

BOQ cum Price Schedule (Annexure-I)

Name of the Work: Balance ETC Work for 200MVA, 400/110kV Auto Transformer and its associated bay extension equipments at Thappagundu Substation in Tamilnadu

Sl. No.	Description of Work	Unit	Qty	Unit Rate (Rs.)	Total Amount (Rs.)
1b	400 kv SF6, 3 Phase Circuit Breaker without PIR alongwith lattice type GS supporting structure , terminal connectors, Breaker control cabinets, ladder and interpole cabling. (Supervision of Erection , Testing and commissioning will be supplier . Supplier wil bring Timing Kit and Gas leak detector only. Necessary manpower support ,tools, tackels and testing kit to be in scope of ETC contractor).	set	2	54,968.86	1,09,937.72
2	132 kv SF6, 3 Phase Circuit Breaker without PIR alongwith lattice type GS supporting structure , terminal connectors, Breaker control cabinets, ladder and interpole cabling. (Supervision of Erection , Testing and commissioning will be supplier . Supplier wil bring Timing Kit and Gas leak detector only. Necessary manpower support ,tools, tackels and testing kit to be in scope of ETC contractor).	set	1	21,177.45	21,177.45
3	400kv,3ph HCB gang isolator,Motor/Manual operated complete with 1 no. of support insulators, terminal connectors and interpole cabling without support structure				
3.1	With one earth switch (motor/manual operated)	NOS	4	27,484.42	1,09,937.70
3.2	With two earth switch(motor/manual operated)	NOS	1	27,484.42	27,484.42
5	132kv,3ph HDB gang isolator, motor /manual operated complete with 9 no. of support insulators, & terminal connectors and interpole cabling without support structure				
5.1	Without earth switch	NOS	4	10,319.51	41,278.05
5.2	Without earth switch(gantry mounted at 10 mt level)	NOS	1	10,319.51	10,319.51
6	420kv upto 3000A, 1 Ph, Current Transformer , live tank complete with terminal connectors without support structure.	Nos	6	9,619.54	57,717.23
7	132kv, 2000A, 1 Ph, Current Transformer (2000A), dead tank complete with terminal connectors without support strcure.	Nos	3	4,117.84	12,353.51
12	96KV, 1 phase , Gapless type Metal Oxide Surge Arrester complete with surge counter, leakage current meter, insulating base , connecting cable and terminal connectors.	NOS	3	1,764.79	5,294.36
14	400KV solidcore with corona ring Post Insulators complete with corona ring & terminal connectors without support structure.	No's	36	1,764.79	63,532.35
15	132 KV solidcore Post Insulators complete with terminal connectors without support structure.	No's	8	1,176.53	9,412.20
16	132 kv Solidcore Underhung Solid core (post) Insulators complete with terminal connectors without supoort structure to be suspended from Top PCD to Beams	No's	3	1,575.00	4,725.00
	BUS BAR MATERIALS				
17	String Insulator (160KN/120KN) and hardware				
19	Conductor complete with Tee connectors for droppers to equipment to connections, PG clamps for busbar jumpering, Twin/quad bundle spacers etc to complete.	Km	0.5	63,373.52	31,686.76
20	4" AL Tube (ETC of Al. Tube includes Aluminium welding and bending to be included . (Welding Sleeve to be supplied by BHEL)	M	203	352.08	71,471.25
21	3" AL Tube (ETC of Al. Tube includes Aluminium welding and bending to be included . (Welding Sleeve to be supplied by BHEL)	M	90	316.87	28,518.08
	ENGINEERED ITEMS				
22	Cable laying				
22.02	4C X 2.5 sq mm PVC/CU	M	2500	25.35	63,373.52
22.03	8C X 2.5 sq mm PVC/CU	M	3000	26.76	80,273.12
22.04	14C X 2.5 sq mm PVC/CU	M	6000	28.17	1,68,996.05
22.05	20C X 2.5 sq mm PVC/CU	M	2500	29.57	73,935.77

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Sl. No.	Description of Work	Unit	Qty	Unit Rate (Rs.)	Total Amount (Rs.)
22.06	28C X 2.5 sq mm PVC/CU	M	2800	33.80	94,637.79
22.07	4C X 4 sq mm PVC/CU	M	5500	29.57	1,62,658.70
22.08	8C X 4 sq mm PVC/CU	M	1800	30.88	55,590.81
23	Cable Gland Type CGN: supplying and fixing of Nickel Plated (Coating thickness not less than 10 microns) brass cable glands , double compression heavy -duty type complete with necessary armour clamps & tapered washer etc for the following cables:				
23	Cable Gland supply and fixing by Contractor				
23.02	4C X 2.5 sq mm PVC/CU	Nos	22	184.49	4,058.72
23.03	8C X 2.5 sq mm PVC/CU	Nos	36	288.70	10,393.05
23.04	14C X 2.5 sq mm PVC/CU	Nos	84	356.30	29,929.20
23.05	20C X 2.5 sq mm PVC/CU	Nos	80	460.51	36,841.14
23.06	28C X 2.5 sq mm PVC/CU	Nos	16	625.29	10,004.57
23.07	4C X 4 sq mm PVC/CU	Nos	44	216.87	9,542.23
23.08	8C X 4 sq mm PVC/CU	Nos	48	308.84	14,824.22
24	Marshalling Kiosks & CT/CVT Junction Boxes				
24.1	Bay Marshalling kiosks (Outdoor ,Floor mounted on cable trench),Ac Junction Box (FRP)	Nos	24	2,112.45	50,698.82
24.2	Bay Marshalling kiosks (Outdoor ,Floor mounted on cable trench),DC inter-lock Box (FRP)	Nos	4	2,112.45	8,449.80
24.3	CT Junction Box (On CT structure)	No's	2	2,112.45	4,224.90
25	Laying of Cable trays: including bends,tees,elbow, reducers, stiffeners couplerplates ,bolting to racks, structure etc to complete. Minor modification work by cutting welding wherever required shall also be part of work.				
25	Laying of Cable trays				
25.1	600mm wide,2.5 m long ladder type	No's	100	91.54	9,153.95
25.2	300mm wide,2.5 m long ladder type	No's	50	49.29	2,464.53
32	Laying of PVC conduits at a depth of 300mm including excavation , backfilling ,making and repairing of walls in trenches ,cutting threading ,fixing of sockets/bends where required etc. complete. Both ends of PVC conduits shall be sealed with bitumen sealing compound (payment will be made for the as erected pipe length)				
32.1	PVC pipe, 50/75 NB	M	200	75.71	15,141.88
32.2	PVC Pipe, 100/110NB	M	500	90.45	45,225.62
33	Earthing Material				
33.1	75x12 mm MS flat	M	1500	147.87	2,21,807.32
33.2	50x8 mm MS flat	M	500	126.75	63,373.52
38.2	400 /110 KV ICT Protection Panel (Approx. width 1600MM) (2 cubicle)	Set	1	11,765.25	11,765.25
38.4	400 KV Tie Protection Panel (line side) (Approx. width 1600MM)	Set	1	5,882.63	5,882.63
38.5	400 KV Tie Protection Panel (for Transformer /Reactor) (Approx. width 1600MM)	Set	1	5,882.63	5,882.63
47.03	110kv Coupling devices	Nos	1	5,250.00	5,250.00
47.04	110KV Carrier Set(1 watts output)	KM	1	10,500.00	10,500.00
51	200 MVA, 3 phase 50 C/s, 400/110/33 ,Ynaod11, Auto Transformer/ inter connecting Transformer(ICT) complete in all respects alongwith RTCC Panels (Indoor), OLTC, Marshalling Kiosks, terminal connectors, accessories, with oil. Work includes unloading , erection of all auxiliaries , viz turrets, bushing , terminal connectors, filling of oil, oil filtration , oil testing, laying of cable from Transformer auxiliaries to MK & OLTC etc as required to complete the installation of transformer.	No's	1	9,00,041.63	9,00,041.63

BOQ cum Price Schedule (Annexure-I)**Name of the Work: Balance ETC Work for 200MVA, 400/110kV Auto Transformer and its associated bay extension equipments at Thappagundu Substation in Tamilnadu**

Sl. No.	Description of Work	Unit	Qty	Unit Rate (Rs.)	Total Amount (Rs.)
51a	Dragging/Shifting Charges of Main Tank of 200MVA, , 3 phase 50 C/s, 400/110/33 ,Ynaod11, Auto Transformer/ inter connecting Transformer(ICT) upto plinth level.	mtr	13	2,753.07	35,789.89
51b	Oil Testing (BDV, Resistivity & Tan Delta etc as per TANTRANSCO specification) for oil supplied in drum (if required) for above Transformer.	No. of Samples	15	9,059.24	1,35,888.64
Total Amount (Rs.) - Excluding GST					29,51,445.46

ANNEXURE-II

**TRANSMISSION BUSINESS GROUP
(SUB- CONTRACTS MANAGEMENT)
TBG - NOIDA**

PRICE SCHEDULE FORMAT

**SUB: TENDER FOR “BALANCE ETC WORK FOR 200MVA, 400/110KV AUTO TRANSFORMER
AND ITS ASSOCIATED BAY EXTENSION EQUIPMENTS AT THAPPAGUNDU SUBSTATION
IN TAMILNADU”.**

TENDER SPEC. NO.:- TBSM/THAPPAGUNDU/BALANCE ETC/TENDER/20-21 DATE 14.10.2020

(a) I/ We hereby agree to execute the above work at ----- % (in figure).....
----- (in words) Above / Below/ At Par the rates of items given in BOQ
(Annexure-I) of subject tender.

NOTE:

1. In this annexure the tenderer shall quote a percentage above/ below/At Par the rates shown in the Bill of Quantities (Annexure-I) of subject tender. The percentage quoted shall be clearly written both in words and figures. In case of discrepancy in rates in figure and words, the minimum will be taken into account by BHEL.
2. The quoted percentage will apply to the individual items uniformly.

Date:

Place:

Signature of tenderer
Name & Designation of authorized person(s) with seal

ANNEXURE-III
(Summary Of Prices)

NAME OF WORK :- BALANCE ETC WORK FOR 200MVA, 400/110KV AUTO TRANSFORMER AND ITS ASSOCIATED BAY EXTENSION EQUIPMENTS AT THAPPAGUNDU SUBSTATION IN TAMILNADU.

TENDER SPECIFICATION NO.:-TBSM/THAPPAGUNDU/BALANCE ETC/TENDER/20-21 DATE 14.10.2020

Sl No.	Description	Amount (Rs.)
1	Total Amount as per rates in BOQ for "BALANCE ETC WORK FOR 200MVA, 400/110KV AUTO TRANSFORMER AND ITS ASSOCIATED BAY EXTENSION EQUIPMENTS AT THAPPAGUNDU SUBSTATION IN TAMILNADU." (Annexure-I)	29,51,445.46
2	Value of percentage above/below/at par (As indicated in Price Schedule Format, Annexure-II) applicable to the total amount of ETC work (at Sl. no. 1 above)% above/below/ at par
3	Total amount after consideration of percentage above/below/ at par.	
4	Total amount (in words) after consideration of percentage above/below/ at par.	