

TENDER SPECIFICATION

No. BHE/PW/PUR/SKT-ELE/1083

FOR

HANDLING AT SITE STORES/STORAGE YARD, TRANSPORTATION TO SITE OF WORK, COMPLETE ERECTION, CHECKING OF CALIBRATION, TESTING, COMMISSIONING AND HANDING OVER OF CABLING, TRANSFORMER, DAVR, SOOT BLOWER SYSTEM, VARIABLE FREQUENCY DRIVES FOR ID FANS, BUS DUCTS, SWITCHGEAR, EARTHING AND ASSOCIATED EQUIPMENTS FOR ELECTRICAL PACKAGE OF 2X250 MW SIKKA THERMAL POWER PLANT EXTN. UNIT# 3&4.

AT

VILLAGE MUNGAI, SIKKA, GARVA AND NANIKHAVRI

DIST-JAMNAGAR, GUJRAT

VOLUME :II – PRICE BID

BOOK NO.

**BHARAT HEAVY ELECTRICALS LIMITED
(A GOVERNMENT OF INDIA UNDERTAKING)
POWER SECTOR - WESTERN REGION
SHREEMOHINI COMPLEX
345, KINGSWAY - NAGPUR 440 001**

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EARNEST MONEY DEPOSIT:
LAST DATE FOR:
TENDER SUBMISSION:

Please see Notice Inviting Tender.
Please see Notice Inviting Tender.

THESE TENDER SPECIFICATION DOCUMENTS CONTAINING **VOLUME-I** , **VOLUME- II** AND VOLUME-IBCD ARE ISSUED TO:
M/s.

PLEASE NOTE:
THESE TENDER SPECS DOCUMENTS ARE NOT TRANSFERABLE.

For Bharat Heavy Electricals Limited

AGM (Purchase)
Place: Nagpur
Date:

BHEL : PS WR
TS : BHE/PW/PUR/SKT-ELE/1083 (RATE SCHEDULE)
VOLUME-II- PRICE BID-1083

BHEL:PSWR:NAGPUR

RATE SCHEDULE, SECTION - A

NAME OF WORK: HANDLING AT SITE STORES/STORAGE YARD, TRANSPORTATION TO SITE OF WORK, COMPLETE ERECTION, CHECKING OF CALIBRATION, TESTING, COMMISSIONING AND HANDING OVER OF CABLING, TRANSFORMER, DAVR, SOOT BLOWER SYSTEM, VARIABLE FREQUENCY DRIVES FOR ID FANS, BUS DUCTS, SWITCHGEAR, EARTHING AND ASSOCIATED EQUIPMENTS FOR ELECTRICAL PACKAGE OF 2X250 MW SIKKA THERMAL POWER PLANT EXTN. UNIT# 3&4.

Sl. No.	Description of items	UOM	Quantity	Unit Rates in Figures (In Rs)	Unit Rates in Words (In Rs)	Total Amounts (In Rs)	APPLICABLE for Terms of Payment
SECTION-E1: CABLE TRAYS AND ACCESSORIES							I.1
E1.1	Ladder type 600(W) x 140 (H) mm	Mtrs.	29375				
E1.2	Ladder type 450(W) x 140 (H) mm	Mtrs.	5925				
E1.3	Ladder type 300(W) x 140 (H) mm	Mtrs.	9000				
E1.4	Ladder type 150(W) x 140 (H) mm	Mtrs.	4825				
E1.5	Perforated type 600(W) x 140 (H) mm	Mtrs.	5000				
E1.6	Perforated type 450(W) x 140 (H) mm	Mtrs.	500				
SECTION-E2A : LT POWER CABLES (XLPE Armoured)							I.2
E2A.1	6Cx6 sqmm Copper	Mtrs.	1000				
E2A.2	4CX25 sqmm Copper	Mtrs.	1000				
E2A.3	4C X 4 sqmm Copper	Mtrs.	2000				
E2A.4	3.5C X 50sqmm Aluminium	Mtrs.	6000				
E2A.5	3.5C X 25sqmm Aluminium	Mtrs.	10000				
E2A.6	3C X 630sqmm Aluminium	Mtrs.	1400				
E2A.7	3C X 240sqmm Aluminium	Mtrs.	11000				
E2A.8	3C X 150sqmm Aluminium	Mtrs.	1200				
E2A.9	3C X 120sqmm Aluminium	Mtrs.	2400				
E2A.10	3C X 95sqmm Aluminium	Mtrs.	9000				
E2A.11	3C X 50sqmm Aluminium	Mtrs.	16000				
E2A.12	3C X 25 sqmm Aluminium	Mtrs.	20100				

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E2A.13	3C X 16 sqmm Aluminium	Mtrs.	500				
E2A.14	3C X 10 sqmm Aluminium	Mtrs.	19000				
E2A.15	3C X 6 sqmm Aluminium	Mtrs.	5400				
E2A.16	3C X 6 sqmm Copper	Mtrs.	2800				
E2A.17	3C X 2.5sqmm Copper	Mtrs.	80200				
E2A.18	2C X 185sqmm Aluminium	Mtrs.	500				
E2A.19	2C X 120sqmm Aluminium	Mtrs.	13400				
E2A.20	2C X 95sqmm Aluminium	Mtrs.	5000				
E2A.21	2C X 70sqmm Copper	Mtrs.	12000				
E2A.22	2C X 50sqmm Aluminium	Mtrs.	1000				
E2A.23	2C X 25sqmm Aluminium	Mtrs.	13000				
E2A.24	2C X 2.5sqmm Copper	Mtrs.	10600				
E2A.25	1C X 630sqmm Copper	Mtrs.	1500				
E2A.26	1C X 630sqmm Aluminium	Mtrs.	20000				
E2A.27	1C X 400sqmm Aluminium	Mtrs.	9000				
E2A.28	1C X 70 sqmm Copper	Mtrs.	200				
E2A.29	1C X 25sqmm Copper	Mtrs.	1000				
E2A.30	1C X 16sqmm Copper	Mtrs.	4000				
E2A.31	1Cx2.5 sq mm Copper	Mtrs.	300000				
SECTION-E2B HT Cables 6.35/11KV							1.2
E2B.1	3CX185Sqmm,Aluminium	Mtrs.	21200				
E2B.2	1CX630Sqmm,Aluminium	Mtrs.	7500				
SECTION-E2C : LT CONTROL CABLES (Generally Unarmoured/Armoured, Screened/Unscreened)							1.2
E2C.1	14C ,1.5 sqmm Copper, HRPVC Armoured	Mtrs.	1000				
E2C.2	12C ,2.5 sqmm Copper, HRPVC Armoured	Mtrs.	27000				
E2C.3	10C ,2.5 sqmm Copper, HRPVC Armoured	Mtrs.	7600				
E2C.4	7C ,2.5 sqmm Copper, HRPVC Armoured	Mtrs.	61400				
E2C.5	4C ,1.5 sqmm Copper(Screened, Armoured)	Mtrs.	9000				

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E2C.6	3C 2.5 sqmm Copper, HRPVC Armoured	Mtrs.	95000				
E2C.7	2C ,1.5 sqmm Copper(Screened, Armoured)	Mtrs.	9000				
E2C.8	2C ,2.5 sqmm Copper(Screened, Armoured)	Mtrs.	85000				
SECTION-E3 : JUCTION BOXES AND PUSH BUTTON							1.3
E3.1	Junction Boxes 250x150x400 mm approx.	Nos.	40				
E3.2	Start Stop Push Button Station 180X100X250 mm approx.	Nos.	680				
E3.3	Junction box for Hoper ,Support& Shaft heaters 600X515X300 mm approx.	Nos.	72				
SECTION-E4 : STRUCTURAL STEEL							1.4
E4.1	Structural Steel fabrication & installation (MS angle, Channel, Plate etc)	MT	285				
SECTION-E5 A:SWITCHGEARS / MCC /PCC							1.5
E5A.1	6.6 kV Station Switchgear Board # 3CA. Each Board shall have 21 panels and supplied in loose shipping sections. Approx.Overall dimension of each panel 1000(L)x750(W)x2295(H) mm, approx. weight 500 kg per panel.	set	1				
E5A.2	6.6 kV Station Switchgear Board # 3CB. Each Board shall have 21 panels and supplied in loose shipping sections. Approx.Overall dimension of each panel 1000(L)x750(W)x2295(H) mm, approx. weight 500 kg per panel.	set	1				
E5A.3	6.6 kV Station Switchgear Board # 4CA. Each Board shall have 21 panels and supplied in loose shipping sections. Approx.Overall dimension of each panel 1000(L)x750(W)x2295(H) mm, approx. weight 500 kg per panel.	set	1				

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E5A.4	6.6 kV Station Switchgear Board # 4CB. Each Board shall have 21 panels and supplied in loose shipping sections. Approx.Overall dimension of each panel 1000(L)x750(W)x2295(H) mm, approx. weight 500 kg per panel.	set	1			
E5A.5	6.6 kV Station Switchgear Board # OCA Board shall have 12 panels and supplied in loose shipping sections. Approx.dimension of each panel 1000(L)x750(W)x2295(H) mm, approx. weight 500 kg per panel.	set	1			
E5A.6	6.6 kV Station Switchgear Board # OCB Board shall have 13 panels and supplied in loose shipping sections. Approx.dimension of each panel 1000(L)x750(W)x2295(H) mm, approx. weight 500 kg per panel.	set	1			
E5A.7	6.6 kV Station Switchgear Board # OCC Board shall have 10 panels and supplied in loose shipping sections. Approx.dimension of each panel 1000(L)x750(W)x2295(H) mm, approx. weight 500 kg per panel.	set	1			
E5A.8	6.6 kV Station Switchgear Board # OCD Board shall have 11 panels and supplied in loose shipping sections. Approx.dimension of each panel 1000(L)x750(W)x2295(H) mm, approx. weight 500 kg per panel.	set	1			
E5A.9	6.6 kV Station Switchgear Board # OCE Board shall have 24 panels and supplied in loose shipping sections. Approx.dimension of each panel 1000(L)x750(W)x2295(H) mm, approx. weight 500 kg per panel.	set	1			
E5A.10	6.6 kV Station Switchgear Board # OCF Board shall have 19 panels and supplied in loose shipping sections. Approx.dimension of each panel 1000(L)x750(W)x2295(H) mm, approx. weight 500 kg per panel.	set	1			

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E5A.11	Soot Blower Motor control Center, double front, Approx overall dimension 12000(L)x2600(H)x1000(W),approx WT 11.4 T approx., shall be supplied in eight to ten loose shipping sections	Nos	2			
E5A.12	LT main Switch Board, double front, Approx overall dimension 9050(L)x2400(H)x1700(W) mm, approx WT 13.0T, shall be supplied in eight to ten loose shipping sections	Nos	2			
E5A.13	Auxiliary Control Panel, Approx Overall Dimension 5687X1000X2400 mm, approx Weight of each panel 6.5 MT and supplied in loose shipping sections	Nos	4			
E5A.14	Station PMCC #ODA, Approx Overall Dimension 10250X1700X2450 mm, approx Weight of panel 8 MT and supplied in loose shipping sections	set	1			
E5A.15	Station PMCC #ODB, Approx Overall Dimension 10250X1700X2450 mm, approx Weight of panel 8 MT and supplied in loose shipping sections	set	1			
E5A.16	Unit PMCC #3DA, Approx Overall Dimension 11100X1700X2450 mm, approx Weight of panel 9 MT and supplied in loose shipping sections	set	1			
E5A.17	Unit PMCC #3DB, Approx Overall Dimension 11100X1700X2450 mm, approx Weight of panel 9 MT and supplied in loose shipping sections	set	1			
E5A.18	Cooling Tower PMCC #3DC, Approx Overall Dimension 13050X1700X2450 mm, approx Weight of panel 10 MT and supplied in loose shipping sections	set	1			
E5A.19	Cooling Tower PMCC #4DC, Approx Overall Dimension 13050X1700X2450 mm, approx Weight of panel 10 MT and supplied in loose shipping sections	set	1			

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E5A.20	Fire protection PMCC #4DC, Approx Overall Dimension 13050X1700X2450 mm, approx Weight of panel 10.5 MT and supplied in loose shipping sections	set	1		
E5A.21	Fuel oil PMCC#ODD, Approx Overall Dimension 9650X1500X2450 mm, approx Weight of panel 10 MT and supplied in loose shipping sections	set	1		
E5A.22	Unit Emergency Board #3DG, Approx Overall Dimension 10100X1300X2450 mm, approx Weight of panel 11 MT and supplied in loose shipping sections	set	1		
E5A.23	Unit Emergency Board #4DG, Approx Overall Dimension 10100X1300X2450 mm, approx Weight of panel 11 MT and supplied in loose shipping sections	set	1		
E5A.24	Turbine MCC #3KA, Approx Overall Dimension 9900X1300X2450 mm, approx Weight of each panel 11 MT and supplied in loose shipping sections	set	1		
E5A.25	Turbine MCC #4KA, Approx Overall Dimension 9900X1300X2450 mm, approx Weight of each panel 11 MT and supplied in loose shipping sections	set	1		
E5A.26	Turbine Valve MCC #3KB, Approx Overall Dimension 14750X1000X2450 mm, approx Weight of panel 15 MT and supplied in loose shipping sections	set	1		
E5A.27	Turbine Valve MCC #4KB, Approx Overall Dimension 14750X1000X2450 mm, approx Weight of panel 15 MT and supplied in loose shipping sections	set	1		
E5A.28	Boiler MCC #3HA, Approx Overall Dimension 8150X1300X2450 mm, approx Weight of panel 9 MT and supplied in loose shipping sections	set	1		
E5A.29	Boiler MCC #4HA, Approx Overall Dimension 8150X1300X2450 mm, approx Weight of panel 9 MT and supplied in loose shipping sections	set	1		

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E5A.30	Boiler Valve & Damper MCC #3HB, Approx Overall Dimension 7500X1000X2450 mm, approx Weight of each panel 7 MT and supplied in loose shipping sections	set	1		
E5A.31	Boiler Valve & Damper MCC #4HB, Approx Overall Dimension 7500X1000X2450 mm, approx Weight of each panel 7 MT and supplied in loose shipping sections	set	1		
E5A.32	Unit ACDB #3QA, Approx Overall Dimension 4500X1000X2450 mm, approx Weight of panel 4.5 MT and supplied in loose shipping sections	set	1		
E5A.33	Unit ACDB #4QA, Approx Overall Dimension 4500X1000X2450 mm, approx Weight of panel 4.5 MT and supplied in loose shipping sections	set	1		
E5A.34	Mise. Service MCC # OSA, Approx Overall Dimension 12750X1300X2450 mm, approx Weight of panel 12 MT and supplied in loose shipping sections	set	1		
E5A.35	Mise. Service MCC # OSB, Approx Overall Dimension 12750X1300X2450 mm, approx Weight of panel 12 MT and supplied in loose shipping sections	set	1		
E5A.36	Ventilation MCC #3TA, Approx Overall Dimension 7400X1300X2450 mm, approx Weight of panel 7 MT and supplied in loose shipping sections	set	1		
E5A.37	Ventilation MCC #4TA, Approx Overall Dimension 7400X1300X2450 mm, approx Weight of panel 7 MT and supplied in loose shipping sections	set	1		
E5A.38	A/C MCC #OTA, Approx Overall Dimension 7400X1300X2450 mm, approx Weight of panel 7 MT and supplied in loose shipping sections	set	1		
E5A.39	ESP A/C & Vent. MCC # 3TB, Approx Overall Dimension 5250X1000X2450 mm, approx Weight of panel 5 MT and supplied in loose shipping sections	set	1		

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E5A.40	ESP A/C & Vent. MCC # 4TB, Approx Overall Dimension 5250X1000X2450 mm, approx Weight of panel 5 MT and supplied in loose shipping sections	set	1			
E5A.41	Service Building MCC # OSG, Approx Overall Dimension 10400X1300X2450 mm, approx Weight of panel 10 MT and supplied in loose shipping sections	set	1			
E5A.42	CWPH & Chlorination MCC # OSC, Approx Overall Dimension 9000X1000X2450 mm, approx Weight of panel 9 MT and supplied in loose shipping sections	set	1			
E5A.43	Clarifier Water /PTP MCC # OSD, Board consist of 23panels .Approx Overall Dimension 16950X1300X2450 mm, approx Weight of panel is 16.1 MT and supplied in loose shipping sections	set	1			
E5A.44	ETP MCC # OSE, Board Consist of 9 Panels.Approx Overall Dimension 6750X1000X2450 mm, Approx Weight of 6.3 MT and supplied in loose shipping sections	set	1			
E5A.45	DM Plant MCC # OSF, Approx Overall Dimension 12000X1300X2450 mm, approx Weight of panel 11 MT and supplied in loose shipping sections	set	1			
E5A.46	CW M/U PH ACDB #OSH , Approx Overall Dimension 3750X1000X2450 mm, approx Weight of panel 4 MT and supplied in loose shipping sections	set	1			
E5A.47	220 V DCDB # 3FA, Approx Overall Dimension 8200X1000X2450 mm, approx Weight of panel 9 MT and supplied in loose shipping sections	set	1			
E5A.48	221 V DCDB # 4FA, Approx Overall Dimension 8200X1000X2450 mm, approx Weight of panel 9 MT and supplied in loose shipping sections	set	1			
E5A.49	AC Control supply panel (ACCSP) consisting of transformers, changeover system, modules, etc. approx weight 3 MT	set	1			

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E5A.50	DC Control supply panel (DCCSP) consisting of changeover system, modules, etc. approx weight 0.5 MT	set	1				
E5A.51	AC fuse BD of assorted size	nos	10				
E5A.52	220V DC fuse BD of assorted size	nos	8				
SECTION-E5 B : STARTER PANEL/BOXES/POWER DISTRIBUTION BOX/MARSHALLING							1.5
E5B.1	Electronic Control Panel, Overall dimensions approx.700X650X2000mm, approx.Weight of each panel 0.3MT. BAPCON CONTROLLER approx .dimension 280 x 210 x 210 mm, rotary switches, etc along with cables and connectors, shall be supplied loose for mounting in the panel at site	Nos	48				
E5B.2	RAPPER CONTROL PANEL Overall dimension approx.1000 X 650 X 2050 mm, approx.Weight of each panel 0.30 MT. 32 Nos. RAPCON Electronic modules for each panel (along with cables connectors) size 280 x 210 x 210 mm shall be supplied loose for mounting in the panel at site	Nos	4				
E5B.3	IOS PANEL overall dimension approx.1000x500x2050 mm,approx. Weight of panel 0.2 MT along with loose accessories such as IOS PC, Computer Furniture, Data Logger PC, Printer -4 Nos. PC termination box, peripheral cables etc.	set	2				
E5B.4	DC motor starter panels, etc (DC JOP, DC EOP, Seal oil panel), including resistance boxes. Approx weight 0.5 MT and approx. dimension 1000x800x2200 mm each.	Nos	6				
SECTION-E5C: DRY TYPE TRANSFORMER							1.5

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E5C.1	Transportation from stores/ storage yard to erection site , assembly, testing & Assistance for Commissioning of 2000 KVA , 3 phase 6.6 kV/ 0.433 KV Dry Type Transformer including all accessories,NGR,cabling etc as described in tender specification,	Nos	8				
E5C.2	2.5MVA,16.5/0.575Kv , Dry type excitation Transformer with encloser,approx. size3600x3000x2700mm,and weight 8MT.	No.	2				
SECTION-E5D: PANELS							1.5
E5D.1	Generator, Generator Transformer, UAT Transformer- Control ,protection & Metering panels. Approx dimension of each panel 1000x750x2295(H), approx weight 500kg per panel	set	2				
E5D.2	Station Transformer - Control ,protection & Metering panels .Approx dimension of each panel 1260x1000x2295(H),approx weight 600kg each panel	set	2				
E5D.3	BTS Panel. Approx.Overall dimension of each panel - 750(W)x2300(H)x800(D) mm, weight of each panel is approximately 1.0 MT.	Nos.	4				
E5D.4	Local Starter	Nos.	95				
SECTION-E5E: BATTERIES /BATTERY CHARGER							1.5
E5E.1	220 Volt DC Battery System, Each set comprises of Battery system. (169 nos,1.41V ECV CELLS Ni -Cd High discharge batteries) , Battery Float Cum Boost charger , Battery cell be mounted on teak wood still age & loose accessories such as inter cell / stack connectors etc shall be supplied loose. . As per details given in tender elsewhere.	set	4				
SECTION-E5F : DIGITAL AUTOMATIC VOLTAGE REGULATOR FOR BRUSHLESS EXCITAION SYSTEM							1.5

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E.5F.1	Transportation from store / storage yard to erection site , Erection, Assembly, Testing & Commissioning of Digital Excitation Equipments / System , System consist of DAVR panels & accessories as per tender specification.	Set	2				
SECTION-E5G : VARIABLE FREQUENCY DRIVE SYSTEM FOR ID FANS							1.5
E5G.1	Transportation from stores / storage yards to erection site , erection , assembly , testing & commissioning of VARIABLE FREQUENCY DRIVE of ID FANS consist of Load Converter Inverter Panels,Adapter Panels,Control Panels. Reactors ,Transformers, Vacuum Breakers, flexible coupling and associated accessories, as per tender specification.	Set	4				
SECTION- E 5H: MISCELLANEOUS EQUIPMENTS							1.5
E5H.1	Ash Level Indicator comprising of level probe with extension lagging pipe, Electronic Unit, Interconnecting Cabling, Conduit, etc.	Set.	96				
E5H.2	Opacity Monitor Consisting of Transmitter & Receiver, Electronic Unit, Air Blower unit, Weather Proof housings, Junction boxes, flexible hoses, mounting flanges with pipe for Transmitter, Receiver & Air blower, interconnec-ted cables etc. for mounting on ESP outlet duct.	Set.	4				
SECTION-E 6 : EQUIPMENT EARTHING /LIGHTING PROTECTION MATERIALS							1.6
E6.1	70 x 10 mm GI earthing flat	Mtrs.	8908				
E6.2	50 x 6 mm GI earthing flat	Mtrs.	10947				
E6.3	25 X 6 mm GI earthing flat	Mtrs.	16949				
E6.4	25 X 3 mm GI earthing flat	Mtrs.	9488				
E6.5	GI wire 4SWG	Mtrs.	4000				
E6.6	GI earthing wire Diameter 3.15mm or 8 SWG	Mtrs.	12330				
E6.7	40mm dia ms rod	Mtrs.	1500				
E6.8	GI wire 16SWG	Mtrs.	140000				
E6.9	20mm dia ,1 meter long hot dip rod galvanised GS ror for vertical air termination	No	90				

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E6.10	Test Link with 150x50x6 thick hot dip Galvanised GS Flat with box	No	90			
E6.11	Flexible braided copper conductor of 600 mm length	No	50			
E6.12	Hot dip galvanised MS Sheet (14 SWG)for covering of cable shaft	Sq Meter	400			
SECTION -E7A: LT BUS DUCTS						1.7
E7.1	415 Volt LT Interconnecting BUS DUCT between LT Power Oil Filled Transformer and dry type transformer. Total length of all 20 bus duct is 125 mtrs (approx) Typical cross section 500 x 1000, Weight 150 kg/mtr (approx) loose items like silicagel breather pipe, GI channel supports and associated accessories.	Set.	20			
SECTION -E7B: HT BUS DUCTS (SPBD)						1.7
E7B.1	6.6 kV, 2500 AMPS, SP Bus Duct from Unit Auxiliary Transformer (25 MVA -UAT3A) to Switchgear Board # 3CA.(Approx length 84 m)	Set	1			
E7B.2	6.6 kV, 2500 AMPS, SP Bus Duct from Unit Auxiliary Transformer (25 MVA -UAT3B) to Switchgear Board # 3CB.(Approx length 70 m)	Set	1			
E7B.3	6.6 kV, 2500 AMPS, SP Bus Duct from Unit Auxiliary Transformer (25 MVA -UAT4A) to Switchgear Board # 4CB.(Approx length 44 m)	Set	1			
E7B.4	6.6 kV, 2500 AMPS, SP Bus Duct from Unit Auxiliary Transformer (25 MVA -UAT4B) to Switchgear Board # 4CB.(Approx length 44 m)	Set	1			
E7B.5	6.6 kV, 2500 AMPS, SP Bus Duct from Station Transformer -3 to Switchgear Board # OCA AND OCB .(Approx length 59 m)	Set	1			
E7B.6	6.6 kV, 2500 AMPS, SP Bus Duct from Station Transformer -4 to Switchgear Board # OCC AND OCD .(Approx length 67 m)	Set	1			

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E7B.7	6.6 kV, 2500 AMPS, Tie SP Bus Duct from Unit Switchgear Board # 3CA to SWSB # 0CA.(Approx length 6 m)	Set	1			
E7B.8	6.6 kV, 2500 AMPS, Tie SP Bus Duct from Unit Switchgear Board # 3CB to SWSB # 0CB.(Approx length 6 m)	Set	1			
E7B.9	6.6 kV, 2500 AMPS, Tie SP Bus Duct from Unit Switchgear Board # 4CA to SWSB # 0CC.(Approx length 6 m)	Set	1			
E7B.10	6.6 kV, 2500 AMPS, Tie SP Bus Duct from Unit Switchgear Board # 4CB to SWSB # 0CD.(Approx length 6 m)	Set	1			
E7B.11	6.6 kV, 2500 AMPS, Tie SP Bus Duct from Unit Switchgear Board OCB to SWSB 0CD.(Approx length 34m)	Set	1			
E7B.12	6.6 kV, 2500 AMPS, Tie SP Bus Duct from Unit Switchgear Board OCA to SWSB 0CC.(Approx length 34 m)	Set	1			
SECTION -E7C :HT BUS DUCTS						1.7
E7C.1	Isolated Phase Bus Duct (16.5 KV) for interconnection of Generator, Generator Transformers, UAT 1 and UAT 2 along with all accessories & auxiliaries as described in the Tender Specification.	set	2			
SECTION- E8 :OIL FILLED TRANSFORMERS(GT,ST,UAT)						1.8
E8.1	3-phase 320 MVA, 16.5/235 KV, ONAN/ONAF/OFAF, Cooled Generator Transformer including all accessories, piping, cabling etc. as described in Tender Specification.	No	2			
E8.2	20 MVA, 3-phase 16.5/6.9 kV Unit Auxiliary Transformer (UAT) including all accessories, piping, cabling etc as described in tender specification. Also including one Neutral Grounding Transformer (NGR) for each UAT.	No	4			

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E8.3	40 MVA, 3-phase 230/6.9 kV Station Transformer (ST) , OLTC , ONAN/ONAF/OFAF including all accessories, piping, cabling etc as described in tender specification. Also including One nos Neutral Grounding Transformer (NGR) for each ST.	No	2			
E8.4	2000 kVA, 3-phase 6.6/0.433 kV ,Auxiliary Service Transformer , ONAN, including all accessories, piping, cabling etc as described in tender specification. Also including One nos Neutral Grounding Transformer (NGR) for each AST.	No	10			
E8.5	630 kVA, 3-phase 6.6/0.433 kV ,Auxiliary Service Transformer , ONAN, including all accessories, piping, cabling etc as described in tender specification. Also including Neutral Grounding Transformer (NGR) for each AST.	No	2			
SECTION-E 9 : ONLY TESTING & COMMISSIONING						1.9
E9.1	Heating elements for Hopper Heater(panel type) of ESP	No.	1152			
E9.2	Heating elements for Support Insulator Heater, Shaft Insulator Heaters of ESP	No	240			
E9.3	High Voltage Rectifier Transformers (70 KV peak, 1200 mA) including oil filtration.	No	48			
E9.4	Testing & Commissioning of Collecting, Emitting, GD Screen Motor	No	104			
E9.5	Testing and commissioning of 6.6 & 11KV HT motors including dryout.	No	24			
E9.6	Testing and commissioning of 415 V LT motors including dry out.	No	158			
E9.7	Generator system testing	Set	2			

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E9.8	Testing and Commissioning of soot blower control panel, including mounting of mimic ,	No	2			
E9.9	Testing & Commissioning of Wall, Long Retractable, Air Heater Soot Blower	No	300			
E9.10	Testing & Commissioning of Furnace temperature probe (including solenoids, thermocouple, etc)	No	4			
E9.11	Thermostats including Calibration.	No	56			
E9.12	Electrically (LT) Operated Valves, Dampers and Gates with Actuators, Limit Switches etc. (Regulating & ON/OFF Type).	No	76			
SECTION-E 10A : OTHER ITEMS						I.10
E10A	Trifoil Clamps (complete with fixing hardware)					
E10A.1	1Cx630 sq mm Al cable(6.35/11KV)	No	2500			
E10A.2	1Cx630 sq mm Al cable(3.3/3.3KV)	No	1200			
E10A.3	1Cx630 sq mm Al cable(1.1/1.1KV)	No	6700			
E10A.4	1Cx400 sq mm Al cable(1.1/1.1KV)	No	3000			
E10B	Hume pipe 100MM DIA	Mtr	200			
E10.C	HT TERMINATION AND JOINTING					

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E10C.1	HT Termination 6.6 KV,1Cx630 sq mm, Al conductor	No	63			
E10C.2	HT Termination 6.6 KV,3Cx185 sq mm, Al conductor	No	145			
E10C.3	Straight through jointing Kit,6.6 KV,1Cx630 sq mm, Al conductor	No	7			
E10C.4	Straight through jointing Kit,6.6 KV,3Cx185 sq mm, Al conductor	No	8			
E10C.5	HT Termination 3.3 KV,1Cx630 sq mm, Al conductor	No	211			
Grand Total in figures (In Rs)						
Grand Total in Words						
Rs.....						