

**Schedule of Electrical Items for Construction of
Exhibitor Hall at State Level Energy Park at
Ranchi**

Sl.No.	Description of Items	Unit	Qty.	Rate	Amount
1	MAIN POWER CONTROL PANEL (MPCP) Supply, installation, testing and commissioning of LT floor mounted totally enclosed and extensible type Cubicle Panel. the general construction shall conform to IS : 8623/93. the degree of IP protection shall be conforming to IP-42.It shall be fabricated out of CRCA not less than 2.0 mm thick for load bearing members and 1.6 mm for doors and LT Panels. The busbar rating shall be 200 amps. and shall be made of electric grade copper conforming to relevant specification and current density in the busbar shall not exceed 160A/sq.cm. the panel shall be duly painted after removing rust. It shall have the following incoming and outgoing feeders as per Specification No. TE.1.				
	SCHEDULE REF.: NS				
1.1	INCOMING FEEDERS				
1.1.1	1 No. 200 Amp TP MCCB of 25 KA. For JSEB supply fitted with kWh meter.	Each	1	X	X
1.1.2	1 No. 100 Amp TP MCCB of 35 KA from 25 kWp SPV Power Plant fitted with kWh meter	Each	1	X	X
1.1.3	3 Sets of LED phase indicating lamp with MCB protection for indicating incoming supply from JSEB and SPV Power Plant	Set	2	X	X
1.1.4	Three phase kWh Meter wit CTs etc. In JSEB feeder and SPV power plant.(Synchronizing will be carried out in the SPV control panel)	Set	2	X	X
1.1.5	Digital Voltmeter, 0-500 volt, AC with selector switch. On all incoing circuits	Set	2	X	X
1.1.6	Digital Ammeter, 0 to 200 Amps with CT in JSEB circuit	Set	1	X	X
1.1.7	Current transformer set, 0 to 200 Amps in JSEB Circuit	Set	1	X	X
1.1.8	Indication lamp - LED single	Each	4	X	X
1.1.9	Indication lamps, LED set of three	Set	1	X	X
1.2	OUTGOING FEEDERS				
1.2.1	1 No. 63 Amp TPN switch fuse disconnecter, 415 volt, 50 Hz as spare	Each	4	X	X
1.2.2	1 No. 32 Amp TPN switch fuse disconnecter, 415 volt, 50 Hz as spare	Each	3	X	X
1.2.3	32 A TPN disconnecter switch fuse unit for Pumping Units of Hydro-electric exhibits.	Each	2	X	X
1.2.4	63 A TPN disconnecter switch fuse for Musical Fountain System..	Each	2	X	X
	Assembled in one unit				
	Total cost of the unit	Full Unit	1		

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2	DISTRIBUTION BOARDS				
	Supplying, installtion, tesing and commissioning of surfce/recess mounting, vertical type, 415 volts, TPN MCB distribution board of sheet steel, dust protected, duly phosphatized and powder painted, inclusive of 200 amps. tinned copper busbar, common neutral link, earth bar, din bar for mounting MCB's, detachable gland/knock out plate, and with 100 amps, 10 kA MCCB as incomer interconnection between incomer MCCB and the busbars of following ways (but without MCCB as required.				
2.1	4 Ways with 100 Amps. MCCB as incomer - (Schedule Ref: VTTPMCBDB 2.35.1)	Each	4		
2.2	8 Way with 100 Amp. MCCB as incomer (Schedule Ref: VTTPMCBDB 2.35.2)	Each	3		
3	Supplying and fixing of following way, three pole and neutral, sheet steel, MCB distribution board, 415 volts, on surface / recess, complete with tinned copper busbar, earth bar, din bar, detachable gland plate, interconnections, phosphatized and powder painted including painting, earthing etc. as required.(But without MCB/RCCB/Isolator)				
3.1	4 Way (4 + 12) single door (Schedule Ref: TPMCBDB 2.33.1)	Each	3		
3.2	6 Way (4 + 18) single door (Schedule Ref: TPMCBDB 2.33.2)	Each	2		
4	Supplying and fixing of following way, single pole and neutral, sheet steel, MCB distribution board, 240 volts, on surface / recess, complete with tinned copper busbar, din bar, detachable gland plate, interconnection including painting, earthing etc. as required.				
4.1	4 way (SPMCBDB 2.31.1)	Each	4		
4.2	8 Way (SPMCBDB 2.31.2)	Each	3		
4.3	12 way (SPMCBDB 2.31.3)	Each	1		
5	Supply and fixing following rating double pole (single phase and neutral), 230 volts, residual current circuit breaker (RCCB) having a sensitivity current upto 300MA in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
5.1	25 Amps. (RCCBSPN 2.56.1)	Each	2		
5.2	40 Amps. (RCCBSPN 2.56.2)	Each	1		
5.3	63 Amps (RCCBSPN 2.56.3)	Each	1		
6	Supply and fixing following rating four pole (three phase and neutral) 415 volts residual current circuit breaker (RCCB) having a sensitivity current upto 300MA in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
6.1	25 Amps. (RCCBTPN 2.57.1)	Each	2		
6.2	40 Amps. (RCCBTPN 2.57.2)	Each	1		
6.3	63 Amps. (RCCBTPN 2.57.3)	Each	1		

Sl.No.	Description of Items	Unit	Qty.	Rate	Amount
7	Supply and fixing 5 Amp to 32 Amp rating 240 volts, 'B series miniature circuit breaker of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
7.1	Single Pole and neutral (MCBB 2.51.1)	Each	50		
7.2	Triple Pole and neutral (MCBB 2.51.2)	Each	6		
8	POINT WIRING				
8.1	Wiring for light / power plug with 2 x 4 sq.mm. PVC insulated copper conductor, single core cable in surface / recessed PVC conduit alongwith 1 No. 2.24 mm dia bare copper wire for loop earthing as required. (WGPVCP2)	Meter	140		
8.2	Wiring with circuit wiring with following sizes of PVC insulated copper conductor single core cable in surface / recessed PVC conduit as required. (WGPVCSB)				
8.2.1	2 x 1.5 sq. mm (1.14.1)	Meter	110		
8.2.2	4 x 2.5 sq. mm (1.14.8)	Meter	60		
8.3	Wiring for light point / fan point / exhaust fan point / call bell point with 1.5 sq.mm. PVC insulated, copper conductor cable in surface / recessed steel conduit as required. (WGPVCPT 1.8.3 Group C)	Point	40		
8.5	Wiring for twin control light point with 1.5 sq.mm. PVC insulated copper conductor cable in surface / recessed steel conduit with 2 way, 5/6 Amps piano type switch etc. as required. (WGSTLMODTC)	Point	1		
8.6	Wiring for light/ power plug with 2 x 4 sq.mm.FR PVC insulated copper conductor, single core cable in surface / recessed PVC conduit along with 1 No. 4 sq.mm FR PVC insulated copper conductor single core cable for loop earthing as required. (WGPVCP2)	Meter	50		
8.7	Wiring for submain wiring with 4 x 4 sq.mm. of PVC insulated copper conductor, single core cable in surface / recessed PVC conduit along with 2 Nos. 4 Sq. mm FR PVC insulated copper conductor single core for loop earthing as required. (WGPVCP4)	Meter	40		
8.8	Wiring with circuit wiring with following sizes of PVC insulated copper conductor single core cable in surface / recessed PVC conduit as required. (WGPVCSB)				
8.8.1	2 x 1.5 sq.mm (1.14.1)	Meter	60		
8.8.2	2 x 2.5 sq.mm (1.14.2)	Meter	40		

Sl.No.	Description of Items	Unit	Qty.	Rate	Amount
9	LIGHT FIXTURES & FANS				
9.1	Supply of following light fixture with copper ballast, starter, capacitor, lamp, reflector, diffuser, MS body/housing holder etc. complete with all fixing accessories as required.				
9.2	.LED Lamp fixture made of 10 Nos, super bright white LED lamps	Each	36		
9.3	1 x 15 watt CFL Wall mounted Bracket Light as per catalogue No. FWP 51 - WIPRO make	Each	40		
9.4	1 x 18 watt CFL wall mounted bracket light as per catalogue No. FWP 44118 of WIPRO make	Each	30		
9.7	Supply of following sizes of ceiling fan complete with double ball bearing. motor, blades, downrod, canopy, capacitor, regulator etc. suitable for operation on 230 volts 50 Hz A.C. supply complete as required.	Each	2		
9.8	Supply of following sizes of heavy duty exhaust fan suitable for single phase 230 volts, 50 Hz AC supply complete with motor, capacitor, louvers / shutters etc. complete as required.				
9.8.1	230mm dia., 1400 RPM Exhaust fan(NS)	Each	1		
10	Circuit/ sub-main wiring in PVC conduit				
	wiring for circuit/sub-main wiring alongwith earth wire with the following sizes of PVC insulated copper conductor, single core cable in surface/recessed PVC conduit as required. (WGPVCSB)				
10.1	2 x 16 sq. mm + 1X16 sq.mm earth wire (1.14.6)	Meter	40		
10.2	4 x 10 sq. mm + 2 x 10 sq.mm earth wire (1.14.11)	Meter	50		
10.3	4 x 16 sq.mm + 2 x 16 sq.mm earth wire (1.14.12)	Meter	45		
10.4	4 x 25 Sq.mm + 2 x 25 sq.mm earth wire (1.14.13)	Meter	36		
11	Laying of one no. 150 mm dia. NP2 RCC / HUME pipe for laying underground cable as required. (Cost of pipe Rs.697.00, page 42, JPWD Sch-2006 and labour charge Rs. 53.10 as per 12.3.62 of JPWD)	Meter	60		
12	EARTHING AND MISCELLANEOUS ITEMS.				
13	Supply and fixing shock treatment chart in English and Hindi mounted on 5 mm thick Plywood and 3 mm thick plain glass front complete as required. (NS Item)	Each	2		
14	Earthing with copper earth plate 600mm x 600mm x 6mm thick including accessories & providing masonry enclosure with cover plate having locking arrangement and watering pipe etc including Charcoal/coke and salt). complete as required. (EARCUPL + EARCHARPL)	Set	2		

Sl.No.	Description of Items	Unit	Qty.	Rate	Amount
15	Providing and fixing 4 MM dia. copper wire on surface or in recess for loop earthing alongwith the existing surface / recessed conduit/ submain wiring / cable as required. (EARCUWRSUR)	Meter	10		
16	Supplying and laying 8 SWG copper wire at .50 m. below ground level for conductor earth electrode, including soldering etc. as required. (EAR8GCUWR)	Meter	16		
17	Providing and fixing 4.00 mm dia. Copper wire on surface or in recess for loop earthing along with existing surface/ recessed conduit/ sub-main wiring/ cable as required. (EARCUWRLO)	Meter	40		
18	Providing and fixing MV danger notice plate of 200 mm x 150 mm, made of mild steel, at least 2 mm thick, and vitreous enamelled white on both sides and with inscription in signal red colour on front side. (DANPLMV)	Each	4		
19	Outdoor Lighting				
19.1	Supply, installation, testing and commissioning of solar PV street lights with CFL lamps as per specification No.E17. (NS Item)	Set	10		
19.2	Supply, installation, testing and commissioning of solar PV street lights with LED lamps as per specification No.E17. (NS Item)	Set	6		
19.3	Solar Garden Light with LED lamps as per Specification No. E18 (NS Item)	Set	6		
20	Total				