

RAYALASEEMA TPP : STAGE II UNIT 3 & 4 (2 X 210 MW)

SECTION VII- APPENDIX –IV B RATE SCHEDULE FOR ELECTRICAL (HT & LT) PACKAGE

Sl.No	BOM Ref No	Description	Qty (Common & Unit 3)	Qty (Unit 4)	Total Qty	Unit Rate	Total Rate
		<i>TRANSFORMERS:</i>					
1.	A1.1	240 MVA GENERATOR TRANSFORMER	1set*	1set*	2 sets*		
2.	A1.2	31.5 MVA STATION TRANSFORMER	1 set*	--	1 set*		
3.	B1.1	16 MVA UAT TRANSFORMER (3A & 3B, 4A & 4B)	2 sets*	2 sets*	4 sets*		
4.	B1.2	2500 KVA UNIT SERVICE TRANSFORMER (EPT-3A&3B , 4A&4B,)	2 sets*	2 sets*	4 sets*		
5.	B1.3	2000 KVA STATION SERVICE TRANSFORMER (CWT2A,2B, CLWT 2A,2B)	4 sets*	--	4 sets*		
6.	B1.4	1600 KVA UNIT SERVICE TRANSFORMER (UST3A(B), 3B(B) & UST4A(B), 4B(B), SST 2A, 2B, 2C, 2D, ACT- 2A, 2B)	8 sets*	2 sets*	10 sets*		
7.	B1.5	1000 KVA STATION SERVICE TRANSFORMER (UST3A(T) , 3B(T) & UST4A(T), 4B(T) , DMCWT 2A,2B)	4 sets*	2 sets*	6 sets*		
		<i>HT SWITCHGEAR :</i>					
8.	A2.1, A2.2	Switchboard 3CA /4CA	1 set*	1 set*	2 set*		
9.	A2.3, A2.4	Switchboard 3CB /4CB	1 set*	1 set*	2 set*		

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Sl.No	BOM Ref No	Description	Qty (Common & Unit 3)	Qty (Unit 4)	Total Qty	Unit Rate	Total Rate
10.	A2.5, A2.9, A2.10, A2.12	Station Switchboard 0CC / 3CD / 4CD / 0CF	3 set*	1 set*	4 set*		
11.	A2.6	Station Switchboard 0CD	1 set*	-	1 set*		
12.	A2.7, A2.8, A2.11	Boiler Switchboard 3CC / 4CC / 0CE	2 set*	1 set*	3 set*		
13.	A3.2	Bus Transfer scheme panel (BTS)	2 Nos	2 Nos	4 Nos		
14.	A2.13	VFD Switchgear Panel	4 nos	4 nos	8 nos		
15.	A2.14	EARTHING TRUCKS /BREAKERS	8 Nos	4 Nos	12 nos		
16.	A 3.1	Generator Relay Panel	1 set*	1 set*	2 sets*		
		415V LOW VOLTAGE SWITCHGEAR/ CONTROL PANELS					
17.	C2.1	Turbine PCC (3DA/4DA)	1 Set*	1 Set*	2 sets*		
18.	C2.2	Turbine Valve MCC (3DD/ 4DD)	1 Set*	1 Set*	2 sets*		
19.	C2.3	Boiler PCC (3DB)	1 Set*	--	1 Set*		
20.	C2.4	Boiler PCC (4DB)	--	1 Set*	1 Set*		
21.	C2.5	Boiler Valve MCC (3DE/4DE)	1 Set*	1 Set*	2 sets*		
22.	C2.6	Station Service PCC (0DA)	1 Set*	--	1 Set*		
23.	C2.7	Emergency MCC (0EA)	1 Set*	--	1 Set*		
24.	C2.8	Misc Service PCC (0DC)	1 Set*	--	1 Set*		
25.	C2.9	Misc MCC (0DD)	1 Set*	--	1 Set*		

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Sl.No	BOM Ref No	Description	Qty (Common & Unit 3)	Qty (Unit 4)	Total Qty	Unit Rate	Total Rate
26.	C2.10	Ventilation MCC (0DH)	1 Set*	--	1 Set*		
27.	C2.11	Ventilation MCC (0DI)	1 Set*	--	1 Set*		
28.	C2.12	Air conditioning MCC (0DG)	1 Set*	--	1 Set*		
29.	C2.13	ESP & Vent MCC (3DF/ 4DF)	1 Set*	1 Set*	2 Sets*		
30.	C2.14	CW PCC (0DB)	1 Set*	--	1 Set*		
31.	C2.15	Fire fighting MCC (0DJ)	1 Set*	--	1 Set*		
32.	C2.16	DMCW PCC (0DK)**	1 Set*	--	1 Set*		
33.	C2.17	Air Compressor PCC (0DL)	1 Set*	--	1 Set*		
34.	C2.18	Filter water P/H MCC (ODM)	1 Set*	--	1 Set*		
35.	C2.19	ACDB –12WAY	1 Set*	--	1 Set*		
36.	C2.20	ACDB –24 WAY	1 Set*	--	1 Set*		
37.	C2.21, C2.22	Turbine ACDB (3DG/ 4DG) / Boiler ACDB (3DH/ 4DH)	2 set*	2 set*	4 sets*		
38.	C2.23, C2.24	220V Unit DCDB (3FA/ 4FA) / 220V Station DCDB (0FA)	2 set*	1 set*	3 sets*		
39.	C2.27	Local Starter Panel	42 Nos.	4 2 Nos.	84 Nos.		
40.	D1.1	Soot Blower MCC	1 Set*	1 Set*	2 sets*		
41.	D1.2	FTP Local starter panels	1 Nos.	1 Nos.	2 Nos.		
42.	D1.3	D.C. Starter panel for Scanner air fan	1 No.	1 No.	2 Nos.		
43.	E1.1	L.T. Main Switch Board	1 Set.*	1 Set.*	2 Sets.*		
44.	E1.2	Auxiliary Control Panel	2 Nos.	2 Nos.	4 Nos.		

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Sl.No	BOM Ref No	Description	Qty (Common & Unit 3)	Qty (Unit 4)	Total Qty	Unit Rate	Total Rate
45.	E1.3	Electronic Control Panel with Bapcon controllers	32 Sets*	32 Sets*	64 Sets*		
46.	E1.4	IOS PC with monitor, printers and other accessories etc.	1 set*	1 set*	2 sets*		
47.	E1.5	Rapper Control Panel- with Rapcon controllers	2 Nos.	2 Nos.	4 Nos.		
48.	E1.7	Ash level indicator	64 Sets*	64 Sets*	128 Sets*		
49.	F1.1	DIGITAL AUTOMATIC VOLTAGE REGULATOR	1 set*	1 set*	2 sets*		
50.	G.1.1	D.C. Starter Cabinet for DC Seal Oil Motor	1Set.*	1 set*	2 sets*		
51.	G.1.2	D.C. Starter Panels For EOPs , JOP	2 Sets*	2 sets*	4 sets*		
52.	G.1.3	Lub Oil Purification Equipment Panel;	1Set*	1 set*	2 sets*		
53.	B2.1	IP BUS DUCT (15.75 KV) Main 150 mtr /set, Tap off 60 mtr/set	1 set*	1 set*	2 sets*		
54.	B2.2.1	6.9kV SP BUS DUCTS 1600A	460 Mtrs	160 Mtrs	620 Mtrs		
55.	B2.2.2	6.6kV SP BUS DUCTS – 2500 A	190 mtrs	-	190Mtrs		
56.	B2.2.3	6.6kV SP BUS DUCTS – 4000 A	15 Mtr	-	15Mtr		
57.	C3.1	220 V DC Battery & Battery Charger	2 sets*	1 set*	3 sets*		
		HT CABLES					
58.	C4.1	3C x 185 sq.mm	5,750Mtr	5,750 Mtr	11500Mtr		
59.	C4.2	1C X 630 sq.mm	17000Mt	17000Mtr	34000Mtr		
60.	C4.3	1C x 630 sq. mm	2250Mtrs	2250 Mtrs	4500 Mtrs		

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Sl.No	BOM Ref No	Description	Qty (Common & Unit 3)	Qty (Unit 4)	Total Qty	Unit Rate	Total Rate
		<i>Termination kits for 6.35/11 kV grade</i>					
61.	C5.1	1c x 630 sq. mm (Indoor Type)	20 Nos.	20 Nos.	40 Nos.		
62.	C5.2	3c x 185 sq. mm (Indoor Type)	80 Nos.	80 Nos.	160 Nos.		
		<i>6.6 kV Straight through jointing kits</i>					
63.	C5.3	1c x 630 sq. mm	2 Nos.	2 Nos.	4 Nos.		
64.	C5.4	3c x 185 sq. mm	1 Nos.	1 Nos.	2 Nos.		
		<i>Termination kits for 3.3/3.3 kV grade</i>					
65.	C5.5	1c x 630 sq. mm (Indoor Type)	50 Nos.	50 Nos.	100 Nos.		
		<i>LT POWER CABLES (1.1 kV grade)</i>					
66.	C6.1	1 C X 630 sq. mm, Al, Armoured	20000Mtr	20,000Mtr	40000Mtr		
67.	C6.2	1 C X 300 sq.mm, Al, Armoured	2500Mtrs	2500 Mtrs	5000 Mtrs		
68.	C6.3	1 C X 185 sq. mm, Al, Armoured	500 Mtrs	500 Mtrs	1000 Mtrs		
69.	C6.4	2 C X 185 sq. mm, Al, Armoured	250 Mtrs	250 Mtrs	500 Mtrs		
70.	C6.5	2 C X 95 sq. mm, Al, Armoured	250 Mtrs	250 Mtrs	500 Mtrs		
71.	C6.6	2 C X 35 sq. mm, Al, Armoured	2000 Mtrs	2000 Mtrs	4000 Mtrs		
72.	C6.7	2 C X 16 sq. mm, Al , Armoured	4000 Mtrs	4000 Mtrs	8000Mtrs		
73.	C6.8	3 C X 185 sq. mm, Al, Armoured	10500Mtr	10500Mtrs	21000Mtr		
74.	C6.9, F3.1	3 C X 95 sq. mm, Al, Armoured	3650 Mtrs	3650 Mtrs	7300 Mtrs		
75.	C6.10,E5.2	3 C X 35 sq. mm, Al, Armoured	4550Mtrs	4550 Mtrs	9100Mtrs		
76.	C6.11	3 C X 16 sq. mm, Al, Armoured	11000Mtr	11000Mtrs	22000Mtr		
77.	C6.12	3.5 C X 185 sq. mm, Al, Armoured	1500 Mtrs	1500 Mtrs	3000 Mtrs		

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Sl.No	BOM Ref No	Description	Qty (Common & Unit 3)	Qty (Unit 4)	Total Qty	Unit Rate	Total Rate
78.	C6.13	3.5 C X 95 sq. mm, Al, Armoured	2500 Mtrs	2500 Mtrs	5000 Mtrs		
79.	C6.14	3.5 C X 35 sq. mm, Al, Armoured	8000 Mtrs	8000 Mtrs	16000Mtr		
80.	C6.15	4 C X 16 sq.mm, Al, Armoured	10000Mtr	10000Mtrs	20000Mtr		
81.	C6.16	1 C X 630 sq. mm, Copper Armoured	1500 Mtrs	1500 Mtrs	3000 Mtrs		
82.	C6.17	1C X 70 sq. mm, Copper, Armoured	2500 Mtrs	2500 Mtrs	5000 Mtrs		
83.	C6.18	2 C X 95 sq. mm, Copper , Armoured	3000 Mtrs	3000 Mtrs	6000 Mtrs		
84.	C6.19	2 C X 70 sq. mm, Copper , Armoured	1000 Mtrs	1000 Mtrs	2000 Mtrs		
85.	C6.20	2 C X 6 sq. mm, Copper , Armoured	15000Mtr	15000Mtrs	30000Mtr		
86.	C6.21, D3.2, F3.3	2 C X 2.5 sq. mm, Copper , Armoured	25100Mtr	25100Mtr	50200Mtr		
87.	C6.22, D3.1	3 C X 2.5 sq. mm, Copper , Armoured	85,500Mtrs	85,500Mtrs	171,000Mtrs		
88.	C6.23	4 C X 2.5 sq. mm, Copper , Armoured	3000 Mtrs	3000 Mtrs	6000 Mtrs		
89.	D3.1	3C X 2.5 sq mm , Al , un armoured	34000 Mtrs	34000 Mtrs	68000 Mtrs		
90.	E5.1	3C X 10 sq mm	4750 Mtrs	4750 Mtrs	9500 Mtrs		
91.	E5.3	2C x 120 sq mm	10500 Mtrs	10500 Mtrs	21000 Mtrs		
92.	E5.4	3.5 C x 120 sq mm	500 Mtrs	500Mtrs	1000 Mtrs		
93.	F3.2	3C x 25 sq mm AL ,Armoured	3280 Mtrs	3280 Mtrs	6560 Mtrs		

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Sl.No	BOM Ref No	Description	Qty (Common & Unit 3)	Qty (Unit 4)	Total Qty	Unit Rate	Total Rate
		<i>LT CONTROL CABLES</i>					
94.	C7.1, E6.2	3 C X 2.5 sq. mm	55500Mtr	55500Mtr	110,000 Mtr		
95.	C7.2	5 C X 2.5 sq. mm	50000Mtr	50000Mtr	100000Mtr		
96.	C7.3, E6.3	7 C X 2.5 sq. mm	39500Mtr	39500Mtrs	79000Mtr		
97.	C7.4, E6.4	10C X 2.5 sq. mm	32750Mtr	32750Mtrs	65500Mtr		
98.	C7.5	12 C X 2.5 sq. mm	37500Mtr	37500Mtr	75000Mtr		
99.	C7.6	16 C X 2.5 sq. mm	5,000Mtrs	5,000 Mtrs	10000Mtr		
100.	C7.7	20 C X 2.5 sq. mm	5,000Mtrs	5,000Mtrs	10000Mtr		
101.	E6.1	2C x 2.5 sq mm	7000 Mtrs	7000 Mtrs	14000 Mtrs		
102.	F4.1	2 C X 1.5 sq mm, Cu, Armoured	2560Mtrs	2560Mtrs	5120Mtrs		
103.	F4.2	4 C X 1.5 sq mm, Cu, Armoured	580 Mtrs	580 Mtrs	1160Mtrs		
		<i>SCREENED CABLES</i>					
104.	F5.1	2P x 0.5 sqmm cable	800 Mtrs	800 Mtrs	1600Mtrs		
105.	F5.2	4P x 0.5 sqmm cable	3300Mtrs	3300Mtrs	6600Mtrs		
106.	F5.3	12P x 0.5 sqmm cable	1100Mtrs	1100Mtrs	2200Mtrs		
107.	F5.4	2P x 0.5 sqmm cable	1680Mtrs	1680Mtrs	3360Mtrs		
108.	F5.5	4P x 0.5 sqmm cable	2380Mtrs	2380Mtrs	4760Mtrs		
109.	F5.6	8P x 0.5 sqmm cable	2440Mtrs	2440Mtrs	4880Mtrs		
110.	F5.7	14P x 0.5 sqmm cable	800 Mtrs	800 Mtrs	1600Mtrs		

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Sl.No	BOM Ref No	Description	Qty (Common & Unit 3)	Qty (Unit 4)	Total Qty	Unit Rate	Total Rate
		<i>CABLE TRAYS COMPLETE WITH COUPLER PLATES, FASTENERS etc.</i>					
111.	C8.1,E4.1	Ladder type, 600 mm wide	21000Mtr	21000Mtr	42000Mtr		
112.	C8.2,E4.2	Ladder type, 450 mm wide	6900Mtr	6900 Mtrs	13800Mtr		
113.	C8.3,E4.3	Ladder type, 300 mm wide	2750Mtr	2750 Mtrs	5500Mtrs		
114.	C8.4,E4.4	Ladder type, 150 mm wide	3500Mtr	3500Mtrs	7000Mtrs		
115.	C8.5	Perforated Type, 600 mm wide	750 Mtrs	750 Mtrs	1500Mtrs		
116.	C8.6	Perforated Type, 450 mm wide	500 Mtrs	500 Mtrs	1000Mtrs		
117.	C8.7	Perforated Type, 300 mm wide	250 Mtrs	250 Mtrs	500 Mtrs		
118.	C8.8	Perforated Type, 150 mm wide	250 Mtrs	250 Mtrs	500 Mtrs		
119.	C8.9	Perforated Type, 100 mm wide	250 Mtrs	250 Mtrs	500 Mtrs		
120.	C8.10	Perforated Type, 50 mm wide	500 Mtrs	500 Mtrs	1000 Mtrs		
121.	C9.1, E8.1	Structural Steel for fabrication of supports (ISA - 50, ISMC – 100, ISMC - 150 etc.)	62 T	62 T	124 T		
		<i>GALVANIZED MS RIGID CONDUITS</i>					
122.	C10.1	50 mm dia Conduit	750 Mtrs	750 Mtrs	1500 Mtr		
123.	C10.2	80 mm dia Conduit	750 Mtrs	750 Mtrs	1500 Mtr		
124.	C10.3	100 mm dia Conduit	750 Mtrs	750 Mtrs	1500 Mtr		
		<i>FLEXIBLE GI CONDUIT</i>					
125.	C11.1	50 mm dia Flexible Conduit	750 Mtrs	750 Mtrs	1500 Mtr		
126.	C11.2	80 mm dia Flexible Conduit	750 Mtrs	750 Mtrs	1500 Mtr		

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Sl.No	BOM Ref No	Description	Qty (Common & Unit 3)	Qty (Unit 4)	Total Qty	Unit Rate	Total Rate
127.	C11.3	100 mm dia Flexible Conduit	750 Mtrs	750 Mtrs	1500 Mtr		
128.	C12.1	Galvanized ms marshalling box 6 way	3 Nos.	2 Nos.	5 Nos.		
129.	C12.2	Galvanized ms marshalling box 12 way	2 Nos.	2 Nos.	4 Nos.		
130.	C12.3	Galvanized ms marshalling box 36 way	2 Nos.	2 Nos.	4 Nos.		
131.	C12.4	Galvanized ms marshalling box 48 way	2 Nos.	2 Nos.	4 Nos.		
132.	C13.1, C13.2, E3.1	Local Push Button Station (Type –A&B)	413 Nos.	413 Nos.	826 Nos.		
		<i>LIGHTNING PROTECTION SYSTEM</i>					
133.	C14.1	Galvanized Steel Flat, 25 X 4 mm	2500Mtrs	2500Mtrs	5000Mtrs		
134.	C14.2	20 mm dia GS Rod for Vertical Air Termination	35 Nos.	35 Nos.	70 Nos.		
135.	C14.3.A	Test Links	25 Nos.	25 Nos.	50 Nos.		
136.	C143.B	Laying of 40mm MS round rod	50Mtrs	50Mtrs	100Mtrs		
		<i>ABOVE GROUND EARTHING MATERIALS</i>					
137.	C15.1	65 x 10 mm GS Flats	2750Mtrs	2750Mtrs	5500Mtrs		
138.	C15.2	25 x 4 mm GS Flats	1250Mtrs	1250Mtrs	2500Mtrs		
139.	C15.3, E7.3	8 SWG GI Wire	8725Mtrs	8725Mtrs	17450Mtrs		
140.	E7.1	GI Flat 50 x 6 mm	1300 Mtr	1300 Mtr	2600 Mtr		
141.	E7.2	GI Flat 30 x 5 mm	500 Mtr	500 Mtr	1000 Mtr		
142.	C15.4	Treated Earth pits	25 sets*	20 sets*	45 sets*		

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Sl.No	BOM Ref No	Description	Qty (Common & Unit 3)	Qty (Unit 4)	Total Qty	Unit Rate	Total Rate
		<i>LT POWER (Aluminium) CABLE TERMINATION</i>					
143.	C16.1	1 C X 630 sq. mm,Al, Armoured	300 Nos	300 Nos	600 nos		
144.	C16.2	1 C X 300 sq.mm, Al, Armoured	10 Nos	10 Nos	10 Nos		
145.	C16.3	1 C X 185 sq. mm, Al, Armoured	28 Nos	28 Nos	56 Nos		
146.	C16.4	2 C X 185 sq. mm, Al, Armoured	10 Nos	10 Nos	20 Nos		
147.	C16.5	2 C X 95 sq. mm, Al, Armoured	4 Nos	4 Nos	8 Nos		
148.	C16.6	2 C X 35 sq. mm, Al, Armoured	6 Nos	6 Nos	12 Nos		
149.	C16.7	2 C X 16 sq. mm, Al , Armoured	22 Nos	22 Nos	44 Nos		
150.	C16.8	3 C X 185 sq. mm, Al, Armoured	123 Nos	123 Nos	246 Nos		
151.	C16.9	3 C X 150 sq. mm, Al, Armoured	2 Nos	2 Nos	4 Nos		
152.	C16.10, F6.1	3 C X 95 sq. mm, Al, Armoured	41 Nos	41 Nos	82 Nos		
153.	C16.11, E9.9	3 C X 35 sq. mm, Al, Armoured	66 Nos	66 Nos	132 Nos		
154.	C16.12	3 C X 16 sq. mm, Al, Armoured	73 Nos	73 Nos	146 Nos		
155.	C16.13	3.5 C X 185 sq. mm, Al, Armoured	21 Nos	21 Nos	42 Nos		
156.	C16.14	3.5 C X 95 sq. mm, Al, Armoured	6 Nos	6 Nos	12 Nos		
157.	C16.15	3.5 C X 35 sq. mm, Al, Armoured	7 Nos	7 Nos	14 Nos		
158.	C16.16	4 C X 16 sq.mm, Al, Armoured	17 Nos	17 Nos	34 Nos		
159.	C16.17	4 C X 35 sq.mm, Al, Armoured	15 Nos	15 Nos	30 Nos		
160.	C16.18	1 C X 630 sq. mm, Copper Armoured	28 Nos	28 Nos	56 Nos		

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Sl.No	BOM Ref No	Description	Qty (Common & Unit 3)	Qty (Unit 4)	Total Qty	Unit Rate	Total Rate
161.	C16.19	1C X 70 sq. mm, Copper, Armoured	8 Nos	8 Nos	16 Nos		
162.	C16.20	2 C X 95 sq. mm, Copper , Armoured	8 Nos	8 Nos	16 Nos		
163.	C16.21	2 C X 70 sq. mm, Copper , Armoured	12 Nos	12 Nos	24 Nos		
164.	C16.22	2 C X 6 sq. mm, Copper , Armoured	22 Nos	22 Nos	44 Nos		
165.	C16.23, E9.1, F6.4	2 C X 2.5 sq. mm, Copper , Armoured	482 Nos	482 Nos	964 Nos		
166.	C16.24, E9.2	3 C X 2.5 sq. mm, Copper , Armoured	863 Nos	863 Nos	1726 Nos		
167.	C16.25, E9.3	4 C X 2.5 sq. mm, Copper , Armoured	105 Nos	105 Nos	210 Nos		
168.	E9.8	3C x 10 sqmm	40 Nos	40 Nos	80 Nos		
169.	E9.4	2C x 120 sqmm	128 Nos	128 Nos	256 Nos		
170.	E9.5	3.5C x 120 sqmm	20 Nos	20 Nos	40 Nos		
171.	D3.2	3 C X 2.5 sq. mm, Cu, Armoured.	300 Nos	300nos	600nos		
172.	F6.2	3C X 25 sq. mm, Al, Armoured	12 Nos.	12 Nos.	24 Nos.		
173.	F6.3	2C X 25 sq. mm, Al, Armoured (This cable not in list of cables)	12 Nos.	12 Nos.	24 Nos.		

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Sl.No	BOM Ref No	Description	Qty (Common & Unit 3)	Qty (Unit 4)	Total Qty	Unit Rate	Total Rate
		<i>JUNCTION BOXES</i>					
174.	D2.1	Junction Boxes 12 way	4 Nos.	4 Nos.	8 Nos.		
175.	D2.2	Junction boxes 24 way	4 Nos.	4 Nos.	8 Nos.		
176.	E3.2,	Power Junction Boxes for hopper heaters/ support insulator heaters/ shaft insulator heaters	44 Nos.	44 Nos.	88 Nos.		
177.	E3.4	Control Junction Boxes for hopper thermostat, start stop PBs, ALI	20 Nos.	20 Nos.	40 Nos.		
178.	E2.1	Testing and Termination and dressing of Heating Elements for Hopper	768 Nos.	768 Nos.	1536 Nos.		
179.	E2.2	Testing Heating elements for support insulator heater	128 Nos.	128 Nos.	256 Nos.		
180.	E2.3	Testing Heating elements for shaft insulator heater	32 Nos.	32 Nos.	64 Nos.		
181.	E2.4	Testing Thermostats for hopper heaters.	32 Nos.	32 Nos.	64 Nos.		
182.	E2.5	Testing Thermostat for support insulators	4 Nos.	4 Nos.	8 Nos.		
183.	F2.1	VFD Transformers	4 sets*	4 sets*	8 sets*		
184.	F2.2	DC Air cooled Reactor	4 sets*	4 sets*	8 sets*		
185.	F2.3	LCI Drive Panel	4 sets*	4 sets*	8 sets*		
186.	F2.4	Control Panel for VFD Drives	2 Nos.	2 Nos.	4 Nos.		
187.	F2.5	Contacto Panel for VFD Drives	4 Nos.	4 Nos.	8 Nos.		
188.	F2.6	MMI for VFD	1 set*	--	1 Set*		

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Sl.No	BOM Ref No	Description	Qty (Common & Unit 3)	Qty (Unit 4)	Total Qty	Unit Rate	Total Rate
		<i>COMMISSIONING of the following erected by Mechanical Contractor</i>					
189.	C17.1	LT Drives- Unidirectional (including DC)	271 Nos.	271 Nos.	542 Nos.		
190.	C17.2	LT Drives- Reversible (including DC)	131 Nos.	131 Nos.	262 Nos.		
191.	C17.4, C17.5, C17.6	Control Panel for Hydrogen /Ammonia/ Phosphate Dosing system	3No.	3 No.	6 No.		
192.	D4.1	Soot Blower Motors (WB, LRB, AH) Try	138 Nos.	138 Nos.	276 Nos.		
193.	D4.2, E10.2, C17.3	Hoists/cranes/monorail/elevator	14 No	14 No	28 Nos		
194.	E10.1	LT Drives of ESP	68 Nos.	68 Nos.	136 Nos.		
195.	E10.3	ESP Transformer	32 Nos.	32 Nos.	64 Nos.		
196.	F7.1	Generator Control panel (GCP) 1370 (W) x 1000 (D) x 2344 (H), weight approx 1300 Kgs	1 No	1 No	2 Nos		
197.	F7.2	Unit auxiliary control board (UAB) 2278 (W) x 1000 (D) x 2344 (H) Weight approx 1600 Kgs	1 No	1 No	2 nos		
198.	F7.3	Station auxiliary control board (SAB) 2370 (W) x 1000 (D) x 2344 (H) weight approx 1600 Kgs	1 No	-	1 No		
199.	F7.4	3C x 50 sq mm screened copper cable	300 mtr	300 mtr	600 mtr		
200.	F7.5	3C x 2.5 sq mm screened copper cable	150 mtr	150 mtr	300 mtr		
201.	G.2.1	Exciter drier/heater	1 set*	1 set*	2 sets*		

Signature of Tenderer

Sl.No	BOM Ref No	Description	Qty (Common & Unit 3)	Qty (Unit 4)	Total Qty	Unit Rate	Total Rate
202.	G.2.2	Generator Air Drier	1 set*	1 set*	2 sets*		
203.	G3.1	210 MW Generator H.V. testing, meggering of Bushings & Accessories, resistance measurement, meggering including dry out of generator.	1 No.	1 No.	2 Nos.		
204.	G.3.2.1	6.6 KV Motors (BFP, PA Fan ,ID Fan ,CE Pump, Mills, FD)	18 Nos.	18 Nos	36 nos		

TOTAL CONTRACT VALUE _____

(IN WORDS -----)

Signature of Tenderer

Sl No	BOM Ref No	Description	Quantity	Unit Rate
		PROVISIONAL ERECTION RATES TO BE QUOTED FOR FOLLOWING OPTIONAL ITEMS		
205.	H.0.1	Filtration of Transformer oil	Per kilo litres	
206.	H.0.2	Providing Aluminium welding including all works such as cutting, chamfering etc. incidental to the job, along with all tools & tackles, machinery, consumables all inclusive.		
207.	H.0.3	Aluminium conductor of thickness 8 mm to 15 mm	Per mtr run	
208.	H.0.4	Aluminium enclosure of thickness 6mm to 8mm	Per mtr run	
209.	H.0.5	Aluminium enclosure of thickness below 6 mm	Per mtr run	
210.	H.1.1.	GI pipe 150 mm ϕ	(per m)	
		CABLES (Laying & Termination)		
		<i>1.1 kV, Unarmoured Al, PVC/FRLS Power Cable</i>		
211.	H.1.2.1	2 C x 6 sq. mm	(per m)	
212.	H.1.2.2	2 C x 10 sq. mm	(per m)	
213.	H.1.2.3	4 C x 6 sq. mm	(per m)	
214.	H.1.2.4	4 C x 10 sq. mm	(per m)	
		<i>1.1 kV, Unarmoured Cu, PVC/FRLS Power Cable</i>		
215.	H.1.2.5	2 C x 10 sq. mm	(per m)	
216.	H.1.2.6	5 C x 4 sq. mm	(per m)	
217.	H.1.2.7	5 C x 6 sq. mm	(per m)	
		<i>1.1 kV, Unarmoured Cu, PVC/FRLS Control Cable</i>		
218.	H.1.2.8	2 C x 2.5 sq. mm	(per m)	
219.	H.1.2.8	24 C x 2.5 sq. mm	(per m)	

Signature of Tenderer

Sl No	BOM Ref No	Description	Quantity	Unit Rate
		PROVISIONAL ERECTION RATES TO BE QUOTED FOR FOLLOWING OPTIONAL ITEMS		
220.	H.1.2.9	2 C x 4 sq. mm	(per m)	
221.	H.1.2.10	5 C x 4 sq. mm	(per m)	
222.	H.1.2.11	10 C x 1.5 sq. mm	(per m)	
223.	H1.2.12	19 C x 1.5 sq. mm	(per m)	
224.	H.1.2.13	27 C x 1.5 sq. mm	(per m)	
225.	H.1.3	Excavation of earth in any type of soil and refilling earth	(per cu. m)	

Signature of Tenderer

TENDER SPECIFICATION

BHEL:PSSR:SCT: 1180

FOR

Handling at Site Stores / Storage yard, Transportation to site of Work, Erection, Testing and Commissioning of HT and LT Electrical Package for Units III & IV of 210 MW set Stage II

at

Rayalaseema Thermal Power Project
(Muddanur) V.V.Reddy Nagar,
Kalamalla Post, Cuddapah District,
Andhra pradesh

PART – II PRICE BID

BOOK NO :



BHARAT HEAVY ELECTRICALS LIMITED
(A Government of India Undertaking)
Power Sector – Southern Region
690, Anna Salai, Nandanam, Chennai – 600 035

Signature of Tenderer

BHARAT HEAVY ELECTRICALS LIMITED
(A Government of India Undertaking)
Power Sector, Southern Region
690, Anna Salai, Nandanam, Chennai – 35

TENDER SPECIFICATION NO:BHEL:PSSR:SCT:1180

NAME OF WORK

Handling at Site Stores / Storage yard, Transportation to site of Work, Erection, Testing and Commissioning of HT and LT Electrical Package for Units III & IV of 210 MW set Stage II at Rayalaseema Thermal Power Project, (Muddanur) V.V.Reddy Nagar, Kalamalla Post, Cuddapah District, Andhra pradesh.

(PRICE BID)

PART II

**Issued to
M/s.**

**For and on behalf of
BHARAT HEAVY ELECTRICALS LIMITED**

Senior Deputy General Manager/Contracts

(This tender document is not transferable)

**Place: Chennai-600 035.
Date:**

Signature of Tenderer

NOTE TO RATE SCHEDULE

- 1. The quantities indicated in the Rate Schedule are only approximate and are liable for variation. Payment shall be made to the actual quantity erected at the unit rate quoted / accepted.**
2. Dimension and weight indicated in the Rate Schedule are only approximate and given for guidance of the contractor.
3. Rates include complete installation, testing, commissioning and trial operation of equipments laying and dressing of cables, termination of cables etc.
4. Where the provisional rates /values are asked for, the successful contractor who has been awarded the work shall have to match their provisional rates for all categories of work, with the lowest provisional rates/value quoted by other qualified bidders. Only those rate/values will be paid for these works. However BHEL RESERVES ITS RIGHT TO TREAT THESE PROVISIONAL WORKS AS OPTIONAL AND GET IT DONE THROUGH OTHERS ALSO AS PER OUR DISCRETION. The above condition shall be binding on the contractor.
5. Tenderers are requested to quote their rates, only in the price bid (part II) provided by BHEL. Quoting of rates in any other form/formats will not be entertained.

SIGNATURE OF THE TENDERER

Signature of Tenderer