



भारत हेवी इलेक्ट्रिकल्स लिमिटेड

(भारत सरकार का उपक्रम)

**BHARAT HEAVY ELECTRICALS LIMITED**

(A Govt. of India Undertaking)

**TCN - 01**

Ref: PSER:SCT:KBA-E673:TCN-01

Date: 07-06-2006

Sub	Tender Change Notice (TCN) 01.
Job	Erection/ laying of cable, cable tray & accessories, above ground earthing, lightning protection, transformers, bus ducts, panels, switchgear etc including supply of cable trays & accessories for 2x250 MW unit # I & II at Korba (East) Project, Chhattisgarh.
Ref	Tender document no PSER:SCT:KBA-E673:06.

With reference to above, following points, relevant to tender, may please be noted and complied with while submitting offer.

- 1.0 With reference to clause no 1.14 and elsewhere in the tender, the scope also includes storage, preservation etc of vendor's supplied materials.
- 2.0 Volume-III has been revised and revised Volume-III, Price Schedule, Rev-1 is attached. Bidder shall quote strictly as per attached revised Volume-III only.
- 3.0 Clause no 24.6 of Volume-ID stands modified and shall be read as under  
Works contract tax shall not be reimbursed and bidder's quoted rate shall be inclusive of this.
- 4.0 Clause no 24.7 of Volume-ID stands modified and shall be read as under  
New tax & duties, if imposed subsequent to latest due date of offer submission by statutory authority during contract period (including extension, if the same is not attributable to the contractor), shall be reimbursed by BHEL on production of relevant supporting document to the satisfaction of BHEL.
- 5.0 Due date of submission is hereby extended from 13-06-2006 to 26-06-2006 (15-00 hrs).
- 6.0 Bidder may submit queries as per instruction of NIT, latest by 13-06-2006.
- 7.0 Reference of this letter shall be included in the list of references of No Deviation Certificate while submitting offer.
- 8.0 All other terms & conditions shall remain unchanged.

Thanking you,

Yours faithfully,  
for BHARAT HEAVY ELECTRICALS LTD

Sr Manager (SCT)

Encl: As above.

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)

POWER SECTOR EASTERN REGION, DJ - 9/1, SALT LAKE CITY, KOLKATA - 700 091

फैक्स/Fax : (033) 23211960

फोन/Phone : बोर्ड/EPABX : 23211691 / 1684

<b>TENDER DOCUMENT NO</b>	<b>PSER:SCT:KBA-E673:06</b>	
<b>VOLUME</b>	<b>III</b>	<b>PRICE SCHEDULE, REV-1</b>
<b>JOB</b>	<b>ERECTION/ LAYING OF CABLE, CABLE TRAY &amp; ACCESSORIES, ABOVE GROUND EARTHING, LIGHTNING PROTECTION, TRANSFORMERS, BUS DUCTS, PANELS, SWITCHGEAR ETC INCLUDING SUPPLY OF CABLE TRAYS &amp; ACCESSORIES</b>	
<b>CAPACITY</b>	<b>2x250 MW UNIT # 1 &amp; 2</b>	
<b>PROJECT</b>	<b>KORBA (EAST) PROJECT, CHATTISGARH</b>	

**BHARAT HEAVY ELECTRICALS LIMITED**  
**(A Govt Of India Undertaking)**  
**POWER SECTOR – EASTERN REGION**  
**PLOT – DJ 9/1, SECTOR II, SALT LAKE**  
**KOLKATA – 700 091**

<b>VOLUME-III</b>	
<b>PRICE SCHEDULE, REV-1</b>	
<b>ERECTION/ LAYING OF CABLE, CABLE TRAY &amp; ACCESSORIES, ABOVE GROUND EARTHING, LIGHTNING PROTECTION, TRANSFORMERS, BUS DUCTS, PANELS, SWITCHGEAR ETC INCLUDING SUPPLY OF CABLE TRAYS &amp; ACCESSORIES FOR 2x250 MW UNIT # 1 &amp; 2 AT KORBA (EAST) PROJECT, CHATTISGARH</b>	
<b>TENDER DOCUMENT NO - PSER:SCT:KBA-E673:06</b>	
<b>VOLUME – III</b>	
<b>PREAMBLE</b>	
01	This preamble forms part of tender document and schedule of items. The tenderer should read this preamble carefully in rates for various items. Clauses under this preamble shall be read in conjunction with various volumes of tender as per NIT together with subsequent changes/ modifications etc thereto as applicable as on date of submission of price offer.
02	The work shall be carried out strictly as per specifications, description of the items in these schedule and / or engineer's instructions.
03	Items of work provided in this schedule but not covered in this specification shall be executed strictly as per instruction of the engineer.
04	Unless specifically mentioned otherwise in the tender document, the tenderer shall quote for the finished items and shall provide for the complete cost towards power, fuel, tools, tackles, equipment, constructional plants, temporary works, labour, dismantling of all temporary piping, structures, valves, pumps, tanks & other misc equipment, strengthening of roads/culverts/bridges etc including arranging all clearances etc required for carrying out different activities & tests, materials, levies, taxes, transport, layout, repairs, rectification, maintenance till handing over, supervisions, colonies, shops, establishments, overheads, profits and all incidental items not specifically mentioned but reasonably implied and necessary to complete the work according to the tender document and this schedule.
05	The rates quoted shall be inclusive of cleaning of site of any vegetation, dressing and leveling etc including fixing of grid pillars, benchmarks etc required for commencement of site activities. No separate payment will be made towards the same.
06	Rates shall be quoted in figures and in words in clear legible writing. No overwriting is allowed. All scoring and cancellations should be countersigned and in case of illegibility the interpretation of engineer shall be final. All entries shall be in English.
07	The tender shall be deemed to have visited site and made himself aware of all the site conditions, studied the specifications and details of work to be done within the time schedule attached and to have acquainted himself of the conditions prevailing at site.
08	Engineer's decision shall be final and binding on the contractor regarding clarification of items in the schedule with respect to the other sections/volumes of the contract.

<b>VOLUME - III</b> <b>PRICE SCHEDULE, REV-1</b> <b>PART-I (SUPPLY)</b>						
<b>ERECTION/ LAYING OF CABLE, CABLE TRAY &amp; ACCESSORIES, ABOVE GROUND</b> <b>EARTHING, LIGHTNING PROTECTION, TRANSFORMERS, BUS DUCTS, PANELS,</b> <b>SWITCHGEAR ETC INCLUDING SUPPLY OF CABLE TRAYS &amp; ACCESSORIES FOR 2x250 MW</b> <b>UNIT # 1 &amp; 2 AT KORBA (EAST) PROJECT, CHATTISGARH</b>						
TENDER DOCUMENT NO: PSER:SCT:KBA-E673:06						
Reference clause (column 3) - Please refer clause no 11.0, page 8/11, Section C of technical specification, Volume-IIB (Part A).						
Sl no	Item description	Reference clause	Total quantity	Unit	Basic unit rate (Rs)	Amount (Rs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(4)x(6)
1.0	GALVANISED MS LADDER TYPE CABLE TRAY	11.3 (i)				
(i)	600mm wide		23000	MTR		
(ii)	450mm wide		4000	MTR		
(iii)	300mm wide		21000	MTR		
(iv)	150mm wide		6000	MTR		
(v)	100mm wide		500	MTR		
2.0	GALVANISED MS LADDER TYPE CABLE TRAY ACCESSORIES	11.3 (ii)				
2.1	HORIZONTAL 90 DEG BEND 600 MM RADIUS					
(i)	600mm wide		385	NO		
(ii)	450mm wide		35	NO		
(iii)	300mm wide		160	NO		
(iv)	150mm wide		35	NO		
2.2	VERTICAL 90 DEG BEND 600 MM RADIUS (INSIDE)					
(i)	600mm wide		140	NO		
(ii)	450mm wide		140	NO		
(iii)	300mm wide		140	NO		
(iv)	150mm wide		55	NO		
2.3	VERTICAL 90 DEG BEND 600 MM RADIUS (OUTSIDE)					
(i)	600mm wide		110	NO		
(ii)	450mm wide		70	NO		
(iii)	300mm wide		70	NO		
(iv)	150mm wide		35	NO		
2.4	TEES 600 MM RADIUS					
(i)	600mm wide		140	NO		
(ii)	450mm wide		20	NO		
(iii)	300mm wide		20	NO		
2.5	CROSSES 600 MM RADIUS					
(i)	600mm wide		110	NO		
(ii)	450mm wide		20	NO		
(iii)	300mm wide		15	NO		
2.6	REDUCERS LHS					
(i)	600mm wide - 450mm wide		35	NO		
(ii)	450mm wide - 300mm wide		20	NO		
2.7	REDUCERS RHS					

Sl no	Item description	Reference clause	Total quantity	Unit	Basic unit rate (Rs)	Amount (Rs)
(i)	600mm wide - 450mm wide		35	NO		

Sl no	Item description	Reference clause	Total quantity	Unit	Basic unit rate (Rs)	Amount (Rs)
(ii)	450mm wide - 300mm wide		20	NO		
3.0	GALVANISED MS PERFORATED TYPE CABLE TRAY	11.3 (i)				
(i)	600mm wide		7000	MTR		
(ii)	450mm wide		1500	MTR		
(iii)	300mm wide		7000	MTR		
(iv)	150mm wide		1500	MTR		
(v)	100mm wide		1500	MTR		
(vi)	50mm wide		1000	MTR		
4.0	GALVANISED MS PERFORATED TYPE CABLE TRAY ACCESSORIES	11.3 (ii)				
4.1	HORIZONTAL 90 DEG BEND 600 MM RADIUS					
(i)	600mm wide		140	NO		
(ii)	450mm wide		25	NO		
(iii)	300mm wide		70	NO		
(iv)	150mm wide		15	NO		
4.2	VERTICAL 90 DEG BEND 600 MM RADIUS INSIDE					
(i)	600mm wide		70	NO		
(ii)	450mm wide		70	NO		
(iii)	300mm wide		35	NO		
(iv)	150mm wide		20	NO		
4.3	VERTICAL 90 DEG BEND 600 MM RADIUS OUTSIDE					
(i)	600mm wide		105	NO		
(ii)	450mm wide		40	NO		
(iii)	300mm wide		35	NO		
(iv)	150mm wide		20	NO		
4.4	TEES 600 MM RADIUS					
(i)	600mm wide		140	NO		
(ii)	450mm wide		70	NO		
(iii)	300mm wide		10	NO		
4.5	CROSSES 600 MM RADIUS					
(i)	600mm wide		140	NO		
(ii)	450mm wide		40	NO		
(iii)	300mm wide		10	NO		
4.6	REDUCER LHS					
(i)	600mm wide - 450mm wide		20	NO		
(ii)	450mm wide - 300mm wide		15	NO		
4.7	REDUCER RHS					
(i)	600mm wide - 450mm wide		20	NO		
(ii)	450mm wide - 300mm wide		10	NO		
5.0	GALVANISED MS CABLE TRAY SUPPORTS					
5.1	SINGLE CHANNEL	11.3 (iii)	15500	MTR		
5.2	DOUBLE CHANNEL	11.3 (iii)	14000	MTR		
5.3	CANTILEVER ARM	11.3 (iv)				
(i)	For 600mm wide trays		18000	NO		

Sl no	Item description	Reference clause	Total quantity	Unit	Basic unit rate (Rs)	Amount (Rs)
(ii)	For 450mm wide trays		3000	NO		

Sl no	Item description	Reference clause	Total quantity	Unit	Basic unit rate (Rs)	Amount (Rs)
(iii)	For 300mm wide trays		17000	NO		
(iv)	For 150mm wide trays		5200	NO		
5.4	CLAMPS AND FITTINGS	11.3 (v)				
(i)	BASE PLATE FOR SINGLE CHANNEL		1800	NO		
(ii)	BASE PLATE FOR DOUBLE CHANNEL		4200	NO		
(iii)	BEAM CLAMPS		8400	NO		
(iv)	90 DEGREE ANGLE FITTING (LA1)		13000	NO		
(v)	90 DEGREE ANGLE FITTING (HL1)		4200	NO		
(vi)	FLAT PLATE STRAIGHT FITTING		700	NO		
(vii)	FLAT PLATE TEE FITTING		1000	NO		
(viii)	CLAMP CC1		14000	NO		
(ix)	CLAMP CC2		14000	NO		
6.0	DOUBLE COMPRESSION HEAVY DUTY BRASS CABLE GLANDS AS PER FOLLOWING	11.3 (vi)				
	ABOVE (MM)      UP TO (MM)					
(i)	--                  15		100	NO		
(ii)	15                  18		50	NO		
(iii)	18                  21		80	NO		
(iv)	21                  24		100	NO		
(v)	24                  27		50	NO		
(vi)	27                  30		50	NO		
(vii)	30                  33		60	NO		
(viii)	33                  36		100	NO		
(ix)	36                  39		100	NO		
(x)	39                  42		80	NO		
(xi)	42                  46		100	NO		
(xii)	46                  50		80	NO		
(xiii)	50                  54		60	NO		
(xiv)	54                  58		40	NO		
(xv)	58                  62		40	NO		
(xvi)	62                  67		40	NO		
(xvii)	67                  74		40	NO		
7.0	TINNED COPPER LUGS (SOLDERLESS CRIMPING TYPE)	11.3 (vii)				
(i)	4 sq mm		100	NO		
(ii)	6 sq mm		100	NO		
(iii)	10 sq mm		100	NO		
(iv)	16 sq mm		100	NO		
(v)	25 sq mm		100	NO		
(vi)	35 sq mm		50	NO		
(vii)	50 sq mm		60	NO		
(viii)	70 sq mm		60	NO		
(ix)	95 sq mm		40	NO		
(x)	120 sq mm		60	NO		
(xi)	150 sq mm		50	NO		
(xii)	185 sq mm		80	NO		
(xiii)	240 sq mm		60	NO		
(xiv)	300 sq mm		60	NO		
(xv)	400 sq mm		50	NO		
(xvi)	500 sq mm		50	NO		
(xvii)	630 sq mm		50	NO		
8.2	ALUMINIUM LUGS (SOLDERLESS CRIMPING TYPE) AS PER DIN 46329	11.3 (vii)				
(i)	150 sq mm		10	NO		
(ii)	300 sq mm		10	NO		

Sl no	Item description	Reference clause	Total quantity	Unit	Basic unit rate (Rs)	Amount (Rs)
(iii)	185 sq mm		10	NO		

Sl no	Item description	Reference clause	Total quantity	Unit	Basic unit rate (Rs)	Amount (Rs)
(iv)	500 sq mm		10	NO		
9.0	TREFOIL CLAMPS (FOR CABLE SIZES AS UNDER)	11.3 (viii)				
9.1	6.6 KV GRADE UNARMoured					
(i)	630 sq mm		3400	NO		
9.2	3.3 KV GRADE UNARMoured					
(i)	400 sq mm		1850	NO		
9.3	1.1 KV GRADE UNARMoured					
(i)	630 sq mm		19000	NO		
(ii)	400 sq mm		7000	NO		
10.0	HT TERMINATION KITS	11.3 (ix)				
10.1	6.6 KV UNARMoured					
(i)	1C- 630 sq mm		24	NO		
(ii)	3C- 240 sq mm		18	NO		
(iii)	3C- 150 sq mm		102	NO		
10.2	6.6 KV ARMoured					
(i)	3C- 150 sq mm		4	NO		
10.3	3.3 KV UNARMoured					
(i)	1C- 400 sq mm		192	NO		
11.0	STRAIGHT THROUGH JOINTS	11.3 (x)				
11.1	6.6 KV UNARMoured					
(i)	1C- 630 sq mm		6	NO		
(ii)	3C- 150 sq mm		4	NO		
11.2	3.3 KV UNARMoured					
(i)	1C- 400 sq mm		4	NO		
12.0	RIGID GALVANISED MS CONDUITS/ PIPES	11.3 (xi)				
(i)	75 mm diameter		1500	MTR		
(ii)	50 mm diameter		3000	MTR		
13.0	FLEXIBLE LEAD COATED CONDUITS	11.3 (xii)				
(i)	25 mm diameter		4500	MTR		
14.0	LIGHTNING PROTECTION AND ABOVE GROUND EARTHING MATERIAL					
14.1	VERTICAL AIR TERMINATION MATERIAL (20MM DIA GALVANISED MS ROD 1000MM LONG)	11.3 (xiii)	140	NO		
14.2	GALVANISED MS FLAT	11.3 (xiv)				
(i)	65 X 8 sq mm		35	MT		
(ii)	50 X 6 sq mm		40	MT		
(iii)	25 X 6 sq mm		30	MT		
(iv)	25 X 4 sq mm		5	MT		
(v)	25 X 3 sq mm		15	MT		
14.3	GS WIRE 8 SWG	11.3 (xv)	10	KM		
<b>TOTAL (BASIC)</b>						
<b>TOTAL EXCISE DUTY (AS APPLICABLE)</b>						
<b>TOTAL SALES TAX (AS APPLICABLE)</b>						
<b>TOTAL VAT (AS APPLICABLE)</b>						
<b>TOTAL FREIGHT (AS APPLICABLE)</b>						
<b>TOTAL (ALL INCLUSIVE)</b>						
<b>NOTE</b>						
01	BIDDER SHALL QUOTE RATES AS PER THE PRESCRIBED FORMAT BASED ON SPECIFICATION AND OTHER TERMS & CONDITIONS OF TENDER ONLY.					

Sl no	Item description	Reference clause	Total quantity	Unit	Basic unit rate (Rs)	Amount (Rs)
02	BIDDER SHALL NOT TAMPER PRICE SCHEDULE FORMAT. IF FOUND TAMPERED AT LATER DATE, THE CANDIDATURE WILL BE SUMMERILY REJECTED.					

**VOLUME - III**  
**PRICE SCHEDULE, REV-1**  
**PART-II (SERVICE - ERECTION/ LAYING, TESTING ETC)**

**ERECTION/ LAYING OF CABLE, CABLE TRAY & ACCESSORIES, ABOVE GROUND EARTHING,  
LIGHTNING PROTECTION, TRANSFORMERS, BUS DUCTS, PANELS, SWITCHGEAR ETC  
INCLUDING SUPPLY OF CABLE TRAYS & ACCESSORIES FOR 2x250 MW UNIT # 1 & 2 AT  
KORBA (EAST) PROJECT, CHATTISGARH**

**TENDER DOCUMENT NO: PSER:SCT:KBA-E673:06**

**TOP (column 3) - For progressive payment, refere corresponding provisions of terms of payment clauses of tender (clause no 25.0).**

Sl no	Item description	TOP	Total quantity	Unit	Basic unit rate (Rs)	Amount (Rs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(4)x(6)
A	CABLE TRAY SUPPORT MATERIAL (Angles, chanel, beams etc).	25.2.1	350	MT		
B	GALVANISED MS LADDER TYPE CABLE TRAY					
1.0	600mm wide	- do -	23000	MTR		
2.0	450mm wide	- do -	4000	MTR		
3.0	300mm wide	- do -	21000	MTR		
4.0	150mm wide	- do -	6000	MTR		
5.0	100mm wide	- do -	500	MTR		
C	GALVANISED MS LADDER TYPE CABLE TRAY ACCESSORIES					
C1	HORIZONTAL 90 DEG BEND 600 MM RADIUS					
1.0	600mm wide	- do -	385	NO		
2.0	450mm wide	- do -	35	NO		
3.0	300mm wide	- do -	160	NO		
4.0	150mm wide	- do -	35	NO		
C2	VERTICAL 90 DEG BEND 600 MM RADIUS (INSIDE)					
1.0	600mm wide	- do -	140	NO		
2.0	450mm wide	- do -	140	NO		
3.0	300mm wide	- do -	140	NO		
4.0	150mm wide	- do -	55	NO		
C3	VERTICAL 90 DEG BEND 600 MM RADIUS (OUTSIDE)					
1.0	600mm wide	- do -	110	NO		
2.0	450mm wide	- do -	70	NO		
3.0	300mm wide	- do -	70	NO		
4.0	150mm wide	- do -	35	NO		
C4	TEES 600 MM RADIUS					
1.0	600mm wide	- do -	140	NO		
2.0	450mm wide	- do -	20	NO		
3.0	300mm wide	- do -	20	NO		
C5	CROSSES 600 MM RADIUS					
1.0	600mm wide	- do -	110	NO		
2.0	450mm wide	- do -	20	NO		
3.0	300mm wide	- do -	15	NO		
C6	REDUCERS LHS					
1.0	600mm wide - 450mm wide	- do -	35	NO		
2.0	450mm wide - 300mm wide	- do -	20	NO		
C7	REDUCERS RHS					
1.0	600mm wide - 450mm wide	- do -	35	NO		
2.0	450mm wide - 300mm wide	- do -	20	NO		

Sl no	Item description	TOP	Total quantity	Unit	Basic unit rate (Rs)	Amount (Rs)
C8	GALVANISED MS PERFORATED TYPE CABLE TRAY					
1.0	600mm wide	- do -	7000	MTR		
2.0	450mm wide	- do -	1500	MTR		
3.0	300mm wide	- do -	7000	MTR		
4.0	150mm wide	- do -	1500	MTR		
5.0	100mm wide	- do -	1500	MTR		
6.0	50mm wide	- do -	1000	MTR		
C9	GALVANISED MS PERFORATED TYPE CABLE TRAY ACCESSORIES					
1.0	HORIZONTAL 90 DEG BEND 600 MM RADIUS					
2.0	600mm wide	- do -	140	NO		
3.0	450mm wide	- do -	25	NO		
4.0	300mm wide	- do -	70	NO		
5.0	150mm wide	- do -	15	NO		
C10	VERTICAL 90 DEG BEND 600 MM RADIUS INSIDE					
1.0	600mm wide	- do -	70	NO		
2.0	450mm wide	- do -	70	NO		
3.0	300mm wide	- do -	35	NO		
4.0	150mm wide	- do -	20	NO		
C11	VERTICAL 90 DEG BEND 600 MM RADIUS OUTSIDE					
1.0	600mm wide	- do -	105	NO		
2.0	450mm wide	- do -	40	NO		
3.0	300mm wide	- do -	35	NO		
4.0	150mm wide	- do -	20	NO		
C12	TEES 600 MM RADIUS					
1.0	600mm wide	- do -	140	NO		
2.0	450mm wide	- do -	70	NO		
3.0	300mm wide	- do -	10	NO		
C13	CROSSES 600 MM RADIUS					
1.0	600mm wide	- do -	140	NO		
2.0	450mm wide	- do -	40	NO		
3.0	300mm wide	- do -	10	NO		
C14	REDUCER LHS					
7.0	600mm wide - 450mm wide	- do -	20	NO		
8.0	450mm wide - 300mm wide	- do -	15	NO		
C15	REDUCER RHS					
11.0	600mm wide - 450mm wide	- do -	20	NO		
12.0	450mm wide - 300mm wide	- do -	10	NO		
C16	GALVANISED MS CABLE TRAY SUPPORTS					
1.0	SINGLE CHANNEL	- do -	15500	MTR		
2.0	DOUBLE CHANNEL	- do -	14000	MTR		
C17	CANTILEVER ARM					
1.0	For 600mm wide trays	- do -	18000	NO		
2.0	For 450mm wide trays	- do -	3000	NO		
3.0	For 300mm wide trays	- do -	17000	NO		
4.0	For 150mm wide trays	- do -	5200	NO		
C18	CLAMPS AND FITTINGS					
1.0	BASE PLATE FOR SINGLE CHANNEL	- do -	1800	NO		
2.0	BASE PLATE FOR DOUBLE CHANNEL	- do -	4200	NO		
3.0	BEAM CLAMPS	- do -	8400	NO		
4.0	90 DEGREE ANGLE FITTING (LA1)	- do -	13000	NO		
5.0	90 DEGREE ANGLE FITTING (HL1)	- do -	4200	NO		

Sl no	Item description	TOP	Total quantity	Unit	Basic unit rate (Rs)	Amount (Rs)
6.0	FLAT PLATE STRAIGHT FITTING	- do -	700	NO		
7.0	FLAT PLATE TEE FITTING	- do -	1000	NO		
8.0	CLAMP CC1	- do -	14000	NO		
9.0	CLAMP CC2	- do -	14000	NO		
D	TREFOIL CLAMPS (For cable sizes as under)					
D1	6.6 KV GRADE UNARMoured					
1.0	630 sq mm	- do -	3400	NO		
D2	3.3 KV GRADE UNARMoured					
1.0	400 sq mm	- do -	1850	NO		
D3	1.1 KV GRADE UNARMoured					
1.0	630 sq mm	- do -	19000	NO		
2.0	400 sq mm	- do -	7000	NO		
E	HT TERMINATION KITS					
E1	6.6 KV UNARMoured					
1.0	1C- 630 sq mm	25.2.3	24	NO		
2.0	3C- 240 sq mm	- do -	18	NO		
3.0	3C- 150 sq mm	- do -	102	NO		
E2	6.6 KV ARMoured					
1.0	3C- 150 sq mm	- do -	4	NO		
E3	3.3 KV UNARMoured					
1.0	1C- 400 sq mm	- do -	192	NO		
F	STRAIGHT THROUGH JOINTS					
F1	6.6 KV UNARMoured					
1.0	1C- 630 sq mm	- do -	6	NO		
2.0	3C- 150 sq mm	- do -	4	NO		
F2	3.3 KV UNARMoured					
1.0	1C- 400 sq mm	- do -	4	NO		
G	RIGID GALVANISED MS CONDUITS/ PIPES					
1.0	75 mm diameter	25.2.5	1500	MTR		
2.0	50 mm diameter	- do -	3000	MTR		
H	FLEXIBLE LEAD COATED CONDUITS					
1.0	25 mm diameter	- do -	4500	MTR		
I	LIGHTNING PROTECTION AND ABOVE GROUND EARTHING MATERIAL					
1.0	VERTICAL AIR TERMINATION MATERIAL (20MM DIA GALVANISED MS ROD 1000MM LONG)	25.2.4	140	NO		
J	GALVANISED MS FLAT					
1.0	65 X 8 sq mm	- do -	35	MT		
2.0	50 X 6 sq mm	- do -	40	MT		
3.0	25 X 6 sq mm	- do -	30	MT		
4.0	25 X 4 sq mm	- do -	5	MT		
5.0	25 X 3 sq mm	- do -	15	MT		
6.0	FLEXIBLE BRAIDED CONDUCTOR OF SUITABLE LENGTH WITH TINNED COPPER CLAMP FOR GATE/ DOOR EARTHING (FIXING ACCESSORIES/ GI NUT/ BOLTS TO BE PROVIDED WITHOUT EXTRA COST)	- do -	40	NO		
K	G S WIRE 8 SWG	- do -	10	KM		
L	CABLE LAYING & TERMINATION (includes laying, dressing, clamping, glanding, termination etc. with supply of lugs but excluding supply of glands)					
L1	6.6/6.6KV UNARMoured CABLES					
1.0	1C-630	25.2.2	10	KM		

Sl no	Item description	TOP	Total quantity	Unit	Basic unit rate (Rs)	Amount (Rs)
2.0	3C-240	- do -	2	KM		
3.0	3C-150	- do -	18	KM		
L2	6.6/6.6KV ARMOURED CABLES					
1.0	3C-150	- do -	1	KM		
L3	3.3/3.3KV UNARMoured CABLES					
1.0	1C-400	- do -	5.5	KM		
L4	1.1kV LT, ALUMINIUM PVC FRLS POWER CABLES					
1.0	1C - 630 SQ. MM	- do -	32	KM		
2.0	1C - 400 SQ. MM	- do -	16	KM		
3.0	1C - 300 SQ. MM	- do -	20	KM		
4.0	1C - 185 SQ. MM	- do -	17	KM		
5.0	2C - 185 SQ. MM	- do -	1	KM		
6.0	2C - 120 SQ MM	- do -	30	KM		
7.0	2C - 95 SQ. MM	- do -	1	KM		
8.0	2C - 50 SQ. MM	- do -	1	KM		
9.0	2C - 25 SQ. MM	- do -	15	KM		
10.0	2C - 16 SQ. MM	- do -	17	KM		
11.0	2C - 6 SQ. MM	- do -	5	KM		
12.0	3C - 300 SQ. MM	- do -	29	KM		
13.0	3C - 150 SQ. MM	- do -	3	KM		
14.0	3C - 95 SQ. MM	- do -	4	KM		
15.0	3C - 50 SQ. MM	- do -	11	KM		
16.0	3C - 35 SQ MM	- do -	2	KM		
17.0	3C - 25 SQ. MM	- do -	5	KM		
18.0	3C - 16 SQ. MM	- do -	6.5	KM		
19.0	3C - 10 SQ. MM	- do -	34	KM		
20.0	3.5C - 300 SQ MM	- do -	1	KM		
21.0	3.5C - 120 SQ. MM	- do -	8	KM		
22.0	3.5C - 95 SQ. MM	- do -	11	KM		
23.0	3.5C - 70 SQ. MM	- do -	12	KM		
24.0	3.5C - 25 SQ. MM	- do -	39	KM		
L5	1.1kV LT, COPPER PVC FRLS POWER CABLES					
1.0	1C - 630 SQ. MM	- do -	3	KM		
2.0	1C - 70 SQ. MM	- do -	5	KM		
3.0	1C - 16 SQ. MM	- do -	1	KM		
4.0	2C - 95 SQ. MM	- do -	6	KM		
5.0	2C - 70 SQ. MM	- do -	2	KM		
6.0	2C - 10 SQMM	- do -	2	KM		
7.0	2C - 6 SQ. MM	- do -	30	KM		
8.0	3C - 2.5 SQ. MM	- do -	64	KM		
9.0	3C - 6 SQ. MM	- do -	3	KM		
10.0	3C - 50 SQ. MM	- do -	0.5	KM		
11.0	4C - 50 SQ. MM	- do -	0.5	KM		
12.0	4C - 35 SQ. MM	- do -	0.5	KM		
13.0	4C - 25 SQ. MM	- do -	0.5	KM		
14.0	4C - 10 SQ. MM	- do -	20	KM		
L6	UNARMoured COPPER PVC FRLS CONTROL CABLES					
1.0	3C-1.5	- do -	60	KM		
2.0	5C-1.5	- do -	80	KM		
3.0	7C-1.5	- do -	20	KM		
4.0	14C-1.5	- do -	8	KM		

Sl no	Item description	TOP	Total quantity	Unit	Basic unit rate (Rs)	Amount (Rs)
5.0	19C-1.5	- do -	3	KM		
6.0	27C-1.5	- do -	8	KM		
7.0	2C-2.5	- do -	120	KM		
8.0	3C-2.5	- do -	150	KM		
9.0	5C-2.5	- do -	20	KM		
L7	ARMOURED COPPER PVC FRLS CONTROL CABLES					
1.0	2C-2.5	- do -	10	KM		
2.0	5C-2.5	- do -	8	KM		
3.0	7C-2.5	- do -	5	KM		
4.0	14C-2.5	- do -	12	KM		
5.0	16C-2.5	- do -	8	KM		
6.0	5C-6	- do -	5	KM		
L8	SCREENED CABLES (OVERALL SHIELDED)					
1.0	2C-2.5	- do -	38	KM		
2.0	5C-2.5	- do -	129	KM		
3.0	7C-2.5	- do -	67	KM		
4.0	14C-2.5	- do -	92	KM		
5.0	16C-2.5	- do -	11	KM		
6.0	5C-6	- do -	6	KM		
L9	1.1 KV LT AI PVC FRLS CONTROL CABLE					
L9.1	SCREENED CABLES (OVERALL SHIELDED) (INCLUDING SUPPLY OF OF HEAVY DUTY COPPER LUGS SUITABLE TO TERMINAL BLOCKS LUGS)					
1.0	1P - 0.75 SQ. MM	25.2.3	80	NO		
2.0	2P - 0.5 SQ. MM	- do -	760	NO		
3.0	4P - 0.5 SQ. MM	- do -	2580	NO		
4.0	6P - 0.5 SQ. MM	- do -	1340	NO		
5.0	8P - 0.5 SQ. MM	- do -	1840	NO		
6.0	12P - 0.5 SQ. MM	- do -	220	NO		
7.0	16P - 0.5 SQ. MM	- do -	120	NO		
L9.2	SCREENED CABLES (OVERALL SHIELDED) (EXCLUDING SUPPLY OF LUGS)					
1.0	2P - 0.5 SQ. MM	- do -	760	NO		
2.0	4P - 0.5 SQ. MM	- do -	2580	NO		
3.0	6P - 0.5 SQ. MM	- do -	1340	NO		
4.0	8P - 0.5 SQ. MM	- do -	1840	NO		
5.0	12P - 0.5 SQ. MM	- do -	220	NO		
6.0	16P - 0.5 SQ. MM	- do -	120	NO		
7.0	1P - 0.75 SQ. MM	- do -	80	NO		
8.0	4C - 1.5 SQ. MM.	- do -	360	NO		
M	CABLE SHAFT COVERING					
1.0	GALVANISED MS SHEET 14SWG (2M THICK) FOR COVERING CABLE SHAFTS INCLUDING HARDWARES ETC.	25.2.1	1100	SQM		
N	MINOR CIVIL WORK					
1.0	MINOR CIVIL WORK (chipping / breaking of brick wall)	25.2.15	10	CUM		
2.0	EARTH EXCAVATION & BACK FILLING	- do -	10	CUM		
O	HT SWITCHGEAR BOARD (NO STANDS FOR NO OF BOARDS)					
1.0	PANELS FOR 6.6 KV STN BOARD, OCA, 2500A	25.2.9	1	NO		
2.0	PANELS FOR 6.6 KV STN BOARD, OCB, 2500A	- do -	1	NO		
3.0	PANELS FOR 6.6 KV STN BOARD, OCC, 2500A	- do -	1	NO		

Sl no	Item description	TOP	Total quantity	Unit	Basic unit rate (Rs)	Amount (Rs)
4.0	PANELS FOR 6.6 KV STN BOARD, OCD, 2500A	- do -	1	NO		
5.0	PANELS FOR 6.6 KV UNIT SWBD, 1CA, 2000A	- do -	1	NO		
6.0	PANELS FOR 6.6 KV UNIT SWBD, 1CB, 2000A	- do -	1	NO		
7.0	PANELS FOR 6.6 KV UNIT SWBD, 2CA, 2000A	- do -	1	NO		
8.0	PANELS FOR 6.6 KV UNIT SWBD, 2CB, 2000A	- do -	1	NO		
9.0	PANELS FOR 6.6 KV CHP BD -OCE A	- do -	1	NO		
10.0	PANELS FOR 6.6 KV CHP BD -OCE B	- do -	1	NO		
11.0	PANELS FOR 6.6 KV AHP BD - OCF A	- do -	1	NO		
12.0	PANELS FOR 6.6 KV AHP BD - OCF B	- do -	1	NO		
13.0	PANELS FOR 6.6 KV RWPH BD - OCG A	- do -	1	NO		
14.0	PANELS FOR 6.6 KV RWPH BD - OCG B	- do -	1	NO		
17.0	6.6 KV EARTHING TRUCKS	- do -	26	SET		
18.0	6.6KV BUS TRANSFER PANEL	- do -	4	NO		
P	LT SWITCHGEAR BOARD & DCDB (NO STANDS FOR NO OF BOARDS)					
1.0	415 V UNIT PCC (Unit # 1), (2500A), 1DA	- do -	1	NO		
2.0	415 V UNIT PCC (Unit # 2), (2500A), 2DA	- do -	1	NO		
3.0	415 V STATION PCC-I , (3000A), 0DA	- do -	1	NO		
4.0	415V STATION PCC-II , (3000A),0DB	- do -	1	NO		
5.0	ASH WATER SYSTEM PMCC ,0DE	- do -	1	NO		
6.0	WATER SYSTEM PMCC,0DF	- do -	1	NO		
7.0	DM Plant PCC,	- do -	1	NO		
8.0	Cooling Towers PMCC (Unit # 1), 1DD	- do -	1	NO		
9.0	Cooling Towers PMCC (Unit # 2), 2DD	- do -	1	NO		
10.0	MAKE UP WATER PMCC,0DH	- do -	1	NO		
11.0	Emergency Service MCC (Unit # 1), 1DG	- do -	1	NO		
12.0	Emergency Service MCC (Unit # 2), 2DG	- do -	1	NO		
13.0	Power House Ventilation MCC I,	- do -	1	NO		
14.0	Power House Ventilation MCC II,	- do -	1	NO		
15.0	Fuel Oil Area PMCC, 0DG	- do -	1	NO		
16.0	ESP Airconditioning & Ventilation MCC-I	- do -	1	NO		
17.0	ESP Airconditioning & Ventilation MCC-II ,	- do -	1	NO		
18.0	Turbine MCC (Unit # 1), (1KA, 800A)	- do -	1	NO		
19.0	Turbine MCC (Unit # 2), (2KA, 800A)	- do -	1	NO		
20.0	Turbine Valve MCC (Unit # 1), (1KB, 200A)	- do -	1	NO		
21.0	Turbine Valve MCC (Unit # 2), (2KB, 200A)	- do -	1	NO		
22.0	Boiler MCC (Unit # 1), (1HA,800A)	- do -	1	NO		
23.0	Boiler MCC (Unit # 2), (2HA,800A)	- do -	1	NO		
24.0	Boiler Valve MCC (Unit # 1), (1HB, 200A)	- do -	1	NO		
25.0	Boiler Valve MCC (Unit # 2), (2HB, 200A)	- do -	1	NO		
26.0	MISC. service MCC I,	- do -	1	NO		
27.0	MISC service MCC II,	- do -	1	NO		
28.0	Power House Airconditioning MCC-	- do -	2	NO		
29.0	ETP MCC,	- do -	1	NO		
30.0	CW Pump House MCC ,	- do -	1	NO		
31.0	ADM Building ACDB,	- do -	1	NO		
32.0	Compressor MCC,	- do -	1	NO		
33.0	Ash Silo MCC,	- do -	1	NO		
34.0	220V DC Distribution Board (Unit # 1),	- do -	1	NO		
35.0	220V DC Distribution Board (Unit # 2),	- do -	1	NO		
36.0	ESP LT MAIN SWITCH BOARD	- do -	4	NO		
37.0	ESP AUX. CONTROL PNL	- do -	8	NO		

Sl no	Item description	TOP	Total quantity	Unit	Basic unit rate (Rs)	Amount (Rs)
38.0	SOOT BLOWER MCC	- do -	2	NO		
39.0	FIRE WATER PH SWBD	- do -	1	NO		
40.0	LOCOSHED ACDB	- do -	1	NO		
41.0	SERVICE BUILDING MCC	- do -	1	NO		
42.0	CHLORINATION MCC	- do -	1	NO		
43.0	PRETREATMENT PLANT MCC	- do -	1	NO		
44.0	AUX.BOILER MCC	- do -	1	NO		
45.0	WORKSHOP MCC	- do -	1	NO		
46.0	110V DCDB	- do -	1	NO		
47.0	BOILER ACDB	- do -	2	NO		
48.0	UNIT SERVICE ACDB	- do -	2	NO		
49.0	AC FUSE DB	- do -	18	NO		
50.0	220V DCFB	- do -	4	NO		
Q1	GENERATOR RELAY PANEL AND UNIT CONTROL & AUX CONTROL BOARD & VARIOUS CONTROL PANELS					
1.0	GENERATOR PROTECTION & RELAY PANELS (EACH BOARD CONSISTS OF 6 NO PANELS)	- do -	2	NO		
2.0	ELECTRICAL CONTROL DESK CUM PANEL COMPRISING OF GENERATOR CONTROL & MONITORING CIRCUIT & AUX. SYSTEM CONTROL & MONITORING CIRCUIT (ERECTION IS EXCLUDED, COMMISSIONING RATE INCL. MOUNTING OF LOOSE COMPONENTS TO BE QUOTED ONLY).	- do -	4	SET		
3.0	AUXILIARY CONTROL PANEL for 6.6kV RWPH	- do -	1	NO		
4.0	ELECTRONIC CONTROLLER (WITH BAPCON)	- do -	72	NO		
5.0	RAPPER CONTROL PANEL (WITH RAPCON)	- do -	16	NO		
6.0	STATCON CONTROL PANEL	- do -	8	NO		
Q2	LOCAL CONTROL PANELS FOR PUMPS ETC					
1.0	Control panels for Raw Water pumps	- do -	1	NO		
2.0	Common Control panel for CW make up pumps, APH pumps, IBD tank spray pumps, Seal water pumps for ash handling plant pumps.	- do -	1	NO		
3.0	Common Control panel for Potable water pumps and HVAC pumps	- do -	1	NO		
4.0	Common Control panel for Boiler Fill Pumps and DM make water transfer pumps	- do -	1	NO		
5.0	Control panels for onload tube cleaning system	- do -	2	NO		
6.0	Control panel for self cleaing filter	- do -	2	NO		
7.0	Fan Control Panel for Station Transformer	- do -	2	NO		
8.0	Local Fan control Panel for Generator Transformer	- do -	2	NO		
9.0	Local Fan control Panel for Unit Aux.Transformer	- do -	4	NO		
10.0	PANEL FOR OIL PURIFICATION UNIT	- do -	2	NO		
R	ESP AND MISC ITEMS					
R1	MISC ITEMS OF ESP					
1.0	IOS Personal Computer	- do -	2	NO		
2.0	Data logger PC	- do -	2	NO		
3.0	Dot matrix Printer	- do -	2	NO		
4.0	Computer Furniture	- do -	2	SET		
5.0	OPACITY MONITOR	- do -	8	NO		
6.0	Cable termination with Heating element & its operation (heating element not to be erected)	- do -	1856	NO		

Sl no	Item description	TOP	Total quantity	Unit	Basic unit rate (Rs)	Amount (Rs)
R2	(ONLY COMMISSIONING RATE TO BE QUOTED FOR ITEMS SL. NO. 7 TO 12 BELOW)					
1.0	THERMOSTAT	25.2.7	80	NO		
2.0	HOPPER / SHAFT/SUPPORT INSULATOR HEATER	- do -	2088	SET		
3.0	ELECTRICALLY OPERATED HOIST	- do -	4	NO		
4.0	Ash Level Indicators & controllers with installation of signal /control cables .	- do -	144	SET		
5.0	Soot Blowers actuator /Limit switches setting, position feedback calibration and operation (Actuator not to be erected)	- do -	240	NO		
6.0	RAPPING MOTORS FOR ESP	- do -	76	NO		
S	JUNCTION BOX/MARSHALLING BOX /PUSH BUTTON/STARTER ETC.					
S1	JUNCTION BOXES (FOR ESP)					
1.0	CONTROL JUNCTION BOXES FOR ESP	- do -	72	NO		
2.0	JUNCTION BOXES FOR ESP	- do -	96	NO		
3.0	PUSH BUTTON /STARTERS FOR RAPPING MOTORS	- do -	152	NO		
S2	GALVANISED MS MARSHALLING/JUNCTION BOX FOR POWER BLOCK,AUX BUILDING ETC					
3.0	6 WAY	- do -	7	NO		
4.0	12 WAY	- do -	23	NO		
5.0	24 WAY	- do -	19	NO		
6.0	36 WAY	- do -	7	NO		
7.0	48 WAY	- do -	7	NO		
S3	PUSH BUTTON /STARTERS					
8.0	Local Push Button Stations (Non flame proof)	- do -	700	NO		
9.0	Local Push Button Stations (Flame proof)	- do -	46	NO		
T	DC Strater Panel/ STARTING CABINET					
1.0	Locally Mounted Starter Module (Local Starters) Upto 5.5KW (with motor starters, emergency stop PB, start PB, Over load relay, etc.)	- do -	150	NO		
2.0	DC Strater Panel, 45 KW	- do -	1	NO		
3.0	DC Strater Panel, 13 KW	- do -	1	NO		
4.0	DC Strater Panel, 5.5 KW	- do -	1	NO		
5.0	STARTER CABINET FOR DC JACKING OIL MOTOR WITH RESISTANCE BOX	- do -	2	NO		
6.0	STARTER CABINET FOR DC SEAL OIL MOTOR WITH RESISTANCE BOX	- do -	2	NO		
7.0	STARTING CABINET FOR DC EMERGENCY LUB OIL MOTOR PANEL WITH RESISTENCE BOX	- do -	2	NO		
8.0	SCANNER AIR FAN DC MOTOR STARTER BOX	- do -	2	NO		
9.0	FURNACE TEMPERATURE PROBE LOCAL STARTER BOX	- do -	2	NO		
U	BATTERY SYSTEM					
U1	MAIN PLANT AREA DC SYSTEM					
1.0	220V Lead Acid plante battery of 1605AH rating (110 cells & 1.85 ECV) of 10hrs discharge rate with all accessories & teak wood racks	25.2.9	2	SET		
2.0	400A, 220V DC Float chargers	- do -	4	NO		
3.0	300A, 220V DC Boost charger	- do -	2	NO		
U2	CWPH AREA DC SYSTEM					