



No: AAI/RHQ-SR/ENGG/SM (E-E)/WO-02/Pondy/FMC/21-22/138 Date: 28.06.2021

M/s. Lakshmi Electrical Enterprises,
 1C, CLC Works Road,
 New Colony,
 Chrompet,
 Chennai - 600044.

Name of Work: Facility Management Contract of E&M Installations at Puducherry Airport.

REF: 1. AAI E-Bid No: 2021_AAI_78051_1
 2. Tender (Price Bid) opened: 15.06.2021

Dear Sirs,

1. Your tender for the above mentioned is hereby accepted by the Competent Authority on behalf of the Chairman, Airports Authority of India, at the item rates quoted by you totaling to **Rs. 89,99,309/- (Rupees Eighty Nine Lakhs Ninety Nine Thousand Three Hundred and Nine Only)** Plus applicable GST @ 18% which is 20.20% below the estimated cost put to tender of Rs. 1,12,77,571/- Plus applicable GST @ 18%. The quoted amount is exclusive of GST / PF / ESI / Bonus.
2. Senior Manager Engg (E-E), AAI, New Operational Office, Southern Region, Chennai Airport, Chennai Shall be Engineer – in – charge of the work. You are requested to attend this office by **09.07.2021** to sign and complete the contract agreement. The contract Agreement shall be executed on a non-judicial stamp paper of value Rs.100/- (Rupees One Hundred only). The cost of the stamp paper shall be borne by you.
3. Please Deposit Rs. 8,99,931/- (**Rupees Eight Lakhs Ninety Nine Thousand Nine Hundred and Thirty One only**) towards Security Deposit within 10 days from the date of issue of this letter, failing which, the same will be deducted from your running bills as per the Clause of 1-A of Clauses of Contract.
4. You are requested to comply with the provision of Contract Labour (Regulation and Abolition) Act 1970 and contract Labour (Regulation and Abolition) Central rules 1971 and minimum wages act and rules thereof Central and State Governments.

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5. You are also directed to contact Manager (Engg-E), AAI, Puducherry Airport immediately who will arrange to hand over the site.
6. Please note that the time allowed for carrying out the work shall be **24 (Twenty Four) Months** which shall be reckoned from 01.07.2021.
7. Any further correspondence in connection with the contract should normally be addressed to the Senior Manager Engg (E), AAI, New Operational Office, Southern Region, Chennai Airport.
8. Please acknowledge the receipt and return the duplicate copy of this letter enclosed herewith after signing it to the undersigned as a token of acceptance.

Thanking you,

Encl: 1) Schedule of Quantities – Schedule 'A'

Yours faithfully,

-sd-

 Senior Manager Engg (E)
 AAI, RHQ-SR, Chennai Airport
Copy to:

1. GM-Engg/SR/AAI/Chennai
2. JGM- Engg (E-E)/AAI/SR/Chennai
3. JGM (F&A)-AAI/SR/Chennai-FC accorded by JGM (F&A) vide E-Office File No: AAI/975/2021-APD-SR-Puducherry dated:28.06.2021
4. JGM (Vig)/AAI/SR/Chennai
5. APD/Puducherry Airport
6. Manager (E-E)/AAI/SR/Puducherry Airport.
7. Website / Office Copy.

28/06/21

 Senior Manager Engg (E)
 AAI, RHQ-SR, Chennai Airport

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SCHEDULE 'A'					
SCHEDULE OF WORK					
Name of Work: Facility Management Contract of E&M Installations at Puducherry Airport .					
S.No.	Description of Item	Qty	Unit	Rate (Rs.) (without GST)	Amount (Rs.) (without GST)
SH I: Monitoring and Maintenance of E & M Installations					
1	Monitoring and Maintenance of Utility Services at Power House Cum Sub-Station and other allied buildings comprising of 22 KV VCB Panels (03 Nos.), 22KV, 630A Load break Switch (01 No), 2 Nos. of 750 KVA, 22 KV/433 V Transformers, 3 Nos. of 320 KVA LT DG Sets, Bus Ducts, LT Panels, CCR's, Capacitor Panels, Battery Banks, HT/LT Cabling, GLF, associated Earthing System of Utilities etc., (As per Annexure 'C' - List of Inventories Except Inventories at New ATC Tower Cum Technical Block Cum Fire station) for round the Clock 24X7 Basis (Three Shift Basis - 8 Hours For One Shift), Monitoring, Control and General Maintenance for 100% Serviceability including Co-ordination with Puducherry EB and i/c providing consumable material like cotton waste, oil, grease & other sundry material required for cleaning etc., attending minor faults of Equipments/Repairs/Replacement of defective components with AAI Supplied New Components, ensuring 100% Serviceability/satisfactory working condition of the Systems, Routine and General Preventive Maintenance on Daily/Weekly/Monthly/Quarterly/Half Yearly/Yearly Basis as per Standard Manufacturers' Practices and as per Techno Commercial Specifications (TCS), Maintenance of Records and Log Books and reporting as and when required, complete Upkeeping of the Installations etc., on all days including Sundays & Holidays as specified and as directed by Engineer-In-Charge as required.	24	Month	236700.00	5680800.00
2	Monitoring and Maintenance of Utility Services at New ATC Tower/Technical Block/Fire Station for one shift Operation (General Duty)Comprising of LT Panels, HT/LT Cabling and all associated E&M Installations (As per Annexure 'C' - List of Inventories Except Inventories at New ATC Tower Cum Technical Block Cum Fire station only) (One Shift Basis - 8 Hours For One Shift), Monitoring, Control and General Maintenance for 100% Serviceability and i/c providing consumable material like cotton waste, oil, grease & other sundry material required for cleaning etc., attending minor faults of Equipments/Repairs/Replacement of defective components with AAI Supplied New Components, ensuring 100% Serviceability/satisfactory working condition of the Systems, Routine and General Preventive Maintenance on Daily/Weekly/Monthly/Quarterly/Half Yearly/Yearly Basis as per Standard Manufacturers' Practices and as per Techno Commercial Specifications (TCS), Maintenance of Records and Log Books and reporting as and when required, complete Upkeeping of the Installations etc., on all days including Sundays & Holidays as specified and as directed by Engineer-In-Charge as required.	24	Month	35325.00	847800.00
3	Providing Services for Computer Skilled Document Assistance services for All E&M Installations Covering Item 1 as above on General Duty (Timing as decided by EIC), Maintenance of Records and reporting as and when required, on all days as specified and as directed by Engineer-In-Charge as required.	24	Month	25125.00	603000.00
SH II : CAMC & Air Conditioning & Water Coolers					
1	Comprehensive Maintenance of Split Type Air Conditioners of All Makes of 1.0 TR / 1.5 TR / 2.0 TR Capacity at Different Locations including provision of all necessary consumables and spares, attending minor/major faults of Equipments, ensuring 100% Serviceability/Satisfactory Working Condition of the Systems, Routine/General Preventive/Breakdown Maintenance as per Standard Manufacturers' Practices and Maintenance of Service Records and Reporting etc., complete as required.				
a	First Year	40	Each	499.00	19960.00
b	Second Year	86	Each	499.00	42914.00

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2	Comprehensive Maintenance of Water Coolers with in built RO Filters of All Makes of 40/80 Litre Capacity at Different Locations including provision of all necessary consumables and spares, attending minor/major faults of Equipments, ensuring 100% Serviceability/Satisfactory Working Condition of the Systems, Routine/General Preventive/Breakdown Maintenance as per Standard Manufacturers' Practices and Maintenance of Service Records and Reporting etc., complete as required. at different locations including providing all necessary consumables and spares, etc., complete as required as per special conditions				
a	First Year	5	Each	750.00	3750.00
b	Second Year	5	Each	750.00	3750.00
3	Dismantling and shifting of Indoor and Outdoor Units of Split Type Air Conditioners of All Makes of 1.0 TR / 1.5 TR / 2.0 TR Capacity to AAI Store / Any Location as specified by AAI, including gas pumping down, dismantling and shifting of pipes, cables etc., complete as required. (This item will be executed As and when required-Re-Installation is Not Covered)	5	Job	500.00	2500.00
4	Installation, Testing and Commissioning of Split Type Air Conditioners of All Makes of 1.0 TR / 1.5 TR / 2.0 TR Capacity including fixing the interconnection suction and delivery pipe line with cable between condensor and evaporator units, top up the gas etc., as required. (This item will be executed As and when required-Dismantled Item Re-Installation Work-No Material Supply)	5	Job	1000.00	5000.00
5	Supply of copper refrigrant pipeline for suction and delivered line suitable for Split Type Air Conditioners of All Makes of 1.0 TR / 1.5 TR / 2.0 TR Capacity including provision of Insulation and Covering as required.	50	Mtr	600.00	30000.00
6	Comprehensive maintenance of split type air conditioners of all makes of 4.0 TR capacity at different tocations including and providing all necessary consumables and spares complete as required as per special conditions.				
b	Second Year	5	Each	2500.00	12500.00
	SH III A: Servicing of HT Panels and LT ACBs of Power Supply Installations.				
1	Overhauling and Servicing of 630 Amp 22 KV HT VCBs by Deploying Authorised Service Personnel of Manufacturer/Service Dealer/ Specialised Agency experienced in similar nature of work, provided at Power Houses Cum Substation including drawing out of the VCB, opening the same, Inspection, Servicing, Cleaning of Contact Surfaces, Overhauling of Operating Mechanism, Lubrication of Moving Parts, Cleaning of CTs, PTs, Busbars and Chambers, Checking of Busbars and bus links, Replacement of Gasket of Panel, Checking of Electrical and Mechanical Operation, measuring of Contact Resistance, Checking of IR values, Testing of ON OFF Time, replacement of minor defective spares supplied by AAI (Excluding Supply of Spares), Testing and Commissioning etc., as required. ISC of VCBs [Kirloskar Make VCBs-3 Nos]				
a	First Year	3	Each	2000.00	6000.00
b	Second year	3	Each	2000.00	6000.00
2	Overhauling and Servicing of Trip Circuit Battery Charging Unit by Deploying Authorised Service Personnel of Manufacturer/ Service Dealer/ Specialised agency experienced in similar nature of work, provided at Power Houses/Substations including Inspection, Servicing, Cleaning of Charger, Checking of Charger Circuit (Control and Power Circuit) including Instruments/ Relays/ Meters/ Transformers/ Rectifiers/ Filters, attending faults, Replacement of Defective Components (Excluding Cost of Spares), Checking of Batteries, Terminals, Checking of Operation, Testing and Commissioning etc., as required.				
a	First Year	1	Each	1500.00	1500.00
b	Second year	1	Each	1500.00	1500.00

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3	Inspection/Overhauling/Service of ACBs of C&S Make of Various Capacities provided in the various LT Panels at Power Houses/ SSs by Deploying Authorised Service Personnel of Manufacturer/ Service Dealer/ Specialised Agencies experienced in Servicing of ACBs including cleaning of ACBs, opening the same, inspection, servicing, cleaning of contact surfaces, arc chutes, overhauling of operating mechanism, lubrication of moving parts, Checking of UV Coils, Trip Circuits, Checking of Control Circuits, replacement of minor defective spares supplied by AAI (excluding supply of spares), testing and commissioning etc., as required.				
a	First Year	12	Each	1000.00	12000.00
b	Second year	12	Each	1000.00	12000.00
4	Calibration of Releases provided in various ACBs in various LT Panels, Testing of Tripping, Timing, etc., i/c adjustment of Settings if required at site by Secondary Injection Test as required.				
a	First Year	12	Each	1000.00	12000.00
b	Second year	12	Each	1000.00	12000.00
SH III B: Calibration of Relays and Testing of CTs.					
1	Calibration of Relays [(Electro-Mechanical/ Static/ Digital/ Microprocessor Based Relays)-(O/C and E/F)] provided in various HV/LV Panels, Testing of Insulation Values, Pick-up Value, Timing, Burden, etc., i/c adjustment of Settings if required at site, Relay Co-ordination with immediate Up and Down Circuit etc., as required, conforming to IS 9124 - 1979 by Secondary Injection Test as required.				
a	First Year	3	Each	1000.00	3000.00
b	Second year	3	Each	1000.00	3000.00
2	Calibration of Auxillary Relays/Master Trip Relay/Trip Supervisory relay provided in various HV/LV Panels, Testing of Insulation values, Pick-up Value, Drop Off, Burden etc., as required, conforming to IS 9124 - 1979 by Secondary Injection Test as required.				
a	First Year	9	Each	1000.00	9000.00
b	Second year	9	Each	1000.00	9000.00
3	Testing of 22 KV CTs (3 Nos. of Current Rating of Upto 400 Amps associated with Relays (OC/EF/Master) provided in various HV Panels, Tesing of Polarity, Ratio, Insulation values, Testing of Ammeter connected in the Panel, Marking of available CT Ratio, Checking of Trip Circuit and Breaker Operation/Tripping etc., as required, conforming to IS 9124 - 1979 by Primary Injection Test (Maximum upto 50% of Rating of CTs-Testing at 25% and 50% of Original Rating) as required.				
a	First Year	3	Each	2500.00	7500.00
b	Second year	3	Each	2500.00	7500.00
SH III C: Filtration of Transformer Oil and Servicing of OLTCs.					
1	Filtration of Transformer Oil of following Equipments conforming to IS 6792/72 and IS 1866 as required with up to date amendments, including transporting Filtration Plant and BDV Test Kit, Replacement of Silica Gel, Acidity Testing of Oil at Chemical Testing Lab, Submission of Reports, Checking of Cable Tightness, Gasketting of Cable End Boxes etc. as required. 750 KVA 22KV/433V Transformer - Approx. Oil Qty 680 Ltrs				
a	First Year	2	Job	6200.00	12400.00
b	Second year	2	Job	6200.00	12400.00
2	Supply of Transformer Oil conforming to IS 335/1983 for topping up of oil for Transformer during filtration of Oil and for replacement of Oil for the Transformers. (Barrel = 210 Ltrs)				
a	First Year	1	Barrel	4500.00	4500.00
b	Second year	1	Barrel	4500.00	4500.00
3	Testing of Power Transformer of following rating 22/ 0.433 KV i/c testing of Insulation resistance, Magnetising current, winding resistance with mico-Ohm meter and Magnetic balance etc., as required. 750 KVA 22KV/433V Transformer				
a	First Year	2	Job	5000.00	10000.00
b	Second year	2	Job	5000.00	10000.00
4	Calibration of Clinometer by enaging of OEM/NABL Accredited Lab, including packing, transportation and submitting of Reports etc., as required.	2	Job	2500.00	5000.00

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SH IV: Servicing of Electro Mechanical Installations					
1	Lifting of Submersible Pumps of various capacities from the existing Bore Well/Well and reinstalling the Submersible Pumps in the existing bore well / well (After servicing/ repairing both are exclusive) complete as required.	2	Job	5000.00	10000.00
2	Rewinding of 1 No. 5HP / 7.5 HP borewell pumpset, including replacement of damaged parts such as inlet base, bushes, thrust bearing set, neck rings etc., including reassembling, painting, testing, transportation etc., as required	2	Job	4000.00	8000.00
3	Lifting of 3 HP/5 HP Sewage Submersible pump in the existing raw sewage sump and servicing of shaft, replacement of mechanical seal & bearing and reinstallation of servicable Sewage Submersible pump in the sump etc., as required.	1	Job	9500.00	9500.00
4	Annual Maintenance Contract of Fire Hydrant System consisting of Jockey/ Electrical/ Diesel pumps with associated Electro Mechanical installations at Sump room, carrying out regular monthly checks required, attending breakdowns as and when required, carrying out B checks for Engines excluding supply of B check spares and other spares as required.	24	Month	3000.00	72000.00
5	Repair & Rewinding of 1400/1200 mm Sweep Ceiling fan i/c replacement of spares as required	20	Job	600.00	12000.00
6	Repair & Rewinding of all capacities of exhaust fan i/c replacement of spares as required.	20	Job	650.00	13000.00
7	Maintenance of Kirloskar Make 1 No. 30 KVA DG Set comprising of Water cooled engine and 3 Phase, 415 Volts, 50 Hz, 0.8 PF, 1500 RPM Self excited & regulated alternator etc.. including AMF panel, carrying out regular monthly checks required, attending breakdowns as and when required, carrying out B checks for Engines excluding supply of B check spares and other spares as required.	24	Month	2000.00	48000.00
8	Supply of B & C Check Kits for the following DG set/Pump as per OEM Recommendations etc as required				
8.01	30 KVA DG Sets				
a	B Check KIT	2	Sets	7000.00	14000.00
b	C Check KIT	2	Sets	10000.00	20000.00
8.02	Fire diesel Pump				
a	B Check KIT	2	Sets	2000.00	4000.00
b	C Check KIT	2	Sets	2500.00	5000.00
9	Maintenance of 1 No. 6 KVA Numeric make on-line UPS systems including replacement of spares etc, carrying out regular monthly checks required, attending breakdowns as and when required.	24	Month	750.00	18000.00
10	Maintenance of Conventional/ Microprocessor Based Fire Alarm System [FAS] including all Associated Accessories and Auto Dialer of all FAS Types/ Models/ Make installed at following Locations including Repairs and Maintenance, attending Faults of Systems, Replacement of Defective Components with AAI Supplied New Components, ensuring 100% Serviceability/ Satisfactory Working Condition of FAS, Routine and General Preventive Maintenance on Monthly/ Quarterly/ Half yearly/ Yearly Basis as per Standard Manufacturers' Practices, Break-Down Maintenance, Maintenance of Records/Service Reports and Reporting as and when required, complete Up-keeping of the Installations [FAS], as specified and as directed by Engineer-In-Charge as required.				
a	ATC Tower (Make: Ravel RE 2554)	24	Month	2500.00	60000.00
b	NDB Building (Make: Ravel RE 2554)	24	Month	2500.00	60000.00
11	Maintenance of Addressable Type Fire Alarm System [FAS] including all Associated Accessories and Auto Dialer of all FAS Types/Models/Make installed at following Locations including Repairs and Maintenance, attending Faults of Systems, Replacement of Defective Components with AAI Supplied New Components, ensuring 100% Serviceability/Satisfactory Working Condition of FAS, Routine and General Preventive Maintenance on Monthly/Quarterly/Half yearly/Yearly Basis as per Standard Manufacturers' Practices, Break-Down Maintenance, Maintenance of Records/Service Reports and Reporting as and when required, complete Up-keeping of the Installations [FAS], as specified and as directed by Engineer-In-Charge as required.as directed by Engineer-In-Charge as required.				
12	New ATC Tower (Make: Notifier) or its equivalent	24	Month	1500.00	36000.00
13	Solar Plant (Make: Honeywell Notifier) or its equivalent	24	Month	2000.00	48000.00
14	Fault Identification of ACB's in LT Panel, Minor rectification works, wiring correction, i/c replacing of spares supplied by AAI etc as required.	5	Each	2000.00	10000.00
15	Fault Identification of PLC controller in LT Panel including checking of PLC Programme, Trouble shooting, Identification & fixing of complete control wiring issues associated with ACB's, submission of updated wiring diagrams,reports etc as required.	2	Each	3000.00	6000.00

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16	SITC of LED Strips suitable to work with current Ballast for series circuit lighting system for LED Sign boards of rating 2.8-66.6 Amps suitable for Runway/Taxiway LED Sign Boards.	50	Mtr	700.00	35000.00
17	SITC of Current Ballast for Series Circuit lighting System for LED Sign Boards of Rating 2.8-66.6 Amps suitable for Runway / Taxiway LED Sign Boards.	10	Each	5000.00	50000.00
SH V: Annual Rate Contract for Internal Electrical Works					
1	Wiring for light point/ fan point / exhaust fan point / call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed steel conduit, with piano type switch, phenolic laminated sheet suitable size MS box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc. as required.				
a	Group B	5	Each	850.00	4,250.00
b	Group C	10	Each	1,100.00	11,000.00
2	Wiring for light point / fan point / exhaust fan point / call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed steel conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc. as required.				
a	Group B	10	Each	850.00	8,500.00
b	Group C	15	Each	1,100.00	16,500.00
3	Supplying and fixing metal box of 150mm X 75mm X 60mm deep (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including providing and fixing 3 pin 5/6 amps socket outlet and 5/6 amps piano type switch, connection, painting etc. as required.	10	Each	190.00	1,900.00
4	Supplying and fixing metal box of 180mm X 100mm X 60mm deep (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including providing and fixing 6 pin 5/6 & 15/16 amps socket outlet and 15/16 amps piano type switch, connection, painting etc. as required.	10	Each	290.00	2,900.00
5	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 3 pin 5/6 amps modular socket outlet and 5/6 amps modular switch, connection etc. as required. (For light plugs to be used in non residential buildings).	20	Each	350.00	7,000.00
6	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 5/6 & 15/16 amps modular socket outlet and 15/16 amps modular switch, connection etc. as required.	15	Each	350.00	5,250.00
7	Supplying and fixing following size/ modules, PVC box alongwith modular base & cover plate for modular switches in recess etc as required				
a	3 Module	20	Each	60.00	1,200.00
b	6 Module	20	Each	90.00	1,800.00
c	8 Module	10	Each	120.00	1,200.00
d	12 Module	5	Each	150.00	750.00
8	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed steel conduit as required.				
a	2 X 1.5 sq.mm + 1 X 1.5 sq.mm earth wire	100	Mtr	190.00	19,000.00
b	2 X 2.5 sq.mm + 1 X 2.5 sq.mm earth wire	100	Mtr	230.00	23,000.00
c	2 X 4 sq.mm + 1 X 4 sq.mm earth wire	100	Mtr	290.00	29,000.00
d	2 X 6 sq.mm + 1 X 6 sq.mm earth wire	50	Mtr	390.00	19,500.00
9	Supplying and fixing of following sizes of steel conduit along with accessories in surface/recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit as required.				
a	20 mm	50	Mtr	140.00	7,000.00
b	25 mm	50	Mtr	180.00	9,000.00
10	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.				
a	20 mm	50	Mtr	60.00	3,000.00
b	25 mm	50	Mtr	90.00	4,500.00
11	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface / recessed steel / PVC conduit as required.				
a	a) 3 x 1.5 sq. mm	100	Mtr	90.00	9,000.00
b	b) 3 x 2.5 sq. mm	100	Mtr	150.00	15,000.00
c	c) 3 x 4 sq. mm	100	Mtr	210.00	21,000.00
12	Supply and fixing rotary stepped type electronic fan regulator (1 module) on the existing modular plate switch box including connections but excluding modular plate etc. as required.	15	Each	290.00	4,350.00

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13	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required				
a	5/6 Amps switch	50	Each	55.00	2,750.00
b	15/16 Amps switch	25	Each	75.00	1,875.00
c	3 pin 5/6 Amps socket outlet	50	Each	80.00	4,000.00
d	6 pin 15/16 Amps socket outlet	25	Each	190.00	4,750.00
14	Supplying and fixing of following ways surface/ recess mounting, vertical type, 415V, 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 MCB's (but without MCB's and incomer) as required • (Note : Vertical type MCB TPDB is normally used where 3 phase outlets are required.) TPN 4 Way (4+12) MCB DB double door	1	Each	5,600.00	5,600.00
15	Supplying and fixing of following way Horizontal type, Three pole and neutral, sheet steel, MCB distribution Board, 415 Volts, on surface/recess, complete with tinned copper bus bar, common neutral link, earth bar, din bar, interconnections, powder painted including earthing etc . as required (but without MCB/RCCB/Isolators and incomer) as required. TPN 8 Way (4+24) MCB DB double door	1	Each	2,900.00	2,900.00
16	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 V, 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)				
a	SPN 8 Way MCB DB double door	1	Each	900.00	900.00
b	SPN 6 Way MCB DB double door	1	Each	1,300.00	1,300.00
c	SPN 4 Way MCB DB double door	1	Each	1,500.00	1,500.00
17	Supplying and fixing following rating, 415 volts, 10 KA Four pole MCB, C curve in the existing MCB DB complete with connections, testing and commissioning etc., as required				
a	40A FP MCB	5	Each	1,400.00	7,000.00
b	63A FP MCB	5	Each	1,600.00	8,000.00
18	Supplying and fixing following rating, 415 volts, Four pole RCCB, C curve in the existing MCB DB complete with connections, testing and commissioning etc., as required				
a	40A FP RCCB, 300mA	5	Each	2,100.00	10,500.00
b	63A FP RCCB, 300 mA	5	Each	2,100.00	10,500.00
c	40A FP RCCB, 100mA	5	Each	2,450.00	12,250.00
d	63A FP RCCB, 100 mA	5	Each	2,450.00	12,250.00
19	Supplying and fixing of 5 amps to 32 amps rating, 240/415 volts, "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. Single pole	20	Each	140.00	2,800.00
20	Supplying and fixing of 5 amps to 32 amps rating, 240/415 volts, "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. Double pole	10	Each	410.00	4,100.00
21	Supplying and fixing of 5 amps to 32 amps rating, 240/415 volts, "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. Triple pole	10	Each	760.00	7,600.00
22	Supplying and fixing 20 A, 240 V, SPN Industrial type socket outlet, with 2 pole and earth, metal enclosed plug top alongwith 20 A "C" curve, SP, MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	5	Each	750.00	3,750.00
23	Supplying and fixing 20 A, 415 V, TPN Industrial type socket outlet, with 4 pole and earth, metal enclosed plug top alongwith 20 A "C" curve, TPMCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	3	Each	2,400.00	7,200.00
24	Providing illumination with standard coloured serial lamps sets for one day on different occasions (Containing minimum 20 Nos of lamps per set) on the Terminal building and other ancillary building and trees as directed by the Engineer-In - Charge.	4000	Set	21.00	84,000.00
25	Providing illumination with multicolour LED colour wash flood light for one day on different occasions with required cables and all accessories to illuminate the fascia of the buildings as directed by the Engineer -In- Charge.	100	Each	225.00	22,500.00

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SH VI: Annual Rate Contract for External Electrical Works SH VI A: Cabling Works.					
1	Laying of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required.				
a	Upto 35 sq. mm	30	Mtr	250.00	7500.00
b	Above 35 sq. mm and upto 95 sq. mm	30	Mtr	300.00	9000.00
c	Above 95 sq. mm and upto 185 sq. mm	30	Mtr	350.00	10500.00
d	Above 185 sq. mm and upto 400 sq. mm	30	Mtr	375.00	11250.00
2	Laying of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of following size in the existing RCC/ HUME/ METAL pipe as required.				
a	Upto 35 sq. mm	30	Mtr	20.00	600.00
b	Above 35 sq. mm and upto 95 sq. mm	30	Mtr	40.00	1200.00
c	Above 95 sq. mm and upto 185 sq. mm	30	Mtr	80.00	2400.00
d	Above 185 sq. mm and upto 400 sq. mm	30	Mtr	80.00	2400.00
3	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing masonry open duct as required.				
a	Upto 35 sq. mm	30	Mtr	20.00	600.00
b	Above 35 sq. mm and upto 95 sq. mm	30	Mtr	40.00	1200.00
c	Above 95 sq. mm and upto 185 sq. mm	30	Mtr	80.00	2400.00
d	Above 185 sq. mm and upto 400 sq. mm	30	Mtr	80.00	2400.00
4	Laying and fixing of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of following size on wall surface as required.				
a	Upto 35 sq. mm (clamped with 1mm thick saddle)	30	Mtr	40.00	1200.00
b	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	30	Mtr	70.00	2100.00
c	Above 95 sq. mm and upto 185 sq. mm (clamped with 25x3mm MS flat clamp)	30	Mtr	110.00	3300.00
d	Above 185 sq. mm and upto 400 sq. mm (clamped with 40x3mm MS flat clamp)	30	Mtr	150.00	4500.00
5	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on cable tray as required.				
a	Upto 35 sq. mm (clamped with 1mm thick saddle)	10	Mtr	30.00	300.00
b	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	10	Mtr	60.00	600.00
c	Above 95 sq. mm and upto 185 sq. mm (clamped with 25x3mm MS flat clamp)	10	Mtr	90.00	900.00
d	Above 185 sq. mm and upto 400 sq. mm (clamped with 40x3mm MS flat clamp)	10	Mtr	120.00	1200.00
6	Supplying and making cable route marker with cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) of size 60 cm X 60 cm at the bottom and 50 cm X 50 cm at the top with a thickness of 10cm including inscription duly engraved as required.	5	Each	500.00	2500.00
7	Supplying and fixing cable route marker with 10 cm X 10 cm X 5 mm thick G.I. plate with inscription there on, bolted /welded to 35 mm X 35 mm X 6 mm angle iron, 60 cm long and fixing the same in ground as required.	5	Each	500.00	2500.00
8	Laying of one number PVC/XLPE insulated and PVC sheathed Power cable of 1.1KV grade of size exceeding 120 sqmm but not exceeding 400sqmm direct in ground including demolishing cement concrete/bituminous road, excavation of trench of upto 0.75 Mtr Depth refilling the trench making the surface to original finish with CC of 1:3:6 ratio on top (150 mm) etc. as required	10	Mtr	500.00	5000.00
9	Supplying and making indoor end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed/ XLPE aluminium conductor cable of 1.1 KV grade as required.				
A	4 X 16 sq. mm (28mm)	2	Each	120.00	240.00
B	4 X 25 sq. mm (28mm)	2	Each	140.00	280.00
C	3½ X 35 sq. mm (32mm)	2	Each	190.00	380.00
D	3½ X 50 sq. mm (35mm)	2	Each	260.00	520.00
E	3½ X 70 sq. mm (38mm)	2	Each	310.00	620.00
F	3½ X 95 sq. mm (45mm)	2	Each	320.00	640.00
G	3½ X 120 sq. mm (45mm)	2	Each	320.00	640.00
H	3½ X 150 sq. mm (50mm)	2	Each	320.00	640.00
I	3½ X 185 sq. mm (57mm)	2	Each	350.00	700.00
J	3½ X 240 sq. mm (62mm)	2	Each	350.00	700.00

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10	Supplying and making straight through joint with heat shrinkable kit including ferrules and other insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.				
A	4 X 16 sq. mm	2	Each	1100.00	2200.00
B	4 X 25 sq. mm	2	Each	1100.00	2200.00
C	3½ X 35 sq. mm	2	Each	1300.00	2600.00
D	3½ X 50 sq. mm	2	Each	1300.00	2600.00
E	3½ X 70 sq. mm	2	Each	1300.00	2600.00
F	3½ X 95 sq. mm	2	Each	1300.00	2600.00
G	3½ X 120 sq. mm	2	Each	1300.00	2600.00
H	3½ X 150 sq. mm	2	Each	2500.00	5000.00
I	3½ X 185 sq. mm	2	Each	3000.00	6000.00
J	3½ X 240 sq. mm	2	Each	3000.00	6000.00
11	Locating the Cable fault on LT/HT feeder cables laid directly in ground/ duct/ pipe including providing Cable Fault Tracer (Rental) etc., as required.				
a	HT CABLES	1	job	25000.00	25000.00
12	Supplying and laying of 75 mm OD HDPE Pipe of PE 80 PN 6 ISI Marked along with all accessories like socket, bend etc., confirming to IS 4984 complete with fitting and cutting, jointing etc., direct in ground (1.2 mtr below the ground level) including excavation and refilling the trench but excluding sand cushioning and protective covering etc., as required.	25	Metre	310.00	7750.00
13	Supplying and laying of 125 mm OD HDPE Pipe of PE 80 PN 6 ISI Marked along with all accessories like socket, bend etc., confirming to IS 4984 complete with fitting and cutting, jointing etc., direct in ground (1.2 mtr below the ground level) including excavation and refilling the trench but excluding sand cushioning and protective covering etc., as required.	25	Metre	450.00	11250.00
	SH VI B : EARTHING				
1	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 metre long etc. with charcoal/ coke and salt as required	2	Set	7500.00	15000.00
2	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 metre long etc. with charcoal/ coke and salt as required	10	Metre	125.00	1250.00
3	Supplying and laying 25 mm X 5 mm copper strip at 0.50 metre below ground as strip earth electrode, including connection/ terminating with nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 Sets of brass nut bolt & spring washer spaced at 50mm)	10	Mtr	350.00	3500.00
4	Supplying and laying 25 mm X 5 mm G.I strip at 0.50 metre below ground as strip earth electrode, including connection/ terminating with G.I. nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 Sets of G.I. nut bolt & spring washer spaced at 50mm)	10	Mtr	110.00	1100.00
5	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	2	Each	7500.00	15000.00
6	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	10	Mtr	175.00	1750.00
7	Providing and fixing 25 mm X 5 mm copper strip on surface or in recess for connections etc. as required	10	Mtr	35.00	350.00
	SH VI C : SITC of Switch Gear Works				
1	Supply, Replacement, Testing and Commissioning of 630 A 4P 50 kA MCCB with thermal magnetic release in the existing Panel including providing Handle, with all accessories, interconnection, connection, earthing, painting of door, etc. as required.	1	Job	25000.00	25,000.00
2	Supply, Replacement, Testing and Commissioning of 400 A 4P 50 kA MCCB with thermal magnetic release in the existing Panel including providing Handle, with all accessories, interconnection, connection, earthing, painting of door, etc. as required.	1	Job	25000.00	25,000.00
3	Supply, Replacement, Testing and Commissioning of 250 A 4P 36 kA MCCB with thermal magnetic release in the existing Panel including providing Handle, with all accessories, with all accessories, interconnection, connection, earthing, painting of door, etc. as required.	1	Job	25000.00	25,000.00

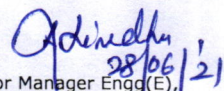


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4	Supply, Replacement, Testing and Commissioning of 160 A 4P 36 kA MCCB with thermal magnetic release in the existing Panel including providing Handle, with all accessories, with all accessories, interconnection, connection, earthing, painting of door, etc. as required.	1	Job	21000.00	21,000.00
5	Supply, Replacement, Testing and Commissioning of multifunction digital metering class 1.0 with RS485 (having measuring parameters V, A, F, KW, KVA, KAVr, KWh, KVAh, KVArh, PF, THD) in the existing Panel including with all accessories, interconnection, connection, etc. as required.	14	Job	3500.00	49,000.00
6	Supply, Replacement, Testing and Commissioning of Three Phase Ammeter (digital meter) class 0.5 in the existing Panel including with all accessories, interconnection, connection, etc. as required.	5	Job	1600.00	8,000.00
7	Supply, Replacement, Testing and Commissioning of Three Phase Voltmeter (digital meter) class 0.5 in the existing Panel including with all accessories, interconnection, connection, etc. as required.	5	Job	1600.00	8,000.00
8	Supply, Replacement, Testing and Commissioning of LED indication lamps (R/Y/G) in the existing Panel including with all accessories, interconnection, connection, etc. as required.	60	Each	150.00	9,000.00
9	Supply, Replacement, Testing and Commissioning of Blue LED indication lamp in the existing Panel including with all accessories, interconnection, connection, etc. as required.	50	Each	150.00	7,500.00
SH VI D : Labour Works					
1	Cleaning of cable trenches by lifting the cables, supporting the cables, removing waste materials I/c malba, debris etc., and transporting and dumping the same to waste dumping yard etc. as required.	30	Mtr	80.00	2400.00
2	Cleaning of bus ducts I/c removing of covers, checking of bus bars, bus supports, tightening of busses and supports and re-fixing of covers, testing, commissioning etc., as required.	30	Mtr	80.00	2400.00
3	Providing one Skilled Wireman and two Unskilled Khalasi to attend any urgent Preventive Maintenance/ Breakdown Maintenance/ Emergency Work at Electrical Installations provided in Main Power House/ Substations with necessary T&P as and when required.	3	Days	2500.00	7500.00
4	Providing Labour and Hire Charges for deploying Excavator (JCB) i/c Operator for tracing the cable faults, excavation and refilling of Cable trench after work etc., as required.	8	Hrs	850.00	6800.00
5	Providing one FITTER and ONE Unskilled Khalasi to attend any urgent Preventive Maintenance/ Breakdown Maintenance/ Emergency Work at Electrical Installations provided in Main Power House/Substations with necessary T&P as and when required.	3	Days	2500.00	7500.00
6	Providing Labour and Hire Charges for deploying Gas Cutting MACHINE i/c Cutter, Gases in Cylinder etc., for cutting of Chequered Plates, MS Angles as required.	5	Hrs	2000.00	10000.00
7	Providing Labour and Hire Charges for deploying WELDING MACHINE i/c WELDER, Welding Rods etc., for WELDING WORKS as required.	8	Hrs	1400.00	11200.00
8	Providing Labour and Hire Charges for deploying Lorry/ Truck/ Tractor i/c Operator and loaders for shifting of debris/ wastes from Power Houses/ Substations etc., to waste dump yard as required.	5	Days	4000.00	20000.00
9	Providing labour and hire charges for deploying Crane (upto 10 Ton) i/c operator for lifting/ Shifting of Equipments/ Cable Drums, etc., as required.	8	Hrs	1000.00	8000.00

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	SH VI E : Civil Works				
1	Providing, laying and fixing following dia G.I. pipe (medium class) in ground complete with G.I. fittings including trenching (75 cm deep) and re-filling etc as required				
A	100 mm dia	12	Mtr	950.00	11400.00
B	150 mm dia	12	Mtr	1400.00	16800.00
2	Supplying and laying of "B" Class G.I pipe of following dia, i/c excavation of bituminous/ concrete road/ pavement, excavation of Soil to maximum depth of 1.2 Mtrs from ground refilling the Soil and with CC of ratio 1:3:6 on top for 0.15 Mtrs after laying Pipe and plastering, making good the same etc., as required.				
A	100 mm Dia	12	Mtr	1800.00	21600.00
B	150 mm Dia	12	Mtr	2000.00	24000.00
3	Fabrication, Supply and Fixing of 6mm thick chequered plates including providing and fixing 40mmx40mmx6mm angle iron supports on cable trenches, 25mmx6mm MS flat around the chequered plate by welding, providing lifting hook etc., as required.	10	Kg	200.00	2000.00
4	Painting of Power Supply Installations with two coats of synthetic enamel paint of approved shade, quality and brand i/c scrapping and cleaning, providing putty wherever required, inscription etc., as required.				
A	Spraying	20	Sq Mtr	150.00	3000.00
B	Brushing	20	Sq Mtr	140.00	2800.00
	SH VI F : Supply of Cables				
1	Supply of Aluminium Conductor, XLPE insulated, PVC sheathed, armoured power cable of 1.1 KV grade of following Sizes conforming to IS 7098 (Part-1) as amended upto date as required. [AS AND WHEN REQUIRED BASIS ONLY]				
A	4 X 16 sq. mm	50	Mtr	135.00	6750.00
B	4 X 25 sq. mm	50	Mtr	165.00	8250.00
C	3½ X 35 sq. mm	50	Mtr	165.00	8250.00
D	3½ X 95 sq. mm	50	Mtr	410.00	20500.00
E	3½ X 120 sq. mm	50	Mtr	570.00	28500.00
Total Amount of Rs.				8999309.00	
Add GST @18%				1619875.62	
Total Amount i/c GST in Rs.				10619185.00	


 Senior Manager Engg(E),
 AAI, RHQ, SR, Chennai.