

ANNEXURE-II					
BILL OF QUANTITY					
DESIGN, SUPPLY, CIVIL WORK AND ETC OF 220KV TRANSMISSION LINE & TOWERS (DOUBLE CIRCUIT)- CIVIL PART					
Project	North Karanpura Super Thermal Power Project (3x660MW)				
Customer	NTPC Ltd.				
S. No.	Item / Work description	Unit	Quantity	Unit Rate	Amount (Rs.)
1	Civil Works				
1.1	Earthwork in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30cm in depth 1.5m in width as well as 10sqm on plan) including dewatering as necessary of rain water/subsoil seepage water and disposal of excavated earth upto 100m and lift upto 4 m, disposed earth to be levelled and neatly dressed.				
1.1.1	All kinds of soil.	Cum	21000		
1.1.2	Ordinary rock	Cum	1000		
1.1.3	Hard rock(requiring blasting)	Cum	1000		
1.1.4	Hard rock(blasting prohibited)	Cum	1000		
1.2	Filling available excavated earth (including rock) in trenches, plinth, sides of foundations, etc., in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead upto 100m and lift upto 3.5m.	Cum	18000		
1.3	Carriage & disposal of surplus excavated earth/rock beyond initial lead by mechanical means not necessarily all the times on pucca roads, including loading, unloading, dressing of excavated material, etc., complete as per specifications -.				
1.3.1	Lead upto 1 km.	Cum	5000		
1.4	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level.				
1.4.1	1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size)	Cum	300		
1.5	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement-All work up to plinth level:				
1.5.1	M20 Grade (Nominal mix)	Cum	2700		
1.6	Centering and shuttering including strutting, propping, etc., and removal of form for:				
1.6.1	Foundations, footings, bases of columns, etc., for mass concrete.	sqm	2100		
1.6.2	Columns, Pillars, Piers, Posts and Struts .	sqm	1100		
1.7	Steel reinforcement -Cold twisted bars /TMT- Fe 500/Fe500D (to be procured from NTPC approved sources)				
1.7.1	Fixing including straightening, cutting and bending, binding (i/c cost of binding wire), placing in position, etc., all labour & material, complete. Reinforcement steel shall be supplied by BHEL free of cost at site (NKTPP end). The quoted rate should be inclusive of unloaing at site , watch and ward, shifting to required loaction etc. also.	kg	220000		
1.8	Supply & Fixing of stub angles in position with necessary arrangements all complete as per drawing and directions of Engr-in-Charge.(weight of stub shall only be measured for payment of this item)	kg	45000		
1.9	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement mortar 1:6:12(1cemet: 6 coarse sand: 12 graded stone aggregate 20mm nominal size) upto plinth level with :				
1.9.1	cement mortar 1:6 (1 cement : 6 coarse sand)	Cum	1000		
	Total Amount (Rs.)				
Notes					
1	The quantities mentioned in the BOQ are tentative and may undergo a change to any extent for individual items.				
2	Any material/services required for successful completion of the project but not covered in the BOQ shall be deemed to be included in the scope of contractor without any cost implications to BHEL. The bidder is advised to visit site before submission of bid.				
3	The route / check survey and geo-technical investigation and soil resistivity measurement shall be done by separate agency appointed by BHEL. Bidder shall associate himself with the agency during the route/check survey.				
4	Loading / Unloading, handling, shifting to & from stores, proper storage, assembly, installation are included in the scope.				
5	MS welding at site- apply red lead paint then aluminium paint then bitumen after welding.				
6	GI welding at site - apply 2 coats of cold galvanising anti corrosive paint after welding.				
7	Bidder may note that any damage of material at site during erection work shall be avoided. Further, owner (NTPC/BHEL) shall not pay any compensation for any loss or damage to the material/properties during work of execution of transmission line job or for tree cutting due to				
8	Right of way is not in Bidder scope, but tree cutting (if any) is in the scope of bidder. Please refer special conditions of contract and customer technical spercification				