

TENDER SPECIFICATION BHEL: PSSR: SCT: 1528

FOR

Handling at Site Stores / Storage yard, Transportation to Site of Work, Pre assy., Erection, Testing and Commissioning of HT & LT Electrical Package including Supply & Applications of touch-up, preservation and final painting of above package

at

**1 X 600 MW – Stage-II of Kakatiya Thermal Power Project,
Chelpur, Warangal Dist. AP**

VOLUME –II PRICE BID



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

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: 1528

for

Handling at Site Stores / Storage yard, Transportation to Site of Work, Pre
assy., Erection, Testing and Commissioning of HT & LT Electrical Package
including Supply & Applications of touch-up, preservation and final painting
of above package of 1 X 600 MW – Stage-II of Kakatiya Thermal Power
Project, Chelpur, Warangal Dist. AP.

One set of Tender documents consisting of Volume-I and Volume II

Book SI No _____ & _____

Issued to

M/s

Refer NIT for Last date of submission

Please note this tender document is not transferable

For and on Behalf of
Bharat Heavy Electricals Limited

General Manager / Contracts

Place: Chennai -35

Date:

KAKATIYA 1X600MW - RATE SCHEDULE

SI.No	BOM Ref No.	Description	Unit	Qty	Rate		Amount	
					In fig	In words	In fig	In words
		TRANSFORMERS						
1	A 1.1	240 MVA Generator transformers(including spare)	Set*	4				
2	B 1.2	80 MVA Station transformers	Set*	1				
3	B1.1	31.5 MVA Unit transformers	Set*	2				
4	B 1.3 & B 1.4	16 MVA Unit Aux Transformer & Station Aux Transformer	Set*	4				
5	D 2.1	4600 KVA VFD Transformers	Set*	4				
		HT Bus duct						
6	C 1.1	21 KV IP Bus duct	Set*	1				
7	C2.1,C2.2,C2.5,C2.6,C2.7,C2.8	SP Bus duct 11 KV 3150 A	Mtr	657				
8	C 2.3,C2.4,C2.6,C2.7	SP Bus duct 3.3 KV 3150 A	Mtr	208				
		HT Switch gear						
9	A 2.1 ,A2.2,A2.3,A2.4,A2.5,A2.6	11 KV Switch board - 2BA,2BB,0BA,0BB,0CA,0CB(73 Panels)	Set*	6				
10	A 2.7 ,A2.8,A2.9	3.3 KV Switch board - 0CA,0CB,2CA (30 Panels)	Set*	3				
11	A 4.0	Earthing trucker breaker(11 KV & 3.3 KV)	Nos	9				
		Generator , GT & UT Control /Protection metering panels						
12	A 3.1	Generator relay panel	Set*	1				
13	A 3.2	Bus transfer panel	Set*	2				
		VFD for ID fans						

SIGNATURE OF BIDDER

Sl.No	BOM Ref No.	Description	Unit	Qty	Rate		Amount	
					In fig	In words	In fig	In words
14	D 3.1	11 KV VFD switch gear panel	Set*	4				
15	D 3.2	LCI drive panel	Set*	4				
16	D 3.3	Adaptor cubicle panel	Set*	4				
17	D 3.4	Common control panel for VFD drives including PC system for MMI	Set*	2				
18	D 3.5	Air core DC link reactor	Set*	4				
		Laying of LT power cables						
19	H.4.1	3.5Cx300 sq.mm, Aluminium, Armoured	Mtr	1200				
20	H.4.2	3 C X 50 sq. mm, Aluminium, Armoured	Mtr	3000				
21	H.4.3	3 C X 16 sq. mm, Aluminium, Armoured	Mtr	900				
22	H 4.5	3 C X 10 sq. mm, Aluminium, Armoured	Mtr	13000				
23	H.4.4	2 C X 120 sq. mm, Aluminium, Armoured	Mtr	37600				
		Termination of LT power cables						
24	H 5.1	3.5Cx300 sq.mm, Aluminium, Armoured	Nos	32				
25	H 5.2	3 C X 50 sq. mm, Aluminium, Armoured	Nos	32				
26	H 5.3&H 5.5	3 C X 16 sq. mm, Aluminium, Armoured	Nos	232				
27	H 5.4	2 C X 120 sq. mm, Aluminium, Armoured	Nos	576				
		Laying and termination of LT Power /Control cables						
29	H 6.1&G6.1	3C X 2.5 Sq.mm	Mtr	118000				
30	H 6.2 & D 4.1	2C X 2.5 Sq.mm	Mtr	15150				

Sl.No	BOM Ref No.	Description	Unit	Qty	Rate		Amount	
					In fig	In words	In fig	In words
31	H 6.5&D4.3	4C X 1.5 Sq.mm	Mtr	21150				
32	H 6.4	10C X 2.5 Sq.mm	Mtr	28000				
33	H 6.3	7C X 2.5 Sq.mm	Mtr	10000				
35	D 4.2	2 C x 1.5 Sq. mm	Mtr	3300				
37	G 6.2	7 C X 1.5 sq. mm	Mtr	18000				
38	G 6.3	10Cx1.5 sq.mm	Mtr	24000				
39	D 4.4	14 C X 1.5 sq. mm	Mtr	200				
		Laying and termination of Individual pair & Overall shielded/Over all shielded Twisted pair armoured cables						
40	D 5.1, D 6.1&G 6.4	2 Pair x 0.5 Sq.m	Mtr	3230				
41	D 5.2,D 6.2 & G6.5	4 Pair x 0.5 Sq.m	Mtr	7680				
42	D 6.3, G6.6 & G6.7	8 Pair x 0.5 Sq.mm	Mtr	2440				
43	D 5.3 & D6.4	12 Pair x 0.5 Sq.mm	Mtr	1900				
		Excitation equipments						
49	D 1.1	Digital Automatic Voltage Regulator(DAVR)	Set*	1				
		Commissioning of equipments erected by Mechanical contractor						
50	E 1.0	600 MW Generator	No ^s	1				
51	E 2.1	11 KV Motors	Nos ^s	5				
52	E 2.2	3.3 KV Motors	Nos ^s	21				
53	E 3.0	ESP Transformer	Nos ^s	64				

SIGNATURE OF BIDDER

Sl.No	BOM Ref No.	Description	Unit	Qty	Rate		Amount	
					In fig	In words	In fig	In words
54	G 1.0	Sootblower MCC	Nos.	1				
55	G 2.0	FTP local starter panel	Nos.	2				
56	G3.0	DC starter panel for scanner air fan	Nos.	1				
57	I 1.1,J 3.0 & J2.0	DC starter panels with resistance box for EOP/JOP	Nos.	4				
59	J 1.0	DC starter cabinet with resistance box for DC seal oil motor	Nos.	1				
60	H 1.1	Auxiliary control panel	Nos.	4				
61	H 1.2	LT Main switch board(LTMSB)	Nos.	4				
62	H 1.3	Electronic control panel with Bapcon controller	Nos.	64				
63	H 1.4	IOS panel with stand alone PC, Colour monitor, Data loggerPC with colour monitor, Printer and other accessories	Set*	1				
64	H 1.5	Rapper control panel with Rapcon controllers& Statcon panel with controllers	Nos.	4				
65	H 1.6	Ash level indicator with probe	Nos.	256				
66	H 1.7	Laying and dressing of GI Flexible Metallic Conduit with fixing hardwares, laying of PTFE shielded signal cable and 1.0 sqmm PVC insulated copper wire for Ash level indicating system (Quantity indicated is for each item)	Mtr	3840				
67	F 1.0	Unit control panel	Set*	1				
68	F 2.0	Electrical control panel	Set*	1				
69	H 2.1	Local Start Stop Push Buttons	Nos.	136				
70	H 2.2 & H 2.3	Junction Boxes	Nos.	72				
71	H 2.4	Junction Boxes	Nos.	38				
72	G 4.0	Junction Boxes	Nos.	2				

SIGNATURE OF BIDDER

Sl.No	BOM Ref No.	Description	Unit	Qty	Rate		Amount	
					In fig	In words	In fig	In words
		Hot dipped Galvanised cable trays complete with coupler plates, fastners & covers						
73	H 3.1	Ladder type 600 mm wide	Mtr	1800				
74	H 3.2	Ladder type 450 mm wide	Mtr	2300				
75	H 3.3	Ladder type 300 mm wide	Mtr	800				
76	H 3.4	Ladder type 150 mm wide	Mtr	5000				
77	G 5.1	Perforated Type, 100 mm wide	Mtr	1500				
		Earthing /Lighting protection materials						
78	H 7.1	50 x 6 mm GS Flats	MTR	3300				
79	H 7.2	30 x 5 mm GS Flats	MTR	2700				
80	H 7.3	8 SWG GI Wire	MTR	17000				
		Structural steel						
81	H 8.1,G7.2,H8.3,G7.1,H8.2	Structural steel	MT	36				
		Electrical commissioning of the equipments erected by Mechanical contractor						
85	G 8.1	Soot Blowers (LRSB / WB/AH etc) including commissioning of 2 Nos. motors, setting of limit switches etc.	Nos [§]	258				
86	K 1.1	LT Motors,Electrical actuators for valves & dampers	Nos [§]	500				
87	H 9.1	LT Drives for ESP	Nos [§]	152				
88	H 9.2	Hoists/cranes/monorail	Nos [§]	17				
89	K 1.2 & 1.3	Exciter dryer / heater & Generator Air Drier	Nos [§]	4				

Sl.No	BOM Ref No.	Description	Unit	Qty	Rate		Amount	
					In fig	In words	In fig	In words
90	K 1.4	CO ₂ Vaporizer	Nos ^{\$}	1				
91	K 1.5	Exciter Stroboscope	Set ^{\$}	1				
92	H 9.3, 9.4, 9.5, 9.6 & 9.7	Testing of Heaters/Thermostat	Nos ^{\$}	1928				
93	K 1.6, 1.7, 1.8 & 1.9	Control Panel for Dosing system	Nos ^{\$}	4				
94	I 1.2	Lub oil purification equipment panel	Nos ^{\$}	1				
	TOTAL							

SGNATURE OF THE BIDDER

**NOTE TO
RATE SCHEDULE:**

1. The quantities indicated in Qty column are approximate and are liable for variation and alteration at the discretion of BHEL. The work executed shall be measured and priced at unit rate quoted by the contractor and accepted by BHEL.
2. The Tenderer is expected to fill up the rate column after satisfying all terms and conditions of Tender Specification.
3. Tenderers are requested to quoted their rates, only in the price bid (Vol II) provided by BHEL. Quoting of rates in any other form / formats will not be entertained.
4. Tenderers are requested to affix their company seal and authorised signature in all pages .
- 5.\$= Rate is to be quoted only for checking/ commissioning.* =Lump sum rate is to be quoted per set

SIGNATURE OF BIDDER