



# JUBILEE ENGLISH HIGH SCHOOL - CBSE

Affiliated to Central Board of Secondary Education, New Delhi  
Affiliation No.830705, School Code:45730

12th Main, Phase II, NRI Layout, T C Palya Post, Bengaluru - 36

Phone: 6366372313,6366372314, Land Line: 080-41170072

Email: [info@jubileeinstitutions.in](mailto:info@jubileeinstitutions.in), Website: [jehscbsenri.in](http://jehscbsenri.in)

JEHS/ADMN/TND/Ele-01

Date:20.11.2025

## NOTICE INVITING QUOTATION

### FOR ELECTRICAL RE-VAMPING AND ALLIED WORKS

Kerala Samajam Dooravaninagar, a society registered under the Societies Act of Karnataka, is running various educational institutions. Jubilee English High School (CBSE), located at Survey No. 9, 12th Main Road, NRI Layout, Bengaluru – 560036, is one among them. The school campus extends across more than three acres of land with a built-up area of approximately one lakh square feet.

A need has been identified to **Re vamp and upgrade the electrical installations** in the JEHS campus. The present sanctioned load is **49 kW**. Electrical equipment and wiring have been added over the years based on evolving requirements, and additional needs since arisen. It has now been decided to carry out complete revamping and an electrical upgrade as recommended by our electrical consultant. The **estimated Bill of Quantities (BOQ)** and **specifications** are attached herewith.

Intending bidders who meet the eligibility criteria specified in this NIQ are invited to quote their **best rates** in the bill of quantities.

### Eligibility of Bidders

1. The contractor must possess a **valid electrical contractor's license** issued by the competent authority.
2. The contractor must have a **minimum of 5 years' experience** in executing similar electrical projects.
3. The contractor must have **adequate manpower and other resources** to execute the project.
4. Liaison with **BESCOM** is involved; therefore, the contractor must have prior **experience in BESCOM liaisoning**.

### Earnest Money Deposit (EMD)

Contractors shall submit an **EMD of ₹2,00,000 (Rupees Two Lakhs only)** in the form of a crossed cheque/DD/Banker's Cheque in favour of **Jubilee English High School**.

- The EMD of **unsuccessful bidders** will be returned in original.
- The EMD of the **successful bidder** shall be converted into a **Security Deposit**, which will be refunded after successful completion of the project **without interest**.

## Period of Completion

The project must be completed **within 90 days** from the date of award of work.

## Warranty

The contractor shall provide a **one-year warranty** for the quality of goods supplied and for the workmanship of all executed works.

## Payment Terms

- Part payments will be made based on **Running Account (RA) Bills**, certified by the consultant, and submitted on a **weekly basis**.
- A **security deposit of 5%** of the bill amount will be retained and released after the **defect liability period** of 12 months.
- The contractor must possess **valid GST registration** and comply with all statutory requirements.
- The contractor shall arrange an **insurance policy covering all risks** of men and materials during the execution period.
- The contractor shall attach the following documents along with the quotation:
  - Valid GST Registration Certificate
  - PAN Card
  - Aadhaar Card
  - Experience Certificates

## Contact for Clarification

For any clarification, you may contact:

**Mr. Chandrasekhara Kurup**, Secretary – DKSES

Mobile: **9945842273**

Email: **dkshsjubilee@yahoo.com**

## General Conditions

The school reserves the right to **cancel this NIQ at any time** without assigning any reason. Sealed quotations along with all required documents shall be addressed to:

**The Secretary – DKSES**

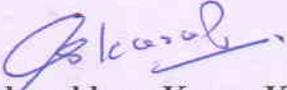
Jubilee English High School

12th Main, NRI Layout

Bengaluru – 560036

Email : **dkshsjubilee@yahoo.com**

Last date for receipt of quotation is **30.11.2025**

  
**Chandrasekhara Kurup K**  
Secretary – DKSES

**BILL OF QUANTITIES AND SPECIFICATIONS FOR ELECTRICAL REVAMPING AND ALLIED WORKS**

Item No.	Description	Qty.	Unit	Supply Rate (Rs.)	Erection Rate (Rs.)	Supply Amount (Rs.)	Erection Amount (Rs.)
<p>The scope shall cover supply, installation, testing and commissioning of the total works mentioned above, complete in all respects including miscellaneous and sundry items that may be required but not specifically stated in the BOQ-Specs below.</p>							
1.0	<p><b>DISCONNECTION AND REMOVAL</b></p> <p>The scope covered here relates to revamping the existing 11KV power supply receiving arrangement from BESCOM. Presently, at site, 11KV supply has already been tapped and a transformer installed in the premises. During execution, the contractor shall check on the each of the items and execute <u>only such</u> items where necessary <b>All the works mentioned below in this item shall be as per BESCOMs specs and meet their approval including the makes of all components and equipments.</b></p>						
1.1	Dismantling and removal of existing 63 KVA transformer and handing over to BESCOM	1	Lot	-			
1.2	Disconnection of existing 11KV (HT) 3 core 95sqmm cable at the existing 63KVA transformer end and reconnection of the same to the proposed 100KVA transformer	1	Lot	-			
1.3	Disconnection of existing 1.1KV (LT) 3 1/2 C x 70sqmm cable at the existing 63KVA transformer end and reconnection to the proposed 100KVA transformer	1	Lot	-			
1.4	Dismantling and removal of existing LT main panel and handing over to Jubilee English High School	1	Lot	-			
2.0	<p><b>100kVA TRANSFORMER</b></p> <p>Supply, installation, testing and commissioning of 11KV/433V, 100 kVA aluminium wound distribution transformer - oil immersed type complete with all standard accessories, loading, unloading, placement, etc., complete as required.</p> <p>Transformers shall generally comply with IS:1180 and IS:2026 standards with energy efficiency level-2 and also complying with BESCOM norms and requirements of Electrical Inspectorate as applicable to the site installation and jurisdiction area of BESCOM / Electrical Inspectorate. Tenderers is advised to check on the above energy efficiency levels with BESCOM, Inspectorate and any other statutory bodies.</p>	1	No.				
3.0	<p><b>LT PANELS</b></p> <p><b>General specifications</b></p> <p>The floor mounting power panels shall be of compartmentalised cubicle type and conforming to the following -</p> <p>(i) Sheet steel - 2 mm thick for frames and equipment mounting plates 1.6 mm thick for partitions.</p> <p>(ii) Welded construction-with transport sections bolted together. All such joints to be gasketed.</p>						

Item No.	Description	Qty.	Unit	Supply Rate (Rs.)	Erection Rate (Rs.)	Supply Amount (Rs.)	Erection Amount (Rs.)
	<p>(iii) The cubicles shall be totally dust and vermin proof conforming to IP-54.</p> <p>(iv) All doors to be of hinged type except busbar chamber covers, which shall be of bolted type.</p> <p>(v) The construction shall be such as to facilitate easy extension at both ends. SMC supports and heat shrinkable PVC sleeves shall be provided for busbars.</p> <p>(vi) The design shall be such as to have individual feeders in separate segregated compartments, with proper barriers between adjacent feeders, bus bar chamber and cable termination chambers.</p> <p>(vii) All feeders in compartmentalised design for housing MCCBs shall have door interlocking feature such that the door cannot be opened with the MCCB in closed position.</p> <p>(viii) All feeder terminations shall be properly terminated to receive Aluminium heavy duty power cables or 1.1kV grade stranded copper cables as the case may be. Adequate space shall be provided to facilitate proper and easy terminations.</p> <p>(ix) An Aluminium earth strip / bus of adequate section shall be run throughout the length of the panels to which all earth terminals of the various components shall be connected.</p> <p>(x) The maximum operating height of any component shall not exceed 1700mm</p> <p>(xi) A min. clearance of 25mm between phases &amp; between phases and neutral shall be maintained.</p> <p>(xii) Bus bars shall be of Aluminium.</p> <p>(xiii) Unless otherwise specified, the neutral shall have a rating of 50% of the phase busbars.</p> <p>(xiv) All control wiring shall be carried out with 1.1 KV grade single core PVC cables with stranded copper conductors of min. 1.5 sqmm for potential circuits and 2.5 sqmm for current transformer circuits. The wiring shall be neatly bunched, adequately supported and properly routed. The wires shall be identified by ferrules at both ends.</p> <p>(xv) All routine tests as specified in the Indian Standards shall be carried out in the presence of clients / Consultants and test certificates submitted for approval.</p> <p>(xvi) The tests shall include all operational, functional tests and shall also cover sequencing and interlocking functions of the system.</p> <p>(xvii) Prior to fabrication of the panels, the manufacturer shall submit the following drawings for approval :</p> <p>(a) Single line diagram - power circuit (b) Control circuit diagrams (c) Front view showing layout of components (d) Foundation drawings (e) Bill of components - specs</p> <p><b>Documents</b> Apart from the above, the following documents in 3 sets shall be furnished prior to dispatch / supply :-</p> <p>(i) Routine test certificates of complete panels (ii) Routine test certificates for major components like circuit breakers, relays, etc., (iii) All final drawings as listed in item (xvii).</p>						

Item No.	Description	Qty.	Unit	Supply Rate (Rs.)	Erection Rate (Rs.)	Supply Amount (Rs.)	Erection Amount (Rs.)
	<p><b>Meters</b> All meters shall be of digital type and CT secondaries shall be rated for 5Amp. Load managers EM6400 as specified in the BOQ shall be with RS 485 ports KWH meters wherever specified shall be EM6433 type with RS 485 port</p>						
3.1	<p><b>BESCOM LT METER BOX</b></p> <p>The LT meter box shall be wall-mounted, fabricated from CRCA (Cold Rolled Close Annealed) metal sheet, and powder-coated for durability. It shall be suitable for the installation of the existing BESCOM meter and current transformers (CTs) and shall conform to all applicable rules, regulations, standards, and requirements specified by BESCOM.</p> <p>Please note that the meter and CTs suitable for the BESCOM-sanctioned load of 49 kW are already installed in the existing panel. These components shall be carefully dismantled and reinstalled in the new LT meter box described above.</p>	1	No.				
3.2	<p><b>FLOOR MOUNTING TYPE EB-DG POWER CHANGE OVER PANEL - 1</b> EB-DG power changeover panel rated for 415Volts, 3Phase, 4Wire, 50Hz, as follows -</p>						
A	<p><b>UTILITY POWER SUPPLY INCOMER SECTION</b> <b>BESCOM Incoming feeder consisting of -</b> 1 set min. 250Amps air insulated Aluminium busbars 1 No. 160 Amps 4 pole 25KA manual operated fixed type MCCB with rotary handle MCCB fitted with adjustable thermal magnetic releases and door interlocking kit 3 Nos. indications for R,Y,B phases 3 Nos. Push buttons for acknowledge / reset / test 2 Nos. indications for load on EB or load on DG 1 No. Multi data meter, accuracy class-1, Conzerv make or equivalent 3 Nos. Current transformers, ratio 160/5A, 5 VA class 1 for metering 1 No. FP contactor 1 No. Earth leakage relay adjustable in the range of 1 to 8 Amps complete with associated CBCT. 1 No. line voltage monitor - for EB power sensing 1 No. Emergency off push button 1 No. Hooter (Common)</p>						
B	<p><b>DG SECTION -1</b> <b>Incoming feeder from existing 30 KVA DG set consisting of -</b> 1 set min. 250Amps air insulated Aluminium busbars 1 No. 63 Amps 4 pole 25KA manual operated fixed type MCCB with rotary handle MCCB fitted with adjustable thermal magnetic releases and door interlocking kit 3 Nos. indications for R,Y,B phases 1 No. Multi data meter, accuracy class-1, Conzerv make or equivalent 3 Nos. Current transformers, ratio 63/5A, 5 VA class 1 for MDM metering 1 No. KWH meter, counter type, direct reading , Conzerv make or equivalent</p>						

Item No.	Description	Qty.	Unit	Supply Rate (Rs.)	Erection Rate (Rs.)	Supply Amount (Rs.)	Erection Amount (Rs.)
	<p>3 Nos. Current transformers, ratio 63/5A, 5 VA class 1 for KWH metering            1 No. Earth leakage relay adjustable in the range of 1 to 8 Amps complete with associated CBCT.            1 No. TP contactor            1 No. Neutral contactor            2 Nos. push buttons for On / Off of contactors            1 No. Auto/manual selector switch            2 Nos. push buttons / control switch for start and stop of engine</p> <p>1 No. electronic over current relay with adjustable settings for alarm and trip            1 No. reverse power relay            1 set of control devices to ensure proper functioning with relation to the DG set</p>						
<b>C</b>	<p><b><u>DG SECTION -2</u></b>  <b>Incoming feeder from proposed 30 KVA DG set consisting of -</b></p> <p>1 set min. 250Amps air insulated Aluminium busbars            1 No. 63 Amps 4 pole 25KA manual operated fixed type MCCB with rotary handle            MCCB fitted with adjustable thermal magnetic releases and door interlocking kit            3 Nos. indications for R,Y,B phases            1 No. Multi data meter, accuracy class-1, Conzerv make or equivalent            3 Nos. Current transformers, ratio 63/5A, 5 VA class 1 for MDM metering            1 No. KWH meter, counter type, direct reading , Conzerv make or equivalent            3 Nos. Current transformers, ratio 63/5A, 5 VA class 1 for KWH metering            1 No. Earth leakage relay adjustable in the range of 1 to 8 Amps complete with associated CBCT.            1 No. TP contactor            1 No. Neutral contactor            2 Nos. push buttons for On / Off of contactors            1 No. Auto/manual selector switch            2 Nos. push buttons / control switch for start and stop of engine</p> <p>1 No. electronic over current relay with adjustable settings for alarm and trip            1 No. reverse power relay            1 set of control devices to ensure proper functioning with relation to the DG set</p>						
<b>D</b>	<p><b><u>DG bus coupler</u></b>            1 No. FP contactor            2 Nos. push buttons for On / Off of contactors            1 No. Auto/manual selector switch</p>						
<b>E</b>	<p><b><u>AMF controls</u></b>            ENGINE CONTROLLERS PROVIDED AS STANDARD SUPPLIES BY DG SET SUPPLIERS SHALL BE USED - THE DG SETS ARE OF KOEL MAKE. THE BATTERY CHARGER FOR THE PROPOSED DG SET IS NOT IN THIS SCOPE AS THESE ARE SUPPLIED BY THE DG VENDOR. PLEASE CONSIDER BATTERY CHARGER UNIT FOR EXISTING DG SET            2 Nos. Auto / manual selector switches - for AMF operation</p> <p>2 Sets - DC control relays, auxiliary contactors and timers as required for all functions including interlocking, three attempt starting facility and failure to start lock-out.</p>						

Item No.	Description	Qty.	Unit	Supply Rate (Rs.)	Erection Rate (Rs.)	Supply Amount (Rs.)	Erection Amount (Rs.)
F	<p><b><u>Load monitoring section</u></b> A load monitoring section shall be provided in the lineup consisting of the following</p> <p>i) In the event of power failure or unhealthy power from BESCOM, both the DG sets shall be ON. ii) Depending up on the load at the time of power failure following operations shall be done automatically</p> <ul style="list-style-type: none"> <li>· if load is below 25KVA, only 1No. 30KVA DG set shall be stay ON and another 30KVA DG set shall be OFF automatically</li> <li>· if load is above 25KVA, both 30KVA DG sets shall be in operation</li> </ul> <p>iii) Window displays for total load KVA to represent the combined load at all bus sections shall be provided as follows -</p> <p>&lt;25 KVA &gt;50 KVA</p> <p>The above displays are intended to facilitate the operator in selecting the appropriate DG sets to meet the load demands at any point of time in the manual mode. The inputs for these windows shall be provided by the PLC and the display as existing at the time of power interruption shall be retained during the power interruption period as well.</p> <p>An operating guide shall be attached internally to the door displaying the above</p>						
G	<p><b><u>Outgoing MCB feeders on bus section-1</u></b> 4Nos. 4 pole 63Amps 1No. 4 pole 40Amps 1No. 4 pole 32Amps 3Nos. 2 pole 32Amps</p>						
H	<p><b><u>Outgoing MCB feeders on bus section-2</u></b> 3Nos. 4 pole 63Amps 1No. 4 pole 40Amps 1No. 4 pole 32Amps 3Nos. 2 pole 32Amps</p> <p><b>Note :</b></p> <p>1) 24 volts DC control supplies shall be tapped from the engine batteries. 2) The DG sets have their own controllers which can perform AMF and other automation features for load sharing both for KW and KVAR. 3) PLC with input / output modules, power supply units, communication module, interposing relays, priority selector switch, necessary mounting arrangements, interconnecting wiring, complete in all respects shall be provided for limited purposes as under -</p> <ul style="list-style-type: none"> <li>- interlocking to prevent any inadvertent operations, both in the manual and automatic modes.</li> <li>- summation metering to provide KVA load displays as specified</li> </ul> <p>4) The PLC shall have a UPS backup and shall be able to interact with the engine control unit 5) Required number of selector switches shall be provided to facilitate both manual and automatic operations 6) In the automatic mode, load dependant switching of DG sets shall be provided with priority selection in order to ensure optimum utilisation of captive power based on load conditions.</p>						

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Item No.	Description	Qty.	Unit	Supply Rate (Rs.)	Erection Rate (Rs.)	Supply Amount (Rs.)	Erection Amount (Rs.)
	<p>7) The panels shall be complete with all necessary control wiring, control components, etc., to achieve the above scheme though they may not have been specifically brought out in the above specs.</p> <p>8) All control wiring to be taken to the DG sets shall be terminated in separate terminal blocks - one for engine and another for alternator for each of the three sets.</p> <p>9) Automatic changeover arrangements for control supplies wherever required shall be provided.</p> <p>10) All cable entries and exits shall be from top/bottom</p> <p>11) The engine controllers of the DG sets have features related to AMF operations, load sharing both for KW and KVAR. The DG control panels shall interface with these engine controllers to achieve the desired scheme.</p> <p>12) The incoming and outgoing feeders shall be provided with suitable termination facility to receive aluminium armoured cables 1.1kV grade.</p> <p><b>13) The single line diagram of the AMF panel is also attached for greater clarity</b></p> <p>14) A separate section of 500mm shall be utilise to house all components related to automation, load monitoring section, etc.,</p>	1	No.				
<b>4.0</b>	<p><b><u>WALL MOUNTING DISTRIBUTION BOARDS</u></b></p> <p>The DB's shall be double door type conforming to IP43 protection grade, complete with copper busbars for phases, neutral and earth, all interconnections and mounting brackets as required for installation either surface mounted in electrical rooms or concealed type in walls at locations as directed by clients</p> <p>The quantities mentioned under this item is very approximate with the sole purpose of having a cost provision - the actual quantities that would be required and the types shall be decided based on the site conditions.</p>						
<b>4.1</b>	<b><u>DB's</u></b>						
a)	4 way - ETPN	2	No.				
b)	6 way - ETPN	R.O	No.				
c)	8 way - ETPN	R.O	No.				
d)	12 way - SPN	R.O	No.				
e)	8 way - SPN	4	No.				
<b>4.2</b>	<b><u>RCBO's for incoming - 100mA</u></b>						
a)	2 pole 25Amps	2	No.				
b)	2 pole 40 Amps	2	No.				
c)	4 pole 40 Amps	4	No.				
d)	4 pole 63Amps	4	No.				
<b>4.3</b>	<b><u>RCBO's for incoming - 300mA</u></b>						
a)	4 pole 40 Amps	4	No.				
b)	4 pole 63Amps	4	No.				

Item No.	Description	Qty.	Unit	Supply Rate (Rs.)	Erection Rate (Rs.)	Supply Amount (Rs.)	Erection Amount (Rs.)
<b>4.4</b>	<b><u>MCB's for incoming /outgoing</u></b>						
a)	SP 10-20 Amps 'C' curve for lighting	R.O	No.				
b)	SP 20 Amps 'D' curve for power	R.O	No.				
c)	SP 32 Amps 'D' curve for power	R.O	No.				
d)	DP 10-32 Amps "D' curve for power	R.O	No.				
e)	DP 40-63 Amps "D' curve for power	R.O	No.				
f)	TP 10-32 Amps "D" curve for power	R.O	No.				
g)	TP 40-63 Amps "D" curve for power	R.O	No.				
	<b>Note :</b> The above rates shall be operated for any change in types or quantities during execution						
<b>5.0</b>	<b><u>1.1 KV GRADE HEAVY DUTY PVC INSULATED ARMoured ALUMINIUM CONDUCTOR POWER CABLES</u></b>						
	1.1KV grade XLPE insulated heavy duty armoured Aluminium conductor power cables with extruded PVC inner sheath, GI flat strip / wire armoured, extruded FRLS grade antirhodant and anti termite PVC (ST-2) outer sheathed cable conforming to IS:7098 part-1 with latest amendments.						
	The cables shall be laid in hume pipes / trenches / fixed to walls / columns / slabs, etc.,						
	Rates to be quoted shall exclude preparation of cable trenches / cable trays /pipes wherever they are run in a group.						
	Where cables are to be individually laid or upto two numbers on walls / columns / slabs / false ceiling, etc., rates quoted shall include necessary hardware such as MS flats - MS angles - channels, supports, clamps and saddles as required, anchor fasteners, etc.,						
	The successful contractor shall hence take measurements at site and only the specific requirements shall be supplied and installed in phases based on execution of works at site.						
a)	3 1/2C x 95 sqmm	20	Mtr.				
b)	3 1/2C x 70 sqmm	R.O	Mtr.				
c)	3 1/2C x 50 sqmm	R.O	Mtr.				
d)	3 1/2C x 35 sqmm	R.O	Mtr.				
e)	3 1/2C x 25 sqmm	50	Mtr.				
f)	4C x 16 sqmm	R.O	Mtr.				
g)	4C x 10 sqmm	R.O	Mtr.				

Item No.	Description	Qty.	Unit	Supply Rate (Rs.)	Erection Rate (Rs.)	Supply Amount (Rs.)	Erection Amount (Rs.)
6.0	<b><u>CABLE END TERMINATIONS FOR 1.1 KV GRADE HEAVY DUTY PVC INSULATED ALUMINIUM CONDUCTOR CABLES</u></b> Cable end terminations by crimping complete with all materials like solder less tinned copper lugs with double compression type brass cable glands, gland earthing, insulation tape, flux - two numbers of interconnections between gland earthing strip and nearest earth bus shall be provided. Cable terminations shall be suitable for the following 1.1kV grade XLPE insulated heavy duty armoured Aluminium conductor power cables.						
a)	3 1/2C x 95 sqmm	2	No.				
b)	3 1/2C x 70 sqmm	R.O	No.				
c)	3 1/2C x 50 sqmm	R.O	No.				
d)	3 1/2C x 35 sqmm	R.O	No.				
e)	3 1/2C x 25 sqmm	4	No.				
f)	4C x 16 sqmm	R.O	No.				
g)	4C x 10 sqmm	R.O	No.				
7.0	<b><u>1.1 KV GRADE COPPER CONDUCTOR CONTROL CABLES &amp; TERMINATIONS</u></b>						
7.1	<b><u>CABLES</u></b> 1.1KV grade XLPE insulated heavy duty <b>armoured</b> copper conductor control cables complete with all hardware such as clamps, saddles, etc., for laying in existing cable trenches or cable racks when run in a group. The details as enumerated for laying of power cables above would be applicable here also.  Please also note that power and control cables shall be run separately in cable trays						
(i)	3 Core 2.5sqmm	30	R.M				
(ii)	5 Core 2.5sqmm	R.O	R.M				
(iii)	3 Core 4sqmm	30	R.M				
7.2	<b><u>Cable end terminations for following copper control cables</u></b>						
(i)	3 Core 2.5sqmm	4	No.				
(ii)	5 Core 2.5sqmm	R.O	No.				
(iii)	3 Core 4sqmm	4	No.				
8.0	<b><u>EARTHING :</u></b>						
8.1	Body earthing of DG sets, 415Volts AMF distribution panel, sub distribution boards and all electrical equipments to the earth ring, formation of a main earthing ring and interconnections between earth electrodes.  The rates to be quoted shall include all necessary clamps, saddles, hardwares, fixing arrangements, etc., as required.						

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Item No.	Description	Qty.	Unit	Supply Rate (Rs.)	Erection Rate (Rs.)	Supply Amount (Rs.)	Erection Amount (Rs.)
a)	25 x 6 mm GI	40	R.M				
b)	25 x 3 mm GI	80	R.M				
8.2	Neutral earthing by copper strips - complete with all hardware and accessories						
a)	25 x 3 mm	30	R.M				
b)	No. 8 SWG copper wire	30	R.M				
8.3	Plate type earth electrodes - 600x600x3mm Copper plate as per IS:3043 standards (latest amendments) complete with excavation, filling of charcoal and salt, chamber / civil works, funnel, hinged MS cover, earth pit marker, fasteners, etc., complete as required - for earthing of DG and transformer neutrals	4	No.				
8.4	<b>Maintenance free safe earth electrodes including chemical as per manufacturers recommendations.</b> Earth electrode shall be of 3mtrs long copper-bonded rod with minimum copper bonding of 250micron and pre welded terminal. The electrode shall be duly tested and certified by CPRI. Also, the chemical backfill compound shall be tested & certified by any approved & accredited laboratory in India . Scope shall cover complete with excavation, refilling and interconnection with down conductors as required and shall be in compliance with IS:3043 Earthing Standards	6	No.				
	<b>Note :</b> The number of earth electrodes shall be decreased / increased as necessary to achieve an earth resistance of less than 1ohm as per IS : 3043 standards during installation / commissioning						
9.0	<b><u>SAFETY EQUIPMENTS :</u></b> The quantities indicated below are tentative, for guidance only and only such quantities as actually necessary and insisted upon by Electrical Inspectorate shall be supplied, the unit rate as quoted below shall be applied for the actual quantities supplied. Prior clearance shall be taken before supplies and also considering that some of these items may already be available at the premises.						
9.1	Danger Boards of appropriate voltage grade danger signals, size and style as required by the electrical Inspectorate.	2	No.				
9.2	Fire fighting buckets with stand and sand	3	Set				
9.3	Rubber mats 6.15mm thick, 900mm wide in standard lengths of 1800mm suitable for voltage levels of 415 volts in front of LT switch board	2	No.				
9.4	First Aid Box	2	No.				
9.5	Shock treatment chart mounted in teak wood frame covered with glass and suitable for hanging on wall.	2	No.				
9.6	Hand gloves suitable for working potential upto 11kV.	1	Pair				

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Item No.	Description	Qty.	Unit	Supply Rate (Rs.)	Erection Rate (Rs.)	Supply Amount (Rs.)	Erection Amount (Rs.)
9.7	Dry chemical powder type fire extinguisher 5Kgs capacity cartridge type fitted with gun metal, operational assembly card, CO2 gas cartridge, high pressure discharge hose and Aluminium squeeze, grip nozzle as per IS:2171.	2	No.				
<b>10.0</b>	<b><u>LIAISON / CO-ORDINATION</u></b>  The electrical contractor shall assist and take responsibility for the following -  a) In obtaining clearance from BESCOM, processing necessary applications for enhanced power sanction  b) Preparation of any additional drawings related to his works for submission to Electrical Inspectorate in the desired form, obtaining approval from Electrical Inspectorate for the various drawings and so also approval for the installation itself. Co-ordination with BESCOM, Electrical Inspectorate, Consultants, Owner complete in all respects.- for the entire works undertaken related to revamping.	1	Lot				
<b>Total of items 1.0 to 10.0 Rs.</b>							
				<b>Total including supply and erections</b>			
				<b>GST @ 18%</b>			
				<b>Total including GST</b>			

LIST OF RECOMMENDED MAKES

Sl. No.	COMPONENTS	MAKE
1	MCCB	- ABB / LK(L&T)
2	MCB, RCBOs	- ABB / Legrand (lexic)
3	AMF Controller	- Woodward / C & S
4	Current Transformers	- Kalpa / Kappa
5	Meters, load managers - Digital	- Conzerv / Prok DV's
6	CBCT and ELR	- Conzerv / Prok DV's
7	1.1KV grade XLPE/ PVC insulated heavy duty armoured Aluminium conductor cables	- Apar / RPG / Polycab / KEI
8	MCB Distribution Boards - in sheet steel enclosure	- ABB / Legrand
9	Power Contactors	- Siemens / L&T / ABB

**Note :**

- 1 The successful tenderer shall prior to supply, fabrication, assembly, again furnish a list of makes of different components proposed to be used by them and obtain clearance from Client's / Consultants.
- 2 Clients - Consultants reserve the right to insist on particular makes during execution without any repercussion in costs.

