Valid Upto:

[Henceforth, called Associated Electrical Contractor or Electrical Contractor]

Name of Work:-*Providing 1 no 62.5 KVA DG set, replacement of outlived fans and fittings and SDBs etc at GST Building, Tuticorin.*

We state that M.O.U's. between us will be treated as an agreement and has legality as per Indian Contract Act (amended upto date) and the department (CPWD) can enforce all the terms and conditions of the agreement for execution of the above work. Both of us shall be responsible for the execution of work as per the agreement to the extent of the MOU allows. We have agreed as under:

- 1- The associated electrical contractor will execute all electrical works in the wholesome manner as per terms and conditions of the agreement. Any type of internal transaction between the electrical contractor and main contractor shall be as per their convenience and mutual understanding without involving the department. Security deposit shall be deducted as per agreement.
- 2- The electrical contractor shall be liable for disciplinary action and other legal actions as per agreement if he fails to discharge obligation as per this agreement besides forfeiture of the security deposit.
- 3- All the machinery and equipments, tools and tackles required for execution of the electrical works. As per agreement shall be the responsibility of the electrical contractor.
- 4- The site staff required for the electrical work shall be arranged by the electrical contractor as per terms and conditions of the agreement.

SIGNATURE OF MAIN CONTRACTOR
CONTRACTOR

SIGNATURE OF ASSOCIATED Specialized ELECTRICAL

Date

Date

Place

Place

WILLINGNESS CERTIFICATE**(To be submitted before start of work)**

Name of Work :*Providing 1 no 62.5 KVA DG set, replacement of outlived fans and fittings and SDBs etc at GST Building, Tuticorin.*

I hereby give my willingness to work as specialized electrical contractor for the above mentioned work.

I will execute the work as per specifications and conditions for the agreement and as per direction of the Engineer-in-charge. Also I will employ full time technically qualified supervisor for the works. I will attend inspection of officers of the department as and when required.

Date:

Signature of Contractor

PART-B

ADDITIONAL CONDITIONS OF CONTRACT & SPECIFICATIONS FOR E&M WORKS FOR DEVELOPMENT OF SITE AND BULK SERVICES FOR: Providing 1 no 62.5 KVA DG set, replacement of outlived fans and fittings and SDBs etc at GST Building, Tuticorin.

(SH: - E&M Portion, Part-B).

1.0. GENERAL AND COMMERCIAL CONDITIONS:

- 1.1. This section covers the various commercial conditions applicable and to be read in connection with the conditions of contract of the standard form (CPWD-7 / 8) of the department (CPWD) forming part of the tender papers. In the event of any discrepancy between these two, the requirements of the former will be followed.
- 1.2. These additional conditions and additional specifications are applicable to all E&M works in general. For specific tenders some of the E&M services may not be a part of the particular tender. In such cases the conditions and specifications which are not related to the works or components thereof mentioned in the schedule of work shall not apply for that particular tender.
- 1.3. All the E & M works shall be carried out as per direction and to the entire satisfaction of the Engineer-in-charge.
- 1.4. Unless otherwise specified in the following conditions, the work shall, in general, be carried out as per following specifications:
 - a) CPWD General Specifications for Electrical Works – Part-I (Internal), 2023 amended up to date.
 - b) CPWD General Specifications for Electrical Works – Part-II (External), 2023 amended up to date.
 - c) CPWD General Specifications for Electrical Works Part-IV: Substation 2013 amended up to date
 - d) CPWD General Specifications for Electrical Works Part 0 VII (DG Sets) 2013 amended up to date
 - e) General Operation & Maintenance guidelines as specified by the OEM / Manufacturer of E&M equipments
 - f) Relevant BIS specifications amended up to date.
 - g) Indian Electricity Act 2013 and Indian Electricity Rules 1956 amended up to date.
 - h) Local Fire Regulations applicable at the place of installation.
 - i) Relevant and applicable foreign standards and specifications amended up to date.
 - j) Any other relevant act or rules and local byelaws.
 - k) Commercial and additional conditions and specifications for E & M works for this tender.
- 1.5.1. The work shall be carried out by CPWD enlisted contractor of appropriate Class as per Composite category with valid Electrical license and supervisor license only and other criteria as per norms. In case the main contractor is not fulfilled the criteria, he should engage an suitable agency as associated contractor, for execution of this work. Name of electrical agency shall be given in consent letter Performa along with enlistment details of the agency
- 1.5.2. Executive Engineer (Elect.) shall be the Engineer-in-Charge as far as electrical works are concerned. It will be obligatory on part of the main contractor to sign the tender documents for the entire component. The main contractor has to enter in agreement (MOU) with the Contractor associated by him for execution of

minor component. Copy of such agreement shall be submitted to EE/DDH of minor component as well as EE in charge of major component

- 1.5.3. Running payment for Electrical/Mechanical components shall be made by the EE (E) directly to the main Contractor. The main contractor shall make the payment to associated Contractor within 15 days of receipt of each running account payment
- 1.5.4. The main contractor shall be responsible for coordinating the activities of all works and will ensure progress of works as per laid down program.
- 1.5.5. Normally, there shall be no change in associated contractor for minor component work during the execution of the work. If at all, a change is necessitated, the same should be acceptable to the department and such acceptable contractor shall fulfill the conditions laid down for the selection of the associated contractor in the tender document.
- 1.6. If the specifications for any item or its component are not available in the CPWD specifications cited above, relevant BIS specification as amended up to date shall be followed, whether or not the specific reference of a particular BIS specification has been made in this specification / tender document.**
- 1.7. Wherever any reference to any Indian Standard specification occurs in the document relating to this contract the same shall be inclusive of all amendments issued thereto or revisions thereof, if any, up to the date of opening of tenders.**
- 1.8. All materials should conform to relevant BIS specifications wherever the same exists in absence of stipulation in this tender document.**
- 1.9.1. Where manufacturers furnishes specific instructions / recommendations relating to the materials used in this job and/or their installation, covering points not specifically mentioned in these documents, these instructions shall be followed in all cases and shall be deemed to be included in the schedule of work whether they have been specifically mentioned or not.**
- 1.9.2. Manufacturer's catalogue / literature on installation, testing, maintenance and troubleshooting of major equipment's shall be submitted to the department while handing over the installation.**
- 1.10. MATERIALS TO BE USED IN THE WORK:**
 - 1.10.1. All materials used in the work shall be new and of good quality, conforming to the relevant specifications as per good engineering practice.

- 1.10.2. All the materials proposed to be used in the work should be got approved from Engineer in Charge before use in work.
- 1.10.3. The materials to be supplied / provided by the contractor in execution of the work should be ISI marked, wherever applicable and of make as specified in the agreement. Where the make of any particular material is not specified in the contract document, the material shall be supplied as per makes desired by the engineer-in-charge.
- 1.10.4. It will be the responsibility of the contractor / bidder to ensure use of genuine materials in the work. The department reserves the right to get (any / all materials / components) inspected by the manufacturer or their authorized representatives at any stage of the execution of work. If any of the materials, equipments supplied and used in work is found spurious at any stage, then the department reserves the right to ask the contractor to replace it by genuine one and make suitable recovery and / or withheld suitable amount till it is done, even if any payment against that material is already made.
- 1.10.5. The department may ask for any valid document like manufacturer's test certificate, document for purchase of the material, document for import / shipment of imported materials etc. as deemed fit by the engineer-in-charge to ascertain genuinity of material supplied by / used in the work by the contractor. The contractor shall remain bound to submit all such documents to the department failing which payment may not be made or if already paid may be recovered / withheld from subsequent running account payment.
- 1.10.6. Copies of all purchase documents for all equipment's, accessories, fittings, fixtures etc. which carry guarantee / warrantee shall be handed over to the department in suitable form so that proper guarantee of materials are available to the department.
- 1.10.7. All the equipment's and their components and all the materials to be used in the work shall be suitable for the environmental conditions at the location of the work.
- 1.10.8. The materials to be supplied in this work shall be scheduled in such a way that miles stones are achieved and no shortfall is there. At the same time materials should be brought at sight in phases in such a manner so that they are not brought much in advance at site and dumped in work site for long period before installation and guarantee / warrantee of the materials are available for full period as per tender conditions. If the materials / equipment's are supplied at site much before actual use in work, the department shall not remain bound to make payment for such items of work involving the said materials / equipment's. The decision of the engineer in charge will be final and binding on all.
- 1.10.9. Dismantle materials, if any, should be returned to the department unless otherwise anything in contrary has been specifically stated in the tender document / BOQ.

1.11. RATES:

- 1.11.1. Unless otherwise provided in the schedule of quantities of the work the rates tendered by the contractor shall be all inclusive and shall apply to all heights, lifts, leads and depths of the building and nothing extra shall be payable to him on this account.
- 1.11.2. The rates for all items of work shall, unless clearly specified otherwise, include cost of all labours, materials and other inputs involved in the execution of the item irrespective of whether they have been specifically mentioned in the tender document or not.
- 1.11.3. This being an indivisible works contract, GST etc. are not payable separately. The rates tendered shall be firm and inclusive of all taxes, duties, cess and levies as applicable, and all charges for packing, forwarding, insurance, freight and delivery, installation, testing and commissioning at site, watch and ward etc. including temporary constructional storage, risks, over head charges, general liabilities / obligations and clearance from local bodies and State Fire Services, as applicable. Nothing extra shall be paid. However, fees payable to the local bodies / authorities for such clearance etc. shall be borne by the department.
- 1.11.4. In case the same item (s) appear more than once in the schedule of work / BOQ under the same sub head or among the different subhead of works, the lowest rate quoted for that item (s) shall be considered for the particular item (s) wherever appeared in any part of BOQ / Schedule of works for the purpose of tender evaluation although web generated e-price bid may incorporate different quoted rate for same item (s) as per the quoting pattern of the tenderer. The tendered amount thus worked out shall be final & shall be binding on the contractor. (Applicable for item rate tender).

1.12. ACCIDENT:

- 1.12.1. The department (CPWD) shall not have any responsibility or liability in case of any accident injury to the personnel to the contractor at work site or to the general public at the work site due to mishandling equipments by the personnel of the contractor or any other similar reason. The responsibilities and liabilities for such accidents and incidents shall be borne in full by the contractor.

1.13 AFTER SALES SERVICE:

- 1.13.1. The contractor shall ensure adequate and prompt after sales service in the form of maintenance personnel and spares as and when required with a view to minimize the break down period. Particular attention shall be given to ensure that all spares are easily available during the normal life of the installation.

1.14 REMOVAL OF SURPLUS MATERIALS AND TOOLS:

- 1.14.1. After completion of work the agency shall remove his men, materials and debris etc. from site.

1.15 QUALITY OF WORK AND WORKMANSHIP:

- 1.15.1. The contractor shall be entirely responsible and answerable for all the works done by him regarding quality, adherence to the laid down specifications, terms and conditions, warranty/guarantee etc. and he shall be liable to bear any compensation that may be levied by the department under any of the clauses of the agreement.
- 1.15.2. Clause 1.15 of CPWD General Specifications for Electrical Works, Part – IV, Substation 2013 shall be applicable
- 1.15.3. The materials having ISI mark shall have precedence over the one conforming to IS Specifications.
- 1.15.4. The contractor is advised to visit the site before quoting for his tender to apprise himself about the site environments and other conditions. Drawings and inventories can be seen in the office of the Engineer – in – charge.

1.16 SITE ORDER BOOK:

- 1.16.1. The contractor or his authorized representative shall sign the site order book and comply with the remarks entered therein by the representative of the department.

1.17 WATCH AND WARD:

- 1.17.1. The contractor will make his own storage of his own materials. The watch and ward of the materials and of the installations would be responsibility of contractor till the work is completed / handed over to the department. Nothing extra shall be paid to the contractor on this account.
- 1.17.2. Making payment to the contractor in any form against supply of materials / equipment's / components or execution thereof shall not absolve the contractor of his responsibility of watch and ward of the equipment's / materials etc. and their satisfactory functioning until the same is taken over by the department after successful installation, testing, commissioning and running in period.
- 1.17.3. No separate storage space will be provided to the contractor for storage of his materials and equipment's to be brought at site and used in execution. The available open site space may however be used by the contractor for storage purposes in which case he may build up temporary store at available site space at his own cost.

1.18 VARIATION IN QUANTITY:

- 1.18.1. Quantities shown against each item of work or supply are tentative which may vary on either side (plus or minus). This variation shall, in general, be governed by clause no. 12 of the clauses of contract of CPWD form 7 / 8. The contractor should ensure from the Engineer-in-charge and from the site condition the actual quantity required / to be used / to be supplied before bringing the materials at site. In case the actual quantity of material required at the site is less than the stipulated quantity, the contractor cannot claim to supply entire quantity stipulated in the schedule of quantities of work (Schedule – A) as well as cannot demand for payment thereof. The contractor shall therefore, be very careful about the quantity of materials to be supplied / brought at site. The decision of the Engineer-in-charge in this regard shall be final and binding on the part of the contractor. Even if initial payment for supply of materials is made in

any form for bringing material at site and if it is found at later stage that the actual requirement is less as per site requirement or as per decision of the Engineer-in-charge, the contractor shall have to take back the additional quantity brought / supplied at site and necessary adjustment shall be made from his next bill on this account. No claim in this regard shall be entertained.

1.19 NATURAL CALAMITY:

- 1.19.1. No payment will be made to the contractor for any damage caused by rain, snow fall, floods, dampness, fire, sun or any other natural cause whatsoever during the execution of work. The damage to the work due to above reason, if any, shall have to be made good by the contractor at his own cost and no claim on this account shall be entertained.

1.20. INSPECTION AND TESTING:

- 1.20.1. The Engineer-in-charge or his authorized representative may inspect any material at manufacturers' works and may witness routine tests as per relevant Indian Standard Specifications or other relevant specifications at manufacturers' works.
- 1.20.2. The contractor shall give in writing advance notice to the Engineer-in-charge and arrange for such inspection / presence for testing at manufacturers work. The TA/DA etc. of the departmental personnel who will be deputed to witness the tests etc. shall be borne by the Department.
- 1.20.3. The Engineer-in-charge or his authorized representatives shall have, at all the reasonable times, access to the contractor's premises or works or other works where manufacturing / fabrication shall be done and shall have the power, at all reasonable times, to inspect and examine the materials and workmanship during its manufacture or fabrication.
- 1.20.4. Inspection of imported materials at foreign works shall however not be carried out by the department. These materials shall be inspected and tested at site. Manufacturers' original test certificates and document of import / shipment should be provided to the department along with the materials without which no payment should be made to the contractor.
- 1.20.5. The contractor shall arrange for all the materials and labour required in connection with inspection of equipment or for any testing to be carried out at his works / manufacturers' works or at site of installation. Notice of such inspection / presence for testing shall be given by the contractor to the Engineer-in-charge at least fifteen days in advance.
- 1.20.6. Notwithstanding approval for such tests / inspection of equipment's / components by the Engineer-in-charge or his authorized representative, the contractor shall be required to perform site tests as desired by the Engineer-in-charge and prove the correctness of ratings and performance of equipment's / components and materials supplied and / or installed by him as per contract specifications and conditions at his own cost.
- 1.20.7. The Engineer-in-charge reserves the right to reject any equipment / machinery / material should it, on tests after installation, be found not to comply with contract specifications or its performance is not satisfactory.

1.20.8. Final inspection and testing will be done by the engineer-in-charge or his representative as per details to be indicated by the engineer-in-charge.

1.20.9. It shall be the responsibility of the contractor to get the installation inspected and passed by the local authorities concerned, as may be required by the local bye laws. The contractor will extend all help including test facilities to the representatives of the local bodies. In case the contractor fails to make desired facilities available during inspection, the department reserves the right to provide the same at the risk and cost of the contractor. The observation of the local authorities will be promptly attended by the contractor. The installation will be accepted by the department only after receiving clearance from the local bodies / fire authorities. The inspection charges leviable by the local / statutory authorities for the inspection shall however, be borne by the department.

1.21. COMPLETION DRAWING AND MANUAL :

1.21.1. In addition to the mode and form of submission of completion drawings and manuals as stipulated in the relevant CPWD Specifications for various sub-heads of E&M works, the contractor shall also submit soft copy of the completion drawings in CD / DVD.

1.22. POWER SUPPLY AND WATER SUPPLY :

1.22.1. No Power & Water Supply shall be provided by the department for the purpose of execution of the E&M work, except for testing and commissioning of installations. The contractor shall make his own arrangement in this regards. The power supply for testing and commissioning will be given at one point inside the premises and the contractor shall have to make arrangement for required cabling work and switch gears for extension of the power to the required location for testing. This will be applicable to all sub-heads of E&M works.

1.23 WORKS TO BE DONE BY THE CONTRACTOR :

1.23.1. Unless 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 – whether specifically indicated in the schedule of quantity / work or not:

- a. Foundations for equipments / structures / fuel tank / pumps including vibration isolation spring / pads.
- b. All minor building works necessary for installation of equipments such as making of openings in walls / floors, either of RCC or brick masonry, foundation trench for fuel line and cable, making of opening in walls or in floors and restoring them to their original condition / finish and necessary grouting etc. as required.

- c. Dismantling of brick wall, if any, for inserting / positioning / placement of equipments, Control panel / Diesel Tanks or for taking ducting / cable tray / pipes and rebuilding / making good the same to its original position / finish.
- d. Making good all damages caused to the structure during installation and restoring the same to their original finish.
- e. Supply and installation of all necessary angle / channel / flat iron supports and brackets etc. for installation of the substation equipments, D.G. Sets / Diesel Tanks / Exhaust Piping / Water and fuel piping / Cabling / electric Panels / bus-trunking / pumps / air-conditioning ducts / air-conditioning equipments and their sub assemblies / accessories on floor / wall / Shaft / terrace and at other places, as may be necessary including their installations in position.
- f. Responsibility to ensure safety of all materials against pilferage and damage till the installation is handed over to the department.
- g. All scaffolding as may be necessary for installation of Exhaust piping / Cabling / Electric Panels / exhaust pipe / wet riser and sprinkler pipes / ducts and all other equipments and their sub assemblies / accessories on floor / wall / Shaft / terrace and at other places during erection work and subsequent removal.
- h. Painting of all exposed metal surfaces of equipments and components with appropriate / approved colour as required and as desired by the Engineer – in - charge.
- i. All electrical works including cables / wires, earthing etc as specified in Schedule of work.
- j. Small wiring, inter-connection etc. inclusive of all materials and accessories necessary to comply with the regulations as well as proper and trouble free operation of the equipment.
- k. Closing of the cable entry points in sub-station/electrical panel rooms etc where ever applicable against seepage of water rodents etc.
- l. Approval / clearance of the complete installation shall be obtained by the contractor from CPCB / State Pollution Control Board / Local Bodies / Central Electricity Authority (CEA) / other licensing authorities wherever required. However, application shall be made by the Department and any statutory fee, as applicable, shall be paid by the department directly to the government authorities concerned.

1.24. DATE OF TAKING OVER OF THE INSTALLATION & DATE OF ACCEPTANCE :

1.24.1. The date of taking over of the installations under any sub-head of E&M works shall be the date of taking over the complete building (s) after due completion of the entire composite work and after complete test and trial run of all the major equipments under all sub-heads of E&M works to the entire satisfaction of the engineer-in-charge.

1.24.2. Subject to the guarantee clause, date of taking over the installation after stipulated period of trouble free operation of all the E&M works shall be the date of acceptance.

1.25. ORDER OF PREFERENCE :

Should there be any difference or discrepancy between the description of items as given in the Schedule of Quantities, technical specifications for individual items of work (including additional and commercial conditions) and IS Codes etc., the following order of preference shall be followed:

1. Schedule of quantities
2. Additional and Commercial Conditions
3. Technical specifications specified in the tender
4. General Conditions of Contract for CPWD Works
5. Drawings
6. CPWD General Specifications

1.26. Relevant IS or any other International code in case IS code is not available. The responsibility of execution of Specialized E&M works under scope of NIT shall lie with Main composite Contractor only. He is required to furnish the documents/certificates in support of his experience to execute the mentioned specialized E&M works given in Table-1 below after award of work. If the main agency does not have required experience, they must associate Specialized Agency/Agencies to execute the mentioned E&M components of the work having requisite experience as per table-1, However, the composite category contractor shall also be eligible to carry out himself any or all of these works without associating any specialized agency provided
(a) He fulfills the prescribed eligibility criteria respectively for these work(s),

or

(b) He directly procures the equipment of approved make from manufacturer and get it installed from authorized agency/service provider of the manufacturer or specialized agency as per criteria mentioned in NIT.

Sl. No.	Sub head of work	Eligibility criteria –The agency should have successfully completed, works as mentioned during last seven years ending previous day of last date of submission of Bid.			Definition of similar work
		One similar works each of value not less	Two similar works each of value not less	Three similar work each of value not less	

		than (Rs.)	than (Rs.)	than (Rs.)	
	Major work (E & M)				
1	IEI works	NOT APPLICABLE , Only CPWD enlisted agency of appropriate class with valid Electrical license issued by competent authority			
Note: - 1. All amounts rounded off to a convenient figure. The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to the ending previous day of last date of the month previous to the one in which tenders are invited 2. While considering any similar work executed by applicant firm under joint venture, the experience of the applicant firm in that work shall be restricted to its share/responsibilities as reflected in the Memorandum of Understanding (MoU), signed between the parties, while forming joint venture for that work, attested copy of which shall be submitted. 3. Completion Certificate (Duly attested) issued by the client department by an Officer of the rank not below the Executive Engineer or equivalent giving the list of major equipment installed are to be furnished along with the application clearly indicating satisfactory completion, date of completion, scope and value of the work					

In this connection, it is mentioned that the composite contractor and the associated specialized agencies shall give required affidavit to confirm their association to the Engineer-in-charge. Tender accepting authority may approve change of sub-agency in case it is required during the currency of the contract.

In case building category contractor does not fulfill the prescribed eligibility criteria respectively for these work(s), or, He does not directly procure the equipment of approved make from manufacturer and get it installed from authorized agency/service provider of the manufacturer or specialized agency as per criteria mentioned in NIT, they must associate Specialized Agency/Agencies to undertake the specialized component/components of the work having requisite experience for individual works as mentioned below:

ADDITIONAL CONDITIONS AND SPECIFICATIONS FOR THE WORK OF INTERNAL & EXTERNAL ELECTRICAL INSTALLATIONS :

- 2.1. The wires / cables used for point wiring, circuit wiring, sub-main wiring, power wiring and other wirings shall be done by FRLS grade PVC insulated copper conductor single core cable of 1100 V grade and of makes as specified in the list of accepted makes of materials.
- 2.2. All the wires should be terminated to the switch box / DB / MCB etc. by crimping with suitable size tinned copper lugs, unless the wire is single stranded. For termination to switches soldering is permissible. Nothing extra shall be paid on this account.
- 2.3. Hidden / concealed items and earthing work shall be done in the presence of the Engineer-In-charge of the work or his authorized representative only. The contractor shall give due notice for such work in advance to the department.
- 2.4. **The wireman / electrician engaged shall possess valid electrical workman permit in appropriate category as per rule.**
- 2.5. The drawing showing layout of the main board, allied equipment, if any, shall be got approved by the contractor from the engineer-in-charge before fabrication and execution.
- 2.6. All hardware, fastening material viz nuts, bolts, washer and screws etc. to be used on work shall be of zinc / cadmium plated iron.
- 2.7. The contractor shall have to furnish the insulation test report, earth test report, along with all required detailed of electrical load on the prescribed Performa for the electric connection from the supply company.
- 2.8. The contractor shall submit the completion certificates and completion plan as per clause 1.26 of General specification for Electrical work (Part-I internal)-2013
- 2.9. The chases in wall shall be done by chase cutting machines, for which the contractor shall arrange adequate numbers of chase cutting machines (chase cutters) for cutting chases in wall etc. for laying of conduit within the scope of work nothing extra shall be paid.
- 2.10. The contractor shall be entirely responsible and answerable for all the works done by him regarding quality, adherence to the laid down specifications, terms and conditions, warranty/guarantee etc. and he shall be liable to bear any compensation that may be levied by the department under any of the clauses of the agreement.

- 2.11. The contractor is advised to visit the site before quoting for his tender to apprise himself about the site environments and other conditions. Drawings and inventories can be seen in the office of the Engineer – in – charge.
- 2.12. The contractor will make his own storage of his own materials. The watch and ward of the materials and of the installations would be responsibility of contractor till the work is completed / handed over to the department. Nothing extra shall be paid to the contractor on this account.
- 2.13. The contractor should use only the approved makes of materials in the work specified in the NIT.
- 2.14. The agency will provide lay out drawing prepared by his Engineer with consultation with Engineer-In-Charge or his representative for approval before execute of work.
- 2.15. All multi data Mtrs specified in item shall be suitable to measure voltage, current, PF, Kwh, frequency etc.
- 2.16. The department reserves the right to send such materials to the manufacturers / authorized test laboratory to verify the genuineness and quality of the product.
- 2.17. The work shall be carried out in engineering like manner and bad workmanship shall be rejected summarily. For redoing the job, no claim of the contractor shall be entertained on this account.
- 2.18. Payment terms: On account payments for part work (after stipulated and statutory deductions) as assessed by the Engineer – in-charge for the applicable items in the Contract shall be payable at part rates not exceeding the percentage indicated against the stages of work mentioned below:
- a) Items of MCBDB, MCB, MCCB

S.N	Stage of work	Percentage of Rate
a	On initial inspection of material and delivery at site in good condition on pro-rata basis	80%
b	On completion of installation on pro-rata basis	10%
c.	On completion of testing and commissioning	5%
d	At the time of payment of final bill	5%

- b) Items connected with point wiring, circuit wiring, sub-main wiring, power point wiring and light plug wiring

SL	Stage of work	Percentage of Rate
a	On laying of conduits with accessories, switch boxes, etc. on pro-rata basis	40%
b	On drawing of wires including terminations, switches, sockets etc. on pro-rata basis	40%
c.	On completion of item and after testing and commissioning	15%
d	At the time of payment of final bill	5%

- c) For other items, the part rates will be decided by the Engineer-In-Charge of the work and shall be binding on the contractor.

- 2.19. All MCCBs with Ics = 100% Icu shall only be provided except mentioned.
- 2.20. All the MCCBs / RCCBs/ MCBs/ MCB DBs shall be of similar make. MCBs shall be of 10 KA rating. For incomer MCCBs in panel's earth leakage protection shall be provided. The KA rating for MCCB shall be as per the item.
- 2.21. The contractor will have to arrange for insulation and other tests like cable test etc. as per rules in the presence of the representative of Engineer-in-Charge as and when required by him and submit the test report in triplicate before the work can be considered as complete.
- 2.22. The contractor shall be responsible for the safe custody of the electrical installation in the building, including fitting and fixtures till the installations handed over to the department. He should make his own arrangement for proper watch and ward at his risk and cost. No claim will be entertained on this account.
- 2.23. The work is to be carried out in workman like manner and generally in accordance with the plans. However, the contractor will be bound to carry out the work with minor deviation over the plan supplied if desired by the Engineer-in-Charge of the work.
- 2.24. Stage payment to the contractor for various minor components of work shall be regulated as per CPWD Specifications. For works for which the % payment is not specially mentioned in the specification, the rate of stage payment shall be decided by Engineer-in-Charge.
- 2.25. Any Damage done to the building during the execution of electrical work shall be made good immediately at his own cost to the entire satisfaction of the Engineer-in-Charge.
- 2.26. All PVC insulated copper conductor cables used for the work shall be FRLS type with ISI mark and of make as per approved list.

- 2.27. Wherever makes of LT panels/Feeder pillars are not specifically mentioned in schedule/particular sub work specification, the same shall be fabricated by panel builders with in house facilities for seven or more tank treatment process and powder coating. They also shall have approval from CPRI for panels with rating not less than the bus bar rating of the item.
- 2.28. Drawings of all panels and fabricated equipments shall be submitted to the Engineer-In Charge got approved before fabrication.
- 2.29. The connections, inter-connections, earthing and inter-earthing shall be done by the contractor wherever required to be done for energization of the installation and nothing extra shall be paid on this account.
- 2.30. General arrangement of Feeder Pillar shall be got approved before fabrication work starts. Drawing with details shall be submitted to the Engineer-in-Charge and got approved before fabrication.
- 2.31. Cable route and pole locations shall be marked in drawing / site and got approved by the Engineer-in-charge or his representative before commencement of work.

2.0 ADDITIONAL CONDITIONS AND SPECIFICATIONS FOR THE WORK OF DG SET WORKS

1.1 Design, Equipment, Selection, Deviations: **SITC of 62.5 KVA DG set at GST Building, Tuticorin.**

1.2 The tenderer shall submit detailed schematic diagram for the approval of the Engineer-in-charge. He will make sure that the equipment offered shall fulfill the design conditions. All the equipments and their installation shall be suitable for the environmental conditions encountered at the location as indicated in specifications.

1.3 The acoustic enclosure (Canopy) shall be manufactured by respective engine OEM/OEA and should be CPCB norms compliant. Only model Numbers having Type Approval and valid conformity of production certificate for noise level as per CPCB norms shall be accepted. Copies of Type approval and COP certificate have to be submitted at the time of submission of drawings for approval. The canopies manufactured by OEM/OEA are only acceptable.

1.4 The number and size of the MS pipe for exhaust piping shall be as per the recommendation of the engine manufacturer. Wherever 2 numbers exhaust pipes are recommended by the engine manufacturer, the number of silencers shall also be 2 numbers.

2.0 Conformity to Statutory Acts, Rules, Regulations, Standards and safety Codes.

2.1 CPWD Specifications:

The entire work shall be carried out as per the following CPWD General Specifications for Electrical works wherever applicable and as amended up to date.

- a) CPWD General Specification for Electrical works (Part-I) Internal – 2023
- b) CPWD General Specification for Electrical works, (Part-II) External -2023
- c) CPWD General Specification for Electrical works, (Part-IV) Sub-Station- 2023
- d) CPWD General Specification for Electrical works (Part-VII) DG Set 2013

The tender specifications, wherever they differ from these specifications as indicated above, shall have overriding value and shall be followed for this work.

2.2 Indian Electricity Act and Rules:

All electrical works in connection with installation shall be carried out in accordance with the provision of Indian Electricity Act 2003 and Indian Electricity Rules 1956, both amended up-to date.

2.3 Indian Standards:

All the components shall confirm to relevant Indian Standard specifications, wherever existing, amended to date.

2.4 Fire Regulation:

The installation shall be carried out in conformity with the local Fire Regulations and Rules there under wherever they are in force and the provisions in local bye-laws, if any.

2.5 Safety Code and Labour Regulation:

In respect of all labour employed directly or indirectly on the work for the performance of contractor's part of work, the contractor at his own expense, will arrange for the safety provisions as per the statutory provisions, B.I.S. recommendations, factory act, Workman's compensation act, CPWD Code and instructions issued from time to time. Failure to provide such safety requirements would make the tenderer liable for penalty for Rs. 2000/- per week for each violation. In addition the Engineer-in-Charge, shall be at liberty to make arrangements and provide facilities as aforesaid and recover the cost from the contractor.

The contractor shall provide necessary barriers, warning signals and other safety measures while executing the work of DG set installation, cables etc. or wherever necessary so as to avoid accident. He shall also indemnify CPWD against claims for compensation arising out of negligence in this respect. Contractor shall be liable, in accordance with the Indian Law and Regulations for any accident occurring due to any cause. The department shall not be responsible for any accident occurred or damaged incurred or claims arising there from during the execution of work. The contractor shall also provide all insurance including third party insurance as may be necessary to cover the risk. No extra payment would be made to the contractor due to the above provisions thereof.

2.6 Central Pollution Control Board (CPCB) NORMS:

The DG Sets shall meet the requirements of environmental (protection) rules 1986 as laid down by Ministry of Environment & Forests read with GSR 371 (E) dtd. 17-02-02 and GSR 520 (E) dtd. 01-07-03. The firm need to furnish the certificate of Type approval and certificate of conformity of production issued by the Central Pollution Control Board (CPCB) or any authorized agency as prescribed in the above law.

3.0 Scope of work

WORKS TO BE DONE BY THE CONTRACTOR

Unless 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-whether specifically indicated in the schedule of work or not: -

Foundations for equipments including vibration isolation springs/ pads, making good all damages caused to the structure during installation and restoring the same to their original finish.

Minor building works necessary for installation of equipments, foundation trench for fuel line & cable, making of opening in walls or in floors and restoring them to their original condition/finish and necessary grouting etc. as required.

All supports for exhaust & water pipes, chimney, bus trunking (if included in scope of contract), cables, anti-vibration pads etc. as are necessary.

All electrical work and neutral earthing, body earthing, required for engine & alternator, main board/ control panels, and control wiring including loop earthing, if specified in Schedule of Work.

All pipes, bus trunking and/ or cable connections.

POL i.e. HSD oil and lub.oil for diesel engine for testing & commissioning for 13 hours i/c 1hr of 10% overloading at OEA/ OEM works shall be arranged by the contractor. After successful testing and commissioning of the D.G. Set a trial run at available load will be carried out for 120 Hrs or 15 days whichever is earlier. The D.G. Set will be operated and log of all relevant parameters will be maintained during this period. The arrangement of staff for trial run / running in period will be made by the successful tenderer. However, diesel shall be provided by the department. The date of taking over of the D.G. Set after trouble free operation during the trial run /running in period shall be the date of acceptance / taking over.

Painting of all exposed metal surfaces of equipments and components with appropriate colour.

Clearance/ Approval of the complete installation from CPCB/ State Pollution Control Board, Central Electricity Authority (CEA)/ Local Bodies and other licensing authorities, wherever required.

4.0 Acceptable make:

Approved makes of materials to be used in the work have been appended with tender Document.

5.0 Diesel Engine

5.1 Engine rating

The engines shall be of standard design of the original manufacturers. It should be 4 stroke cycles, water cooled, naturally aspirated / turbo charged (as per manufacturers standards) diesel engine developing suitable BHP for giving a power rating as per ISO 8528 part- I in KVA at the load terminals of alternator at 1500 RPM at actual site conditions.

The engines shall be capable for delivering specified prime power rating at variable loads for PF of 0.8 lag with 10% overload available in excess of specified output for one hour after every 12 hours. The average load factor of the engine over period of 24 hours shall be 0.85 (85%) for prime power output. The engines shall conform to BS 5514/ BS 649/ IS10000/ ISO: 3046 amended up to date.

6.0 Control Panel

6.1 Location:

Associated control panel of DG set can be located inside the acoustic enclosure or outside the acoustic enclosure as per the manufacturer's standard. In case the AMF panel is to be installed outside the acoustic enclosure, it should be closer to the acoustic enclosure in consultation with the Architect.

7.0 Foundation

Scope: This section covers details of foundations for DG set with acoustic enclosures.

Genset with acoustic enclosure:

8.0 Acoustic enclosure:

8.1 The enclosure shall be made of from OEMs only, who are approved / certified by CPCB.

8.2 The acoustic enclosure shall be designed and manufactured confirming to relevant standards suitable for outdoor installation exposed to weather conditions, and to limit overall noise level to 75 dB (A) at a distance of 1 metre from the enclosure as per CPCB norms, as amended up to date, under free field conditions.

8.3 The construction should be such that it prevents entry of rain water splashing into the enclosure and allows free & quick flow of rain water to the ground in the event of heavy rain. The detained construction shall confirm to the details as under:

8.4 The acoustic enclosure will be made on the basis of modular construction i.e made in parts and can be assembled or disassembled at site. All members will be properly gasketed and bolted together. The structure should be weather proof.

8.5 The enclosure will be totally enclosed type made of high quality CRCA sheet of thickness at least 16 SWG.(1.6 mm)

8.6 The sheet metal components shall be hot dip seven tanks pre-treated before powder coating. The enclosure shall be powder coated (inside as well outside) with a special pure polyester based powder.

All nut and bolts / external / hardware shall be made of Stainless Steel.

8.7 Sound proofing of the enclosure shall be done with high quality Fire Retardant insulation material i.e. Glass wool / mineral wool of appropriate thickness confirming to relevant IS. The sound proofing materials would be further covered with fine glass fiber cloth and would be supported by perforated MS sheet duly powder coated.

8.8 The doors shall be gasketed with high quality gaskets to prevent leakage of sound and the door handles shall be lockable type.

8.9 There shall be a provision for filling fuel from outside the enclosure with locking arrangement. Fuel tank should have provision for cleaning.

8.10 The provision of external drain plug shall be kept for draining lub oil and diesel.

8.11 Especially design attenuators shall be provided to control sound at air entry exit point.

8.12 Especially design residential silencer shall be provided within the enclosure to reduce exhaust noise.

8.13 Adequate ventilation shall be provided to meet total air requirement. If necessary suitable numbers of axial flow fan and exhaust fan of suitable dia meter shall be provided as per manufacturer.

8.14 The temperature rise inside the enclosure should not be more than 50 C for maximum ambient above 40 deg.C and it should be below 100 C for ambient below 40 deg.C.

8.15 Temperature Control Relay which continuously indicates the inside temperature of the canopy with variable setting for tripping the generator.

8.16 There shall be a provision of emergency shutdown from outside the enclosure.

8.17 Acoustic enclosure will be provided with flexible exhaust pipe connection with adequate and suitable arrangement of mounting of the residential silencer mounted on the top and concealed in the body of the enclosure. The exhaust pipe will be provided with asbestos rope insulation of 10mm thick and covering with aluminium foil. The exhaust pipe inside the enclosure must be lagged (except below).

8.18 The DG set will be provided with special spring mounted vibration damper to eliminate the vibration when DG set is working on full load.

8.19 The front panel should include engine RPM meter electrically operated.

8.20 The Fuel gauge shall have electrically operated – fuel gauge shall have to inside the enclosure.

8.21 There should have a provision of DC Emergency light operated automatically with door opening.

8.22 The inside of the enclosure shall be illuminated by the suitable rating LED lamps/Fixtures controlled by a 5A switch for adequate lighting during servicing etc. of the DG Set. The power supply to this luminaire should be from the load side of the AMF Panel so that it can remain energized under all conditions.

9.0 Inspection and Testing

The successful tenderer will arrange staff / fuel / POL for test run at his cost.

9.1 Testing shall necessarily be carried out at factory / manufacturer premises in presence of representative of the department/as per decision of Engineer-in-Charge.

9.2 For testing following procedure will be followed: All major items / equipments i.e. engine and alternator in assembled condition, associated electrical control panels etc. shall be offered for inspection and testing at factory / manufacturers works. The successful tenderer shall give a notice of minimum two weeks for carrying out such tests. The Engineer-in-charge / or his authorized representative shall witness such inspection & testing at mutually agreed date. The cost of the Dept's representative's visit to the factory will be borne by the Department.

9.3 The department also reserves the right to inspect the fabrication job at factory and successful tenderer has to make arrangements for the same.

9.4 DG set will be tested on load of unity power factor for the rated KW rating. During testing, the DG set covered under scope of the work, shall be operated for a period of 12 hours on the rated KW at DG set's KW rating i/c 1 hour of 10% over load after continuous run of the 12 hours. During testing all controls / operations safeties will be checked and proper record will be maintained. Any defect / abnormality noticed during testing shall be rectified. The testing will be

declared successful only when no abnormality / failure is noticed during the testing. The DG set will be cleared for dispatched to site only when the testing is declared successful by authorized representative / Engineer-in-charge.

9.5 Trial Run/ Running-in-Period

After successful testing of the DG Set, a trial run at available load will be carried out for 120 Hours or 15 Days whichever is earlier. The DG Set will be operated and a log of all relevant parameters will be maintained during this period. The arrangement of staff for trial run/ running in period will be made by the successful tenderer. However, diesel shall be provided by Department. The contractor will be free to carry out necessary adjustments. The DG Set will be said to have successfully completed the trial run, if no break-down or abnormal/ unsatisfactory operation of any component of the entire installation included in the scope of work of the contract, occurs during this period. After this the DG Set will be made available for beneficial use. After the DG Set has operated without any major break-down/ trouble, it shall be taken over by the department subject to guarantee clause of the contract. This date of taking over of the DG Set, after trouble free operation during the trial run/ running-in period, shall be the date of acceptance/ taking over.

9.6 Safety measures

All equipments shall incorporate suitable safety provisions to ensure safety of the operating personnel as per manufacturers' standard practice.

9.7 STATUTORY CLEARANCE(S)

Approval/ clearance of the complete installation shall be obtained by the contractor from CPCB/ State pollution Control Boards/ Local Bodies/ Central Electricity Authority (CEA)/ other licensing authorities wherever required. However, application shall be made by Department and any statutory fee, as applicable, shall be paid by Department directly to the govt. authorities concerned.

10 TERMS OF PAYMENTS

The following percentage of contract rates for the various items included in the contract shall be payable against the stage of work shown herein.

S.N	Stage of work	Percentage of Rate	
		DG set/AMF/LT Panels	All other Items
A	After initial inspection (wherever specified) & delivery at site in good condition on pro-rata basis	80%	75%
B	On completion of pro-rata installation	10%	15%

C	On commissioning and completion of successful running in period & taking over of the equipments by the department.	5%	5%
D	At the time of payment of final bill	5%	5%

Clause-18**List of mandatory machinery, tools and plants to be deployed by the contractor at site**

1.	Steel/Aluminum Ladder 1.5 m to 8 m.	2 Nos.
2.	Chase cutting machines.	2 Nos.
3.	Electrical wire drawing equipment.	2 Set.
4.	Torque wrench for nut/bolt/screws.	2 Nos.
5.	Conduit die set.	2 Set.
6.	Pipe vice.	1 No.
7.	Bench vice.	1 No.
8.	L.T. Megger 500/1000 volts.	1 No.
9.	Tong Tester.	1 No.
10.	Multimeter.	1 No.
11.	Hydraulically operated & hand Operated crimping machine.	1 No.
12.	Earth tester.	1 No.
13.	Portable Ordinary drilling machine.	2 Nos.
14.	Portable Hammer drilling machine.	2 Nos.
15.	Overhead conduit puller.	1 No.

LIST OF MAKE OF MATERIALS:-

PACKAGE I : Internal Electrical Installations		
S.NO	Name of the Product	Approved Makes
1	PVC insulated copper conductor FRLS copper ISI Marked	Havells/RR Kabel/KEI/ Polycab
2	MCB / ELCB/RCCB / DB/ Isolator	Legrand/Siemens/Schneider/ L&T
3	XLPE UG Aluminium/Copper LT Cable	Havells/ KEI/ RR Kabel/ Polycab
4	Cable glands and cable lugs	Jainsons / Comet / Dowells / Prabath/ Polycab/ Gripwel/ Raychem.
5	DWC/ HDPE	Gemini / Rex /Duraline/prince/supreme
6	PVC Conduit (ISI Marked) medium class	Avonplast/AKG/Precision/Modi
7	GI Pipe(ISI Marked)	Jindal / TATA / SAIL.
8	Modular Switches & Sockets, Fan Regulator,RJ-45 Data Socket / GI Boxes/TV/Telephone sockets	Legrand-Myrius/ Northwest-NOWA / Schneider (opale)
9	BLDC Fans (Ceiling Fans)	Atomberg –Efficio /Havells /Crompton /Orient
10	Exhaust Fan/Wall Fans / Pedestal Fans	Crompton/Orient/Havells/Almonard
11	All types of LED Fittings (Indoor / Outdoor Light Fittings)	Crompton /Phillips/Wipro/
12	Electrical LT Panel Boards/ Feeder Pillars/ Meter Boards/ Control & Relay Panels.	Manufacturer having in-house 7 tank process, powder coating facility, CNC Machine having CPRI approval for relevant bus bar rating (The decision of the Engineer – in- charge will be final and binding).
13	Change over Switches , SDFU	Legrand/Siemens/Schneider/ L&T
14	Moulded Case Circuit Breaker/Motor protection circuit breaker Electric	Legrand/Siemens/Schneider/ L&T
15	Water Coolers	Bluestar/ Voltas/ Usha

16	Ammeter / Voltmeter / Combined Meters/Analogue panel meters	AE / L&T / C&S / Conserve/ Kaycee / Socomec(Diris) .
17	CMS	Legrand/OBO/MK
18	MS Conduits (ISI Marked)	AKG/BEC/RMCON / Steel Kraft
19	Connector/Terminal block	Wago/Elemac/Phoenix
20	Rising main, End Feed Unit,Tap Off Box	C&S/Legrand/Schneider/Siemens/L&T
21	ACB 415 V, 400 A-2000 A	Legrand/Siemens/Schneider/ L&T
22	Selector Switch	BCH/Rishabh/Conserv/Kaycee/AE/
23	Bollards, post of lantern	K-Lite/Philips/Wipro
24	UPS	Numeric, Scheieder, Fuzi, Vertiv,
25	Indication lamps,	L&T, Siemens, Schneider, GE, BCH, C& S Electric
26	Pumps	Ksb/Texmo/kirlosakar
27	UPVC Piping & Accessories	Ashivard / Finolex / Avonplast / Precision
28	push buttons, selector switch	L&T, Siemens, Schneider, GE, BCH, C& S Electric
29	Octagonal poles	Bajaj/ Chennai poles/Transrail/ Utarkash
30	SPD	OBO/Legrand/schenider/L&T
31	Coaxial cable	Havells/RR Kabel/Finolex/ Polycab
32	Cat6 cable	Molex/Systimax/Panduit/ Legrand/commscope
33	Pumps	Ksb/Texmo/kirlosakar
34	Submersible Cable	Havells/RR Kabel/KEI/ Polycab
35	Split AC	Voltas/Bluestar/daikin/Hitachi
36	AC Stabilizer	V-Guard / Microtek / Everest / Crompton

37	IP based camera, NVR	Honeywell / Bosch/ Pelco/Axis / Tyco/
38	Double Distillation unit	Labsil/Borosil/Riviera/Bhanu/Infusil/Equtron
39	Deep Freezer	Bluestar/Western/Celfrost/Westfrost/Godrej
40	Double Door Refrigerator	Haier/Samsung/Whirlpool/LG/Godrej

PACKAGE C2 : DG SET

S.NO	Name of the Product	Approved Makes
1	Al. armored XLPE / 1100 volt grade Alu. Cables , HT cable	Refer list of approved makes in Internal Electrical Installations & External Electrical.
2	MCB, MCB DB, Isolator, Time switch, Contractor, Cable end box etc.	
3	MCCB	
5	Meters, MF meters	AE, LK, Conzerv, Trinity, Secure, IMP, Minilec, HPL, C&S Electric / Rishav, Elmeasure
6	Indication lamps, push buttons, selector switch	LK, Siemens, Schneider, GE, BCH, C& S Electric
7	CTs / PTs	Kappa, AE, Savio, ECS, Pragati, Precise, LK
9	DWC Pipe	ISI marked of REX / Gemini/Supreme / Prince
10	Cable lugs / glands	Dowells, Gripwel, Jainsons, Comet
11	D.G. Set	
	a) Diesel Engine	Cummins / Caterpillar / Perkins / Mitsubishi / Kirloskar – KOEL Green
	b) Alternator	Kirloskar – Green / Stamford / Leroy Somer / Crompton
	c) AMF Panel	As per OEM / OEA of DG Set – Inbuilt
12	Other Electrical Panels	The manufacturers must have 7 tank process plant, powder coating facility, CNC machines and also have CPRI test certificate of relevant bus bar rating not older than 5 years

		from the date of call of tender.
13	MS channels, Steel TMT bars, MS pipes	SAIL/Jindal/TATA/RMNL vizag/JSW

Note : In case make of any equipment or material is not specified in the NIT the decision of Engineer-In-Charge in this regard will be final

EXECUTIVE ENGINEER (E) (COIMBATORE)

PART – C

Name of Work : Providing 1 no 62.5 KVA DG set, replacement of outlived fans and fittings and SDBs etc at GST Building, Tuticorin.

S.No	DSR E&M 2025 /MR	Description of Item	Qty	Rate	Unit	Amount
1		Supplying, Installation, Testing & Commissioning of 'Silent Type Diesel Generating set as per CPCB IV + or better norms along with having Prime Power Rating of KVA as below, 415 volts at 1500 RPM, 0.8 lagging power factor at 415 V suitable for 50 Hz, 3 phase system & for 0.85 Load Factor, including testing at factory and site with fuel, load for test and other necessary arrangements Complete as per CPWD specifications, should have QR code which should contain drawing, test report OEM manual, Geo- Tag of manufacturing location, rating plate as per relevant IS Code etc. and consisting of the followings:				
		(A) Diesel Engine:				
		Tourbocharged Diesel engine 4 stroke water cooled, multi cylinder, dynamically balanced fly wheel, electric start of suitable BHP at 1500 RPM suitable for above output of alternator at 40 OC, 50% RH & at 1000 Meter MSL , capable of taking 10% over loading for one hour after 12 hours of continuous operation. The engine will be with Electronic governor, Dry type Air filter with service indicator, first filling of engine fuel (after commissioning) lubricating Oil, Coolant and other consumables complete with all the required accessories, the Electronic governor shall be as per ISO 8528.The engine shall comply to the latest CPCB norms (CPCB IV + or better) and Conforming to BS 5514, BS 649, IS 10000, IS 10002, IS 13018 and as per CPWD specifications.				
		(B) Engine mounted Instrument Panel fitted with and				
		having digital dis Plate for following				
		(i) Start-stop switch with key				
		(ii) Water temperature indication				
		(iii) Lubrication oil pressure indication				

		(iv) Lubrication oil temperature indication				
		(v) Battery charging indication and Voltage indication				
		(vi) RPM indication				
		(vii) Over speed indication				
		(viii) Low lubrication Oil trip indication				
		(ix) Engine Running Hours indication				
		(x) Fuel Level				
		(C) Alternator:				
		Synchronous alternator rated of appropriate KVA, 415 volts at 1500 RPM, 3 phase 50 Hz, AC supply with 0.8 lagging power factor at 40 OC, 50% RH & at 1000 Meter MSL. The alternator shall be having Screen Protected Drip Proof (SPDP) enclosure IP23, brushless, continuous duty, dynamically balanced rotor, capable of taking 10% over loading for one hour after 12 hours of continuous operation, self cooled, self-excited and self-regulated through AVR conforming to IS13364(Part 2)/IS: 4722/BS 2613 suitable for tropical conditions and with class- H insulation.				
		(D) Base Frame & Foundation:				
		Both the engine and alternator shall be mounted on suitable base frame made of MS channel with necessary reinforcement which shall be installed on suitable cement concrete foundation and vibration isolation arrangement as per recommendations of manufacturer.				
		(E) FUEL TANK:				
		Daily service fuel tank of suitable litres capacity as per CPWD Specifications, fabricated out of 3 mm thick M.S. sheet complete with all standard accessories and fuel piping between fuel tank and diesel engine with MS class 'C' pipes of suitable dia. Complete with valves, level indications & accessories as required as per specifications.				
		(F) Exhaust System: Dry exhaust manifold with hospital type exhaust silencer and catalytic convertor.				

		(G) Starting System: 12V/24V DC starting system comprising of starter motors: voltage regulator and arrangement for initial excitation complete with suitable numbers of batteries (180 AH capacity lead acid SMF type) as required as per specifications. The battery shall be housed inside the acoustic enclosure of DG Set.				
		(H) Acoustic and weather proof enclosure with arrangement for fresh air intake for cooling of the engine & alternator, extraction, discharging hot air in to the atmosphere and the temperature rise inside the enclosure, noise level outside enclosure. The acoustic enclosure should be suitable for cable connection/connection through bus-trunking. Such arrangements on acoustic enclosure should be water proof & dust-proof conforming to IP-65 protection. The enclosure shall be as per CPCB IV + or better norms etc. and as per CPWD specifications.				
		(I) AMF Panel: Free standing floor mounted IP 42 automatic mains failure control panel including auto by-pass, suitable for KVA as below for silent type DG set complete with relays, timers, set of CTs for metering & protection and energy analyser to indicate currents, phase and line voltages, frequency, power factor, KWH, Kilo Volt Ampere Reactive Hour (KVARH), KVA (Phase & Total), KW & provision for overload, short circuit, restricted earth fault, under frequency, power (aluminium) and control (copper) cabling of suitable size upto 15 meter between AMF panel, LT Panel and DG Set including connection interconnection etc. as required, all complete and inter locking and communication/ Ethernet /RS485/SNMP port open protocol for BMS integration including suitable software, the panel shall be of DG Set OEM make etc. as per approved by Engineering in charge and including the following:				

		1. Suitable numbers and appropriate capacity 4 pole motorised electrically operated draw out with cradle type 3 position ACB/ MCCB with electronic release for O/C & E/F and shunt trip. 2. Auto/Manual/Test/Off selector switch 3. Protection for under and over voltage phase reversal (2 nos Over voltage relay, 2 Nos. reverse power relay and 2 Nos. under voltage relay). 4. 3 Sets of current transformers 15 P 10 accuracy for protection and 15 VA class-I for metering 5. Energy analyser unit to indicate current, Voltage(LN & L_L), kW, kVA (Phase & Total), Frequency, KWH, PF. 6. LED Indicating lamps for load on mains and load on set 7. Fuse/ MCB for instruments 8. Battery charger, complete with transformer/ rectifier, D.C. voltmeter and ammeter, selector switch for trickle, off and boost and current adjustment.				
		9. Main supply failure monitor 10. Supply failure timer 11. Restoration timer 12. Control unit with three impulse automatic engine start/stop and failure to start lockout. 13. Impulse counter with locking and reset facility. 14. ON/OFF/Control circuit switch with indicator				
		15. Audio/Video annunciation for (i) High water temperature (ii) Low lubricating oil pressure (iii) Engine over speed (iv) Engine fails to start (v) Full load/maximum load warning				

		16. Protection for over/under Frequency, Loss of AC sensing, Over Current, Unbalancing load with suitable number of relays and accessories17. Maintenance notification based on Engine Run Hour & due date.18. Load Management through PLC to achieve auto opening and closing of incomer breakers, bus coupler switching of essential panel , interlocking providing signal to AMF Panel for load status and AMF shall give command to DG Set to auto start / auto stop depending upon load status and requirement etc. and necessary hardware and software required to perform the operation shall be provided by the contractor including all control wiring.				
	29.1.5	62.5 KVA	1	597453.00	each	597453.00
2		Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.				
	1.21.1	a) 20 mm	100	151.00	Mtrs	15100.00
	1.21.2	b) 25 mm	50	168.00	Mtrs	8400.00
3		Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface/ recessed steel/ PVC conduit as required.				
	1.17.3	a) 3 x 1.5 sq. mm	50	104.00	Mtrs	5200.00
	1.17.21	a) 3 x 4 sq. mm	50	222.00	Mtrs	11100.00
	1.17.24	b) 6 x 4 sq. mm	30	424.00	Mtrs	12720.00
4	2.3	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 volts, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator)				
	2.3.2	a) 8 way, Double door	6	2773.00	Each	16638.00
	2.3.3	a) 12 way, Double door	2	2871.00	Each	5742.00

5		Supplying and fixing of following ways surface/ recess mounting, vertical type, 415 V, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 A tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCBs (but without MCBs and incomer) as required. (Note : Vertical type MCB TPDB is normally used where 3 phase outlets are required.)				
	2.5.2	8 way (4 + 24), Double door	1	10724.00	Each	10724.00
6		Supplying and fixing 5 amps to 32 amps rating, 240/415 V, 10kA, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
	2.10.1	a) Single pole	70	285.00	Each	19950.00
	2.10.4	b) Triple pole	2	1070.00	Each	2140.00
7	2.12	Supplying and fixing following rating, double pole, 240 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
	2.12.1	40 amps	8	472.00	Each	3776.00
8	9.1	Supply, Installation, Testing and Commissioning of ceiling fan with Brush Less Direct Current (BLDC) Motor, class of insulation: B, 3 nos. metal (Aluminium alloy) blades, 30 cm long down rod, 2 nos. canopies, shackle kit, safety rope, copper winding, steel/Al body. Power Factor not less than 0.9, Service Value (CM/M/W) minimum as below, 350 RPM (tolerance as per IS : 374-2019), THD (Total Harmonic Distortion) less than 10%, remote (preferably mobile app based) for speed control and all remaining accessories including safety pin, nut bolts, washers, temperature rise=75 °C (max.), insulation resistance more than 2 mega ohm, suitable for 230 V, 50 Hz, single phase AC supply Ceiling Fan compliant to IS 374:2019 fan i/c external connections with 1.5 sq.mm FRLS/HFFR, PVC insulated copper conductor single core cable and earthing etc. as required.				
	9.1.3	1200mm, service value ≥ 6.0 CM/Min/Watt, air delivery 210 CM/Min (Minimum)	20	2882.00	Each	57640.00
9	9.1.4	1400mm, service value ≥ 6.0 CM/Min/Watt, air	10	2913.00	Each	29130.00

		delivery 245 CM/Min (Minimum)					
10	8.1	Supplying, Installation, Testing & Commissioning of LED Recessed/ surface Down lighter (Round/ square/ Rectangular) SMD type of following body material with PMMA and prismatic diffuser and construction as per IS : 10322 with driver as per the requirement with Driver efficiency >85%, Operating voltage AC 140-270 Volt, frequency 50/60 hz, Operating temp range -50C to 400C, internal surge protection of 2.5 KV with Short & Open circuit protection ,THD < 10% , P. F.≥0.95, IP20, CRI >80, UGR (Unified Glare Rating) < 19, Flicker free (flicker should be below 5%), life time (LED, Driver & electrical circuitry), of minimum 50000 Burning Hours with 70% of initial Lumen maintained till life ends, CCT 3000°K /4000°K / 5700°K / 6500°K (As per ANSI Bin), SDCM (Standard Deviation Colour Matching) <3, Maximum power consumption should not more than the specified rating and Fixture shall be confirming to relevant BIS standards. Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing Complete in all respect i/c external connections with 1.5 sq.mm FRLS/HFFR, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM warranty. System lumen efficacy ≥105 and <120 lm/Watt output . LM79 & LM80 Test report and all testing required for LED fixtures as per BIS shall be submitted. Shape size and CCT shall be as approved by Engineer-in-Charge as per requirement. (Thermal management: heat sink of aluminium housing such that LED junction temperature shall not rise above 90°C) Powder coated die cast /Extruded aluminium Body including trim.					

	8.1.3	12 - 15 watt	15	715.00	Each	10725.00
11	8.6	Supplying, installation, Testing & Commissioning of Panel light 2x2 ft., of following body material and construction as per IS : 10322 with driver as per the requirement with Driver efficiency >85%, Operating voltage AC 140-270 Volt, frequency 50/60 hz, Operating temp range -5 0C to 40 0C, internal surge protection of 2.5 KV with Short & Open circuit protection, THD < 10% , P. F.≥0.95, IP20, CRI >80, UGR (Unified Glare Rating) < 19, Flicker free, (flicker should be below 5 %), life time (LED, Driver & electrical circuitry), of minimum 50000 Burning Hours with, 70% of initial Lumen maintained till life ends as per LM80 extrapolation IES TM-21-11 report, CCT 3000°K / 4000°K / 5700°K /6500°K (As per ANSI Bin), SDCM(Standard Deviation Colour Matching) <3, Maximum power consumption should not more than the specified rating and Fixture shall be of relevant BIS standard. Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. complete in all respect i/c external connections with 1.5 sq mm FRLS/HFFR, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM warranty. System lumen efficacy ≥105 <120 lm/Watt output . LM79 & LM80 Test report and all testing required for LED fixtures as per BIS shall be submitted. Shape size and CCT shall be as approved by Engineer-in-Charge as per requirement. (Thermal management: heat sink of aluminium housing such that LED junction temperature shall not rise above 90°C). Powder coated die cast /Extruded aluminium Body (Thickness > 1.20 mm)				
	8.6.4	36 watt	15	2508.00	each	37620.00

12		Supplying, Installation, Testing & Commissioning of LED surface mounted Batten light of following body material and construction as per IS : 10322 with driver (Replaceable) as per the requirement with Driver efficiency >85%, Operating voltage AC 140- 270 Volt, frequency 50/60 hz, Operating temp range -5 °C to 40 °C, internal surge protection of 2.5 KV with Short & Open circuit protection, THD < 10%, P. F.≥0.95, IP20, CRI >80, Flicker free, (flicker should be below 5 %), life time (LED, Driver & electrical circuitry), of minimum 50000 Burning Hours with 70% of initial Lumen maintained till life ends, CCT 3000°K / 4000°K / 5700°K /6500°K (As per ANSI Bin), SDCM(Standard Deviation Colour Matching) <3, Maximum power consumption should not more than the specified rating and Fixture shall be of relevant BIS standard. Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. complete in all respect i/c external connections with 1.5 sq mm FRLS/HFFR, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM warranty. System lumen efficacy ≥105 <120 lm/Watt output . LM79 & LM80 Test report and all testing required for LED fixtures as per BIS shall be submitted. Shape size and CCT shall be as approved by Engineer-in-Charge as per requirement. (Thermal management: heat sink of aluminium housing such that LED junction temperature shall not rise above 90°C). Powder coated die cast /Extruded aluminium Body (Thickness > 1.20 mm)				
	8.9.1	18 - 22 watt	90	681.00	each	61290.00

13	MR	Dismantling of following items from the installed position and handing over to client etc as required. a) single/twin box type fittings / modular fittings- 120 nos b) Ceiling fans - 30 nos c) Defective wiring i/c wall mounted panel boards, SDBs etc. - 1 Lot	1	10000.00	Job	10000.00
14	5.2	Earthing with G.I. earth pipe 4.5 metre 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.	2	7658.00	Each	15316.00
15	5.4	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 Meter long etc. with charcoal/ coke and salt as required.	2	8351.00	set	16702.00
16	5.6	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 Meter long etc. with charcoal/ coke and salt as required.	2	15004.00	set	30008.00
17	5.10	Providing and fixing 25 mm X 5 mm copper strip in 40 mm dia G.I. pipe from earth electrode including connection with brass nut, bolt, spring, washer excavation and re-filling etc. as required.	15	1638.00	mtr	24570.00
18	5.11	Providing and fixing 25 mm X 5 mm G.I. strip in 40 mm dia G.I. pipe from earth electrode including connection with G.I. nut, bolt, spring, washer excavation and re-filling etc. as required.	15	755.00	mtr	11325.00
19	5.14	Providing and fixing 25 mm X 5 mm copper strip on surface or in recess for connections etc. as required.	10	1246.00	mtr	12460.00
20	5.15	Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required.	10	287.00	mtr	2870.00

21	5.13	Providing and laying earth connection from earth electrode with 4.00 mm dia copper Wire in 15 mm dia G.I. pipe from earth electrode including connection with copper thimble excavation and re-filling as required.	25	400.00	mtr	10000.00
22	5.17	Providing and fixing 4.00 mm dia copper wire on surface or in recess for loop earthing as required.	20	173.00	mtr	3460.00
23	MR	Dismantling of existing defective TP&N SDFU from wall and replacing it with 1 no 125 A TP&N SDFU with enclosure and along with DIN fuses, pdg. Suitable size cable end box, fixing it on wall with suitable size MS clamps, necessary cabling, testing etc as required.	1	25000.00	LS	25000.00
Total						1067059.00

GENERAL ABSTRACT**SCHEDULE OF QUANTITY**

Name of work: - ***Providing 1 no 62.5 KVA DG set, replacement of outlived fans and fittings and SDBs etc at GST Building, Tuticorin.***

Name of the Contractor

Sl.No.	Name of component	Estimated cost (Rs)	Percentage above or below the estimated cost	% in Figures	Total Cost (Rs)
1	As Per Schedule	Rs. 10,67,059.00/-			
	Total	Rs. 10,67,059.00/-			

1. The Column Nos 4&5 are mandatory to be filled by the bidders/ tenderers. If all these columns are left blank, the tender become invalid.

2. The amount in figures in column No.6 shall appear automatically corresponding to the percentage quoted in column No.4 & 5.

3. The tenderer is need to quote the percentage only above or below or at par with the estimated cost to cover all the rates of item covered under the respective packages.

4. The percentage shall be written in 2 (two) place of decimal.

5. If the percentage selection in column No 4 is " At Par", by default the percentage will be considered as " Zero" only. In other words if "At par" is selected in column No.4, then no need to fill column No.5

6. The rate for the payment of each item will be - measured quantity x estimated cost of that particular item x tender percentage corresponding package respectively.

Signature of Contractor

Executive Engineer(E),
CPWD, Coimbatore.