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TENDER SPECIFICATION

TENDER NO. BHEL:CHHABRA:STORES:363

FOR

**Construction of site office, storage shed and other infrastructure facilities at 2 x 250 MW
CHHABRA SITE at SLAPPER, Distt. Bilaspur, Himachal Pradesh.**

PART II – PRICE BID

Bharat Heavy Electricals Limited
(A Govt. Of India Undertaking)
Power Sector – Northren Region,
Plot No. 25 , Sector - 16A ,
Distt. Gautam Budh Nagar, NOIDA – 201 301.INDIA

TENDER NO. BHEL:CHHABRA:STORES:363

IMPORTANT NOTE

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THIS TENDER SPECIFICATION ISSUED TO:

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BILL OF QUANTITY FOR site office, storage shed and other infrastructure facilities at 2 x 250MW Chhabra TPS Stage I

Sl. NO.	DESCRIPTION OF ITEM	QTY	UNIT	RATE (Rs.)	AMOUNT (Rs.)
1	Earth work in excavation in all types of ordinary and hard soil including removal of vegetation, shrubs and debris, getting out and stacking the excavated soil, dressing of sides and ramming of bottom, dewatering of accumulated water from any source and keeping the surface dry for subsequent works such as concreting form work etc. and disposal of surplus excavated soil as directed, disposed soil to be neatly levelled and dressed lead upto 100 meters and lift upto 2.0 meter complete.	16595	Cu.M		
2	Back filling available excavated earth (excluding rock) in trenches, plinth, slides of foundations etc., including re-excavating the deposited soil excavated earlier, breaking clods, laying at all depths and heights in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering complete lead upto 50 Metre and lift upto 1.5 Meter.	1100	Cu.M		
3	Disposal of surplus excavated earth and debris including re-excavating the deposited soil earlier, transportation, loading, unloading, laying at all depths and heights, leveling and dressing both the area (viz. From where earth is transported and where it is deposited) to required levels and slopes, complete with all lifts as directed. (upto 2 KM)	15495	Cu.M		
4	Providing approved quality Yellow soil and filling the same where required under floors etc., watering, ramming, consolidating, grading and finishing to final levels and slopes for all lifts and leads involved, complete as directed (Payment to be made for solid measure of the consolidated filling).	570	Cu.M		
5	Providing and tilling of quarry dust filling the same where required under floors etc., watering, ramming, consolidating, grading and finishing to final levels and slopes for all lifts and leads involved, complete as directed (Payment to be made for solid measure of the consolidated filling)complete in all respects as directed by Engineer-in Charge	4210	Cu.M		
6	Providing and tilling of Parvati sand filling the same where required under floors etc., watering, ramming, consolidating, grading and finishing to final levels and slopes for all lifts and leads involved, complete as directed (Payment to be made for solid measure of the consolidated filling)complete in all respects as directed by Engineer-in Charge	4210	Cu.M		
7	Providing and laying and laying damp proof course 40 mm thick with concrete grade 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size and applying a coat of residual petroleum of penetration 80/100 of approved quality using 1.7 kg per sq. metre on damp proof coarse after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in KEROSENE OIL.	90	Sq m		
8	Brick work with class designation 75 in cement mortar 1:6 (1 cement : 6 coarse sand) in foundation, plinth and super structure in thickness of 230 mm including cost of all materials, lead lifts, labour charges, mixing mortar, laying bricks, racking joints, curing etc. all complete as per drawing and specification and direction of Engineer In-charge.	552	Cu. M		

BILL OF QUANTITY FOR site office, storage shed and other infrastructure facilities at 2 x 250MW Chhabra TPS Stage I

Sl. NO.	DESCRIPTION OF ITEM	QTY	UNIT	RATE (Rs.)	AMOUNT (Rs.)
9	Brick work with brick of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) in super structure in thickness of 115 mm including cost of all materials, lead lifts, labour charges, mixing mortar, laying bricks, racking joints, curing etc. all complete as per drawing and specification. 2 nos. MS rods of 6 mm dia are to be provided after every 3rd layer for which no additional payment will be made.	365	Sq. M		
10	Plain cement concrete of mix 1:4:8 (1 cement : 4 coarse sand and 8, 40 mm down graded stone aggregate) for column footing, levelling, floors etc., including cost of all materials, lead, lift, labour charges, consolidation, shuttering, curing etc. complete.	110	Cu. M		
11	Reinforced cement concrete of mix 1:2:4 (1 cement, 2 coarse sand and 4, 20 mm down graded aggregate) for column footing, sunshades, shelves, lintels etc. including cost of materials, lead lift, labour charges for concreting, shuttering, curing etc. complete.	10	Cu. M.		
12	Providing and placing mild steel/ tor steel reinforcement for RCC work including cost of all materials, labour for cutting, bending, binding and placing in position complete as per drawing and instruction of Engineer.	1	MT		
13	Providing SCREED (Floor finish) 40 mm thick Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4, 10 mm down graded aggregate) including cost of materials leads lift complete as per specification, finished with a floating cost of neat cement including cement slurry, glass strip etc. complete.	1680	Sq. M		
14	Plastering work with cement mortar 1:6 (1 cement : 6 coarse sand) 12 mm thick after scrapping and cleaning the masoary joints including scaffolding, cost of materials, labour, mixing , leads & lifts, curing etc. complete.	2090	Sq. M		
15	Plastering work with cement mortar 1:6 (1 cement : 6 coarse sand) 15 mm thick after scrapping and cleaning the masoary joints including scaffolding, cost of materials, labour, mixing , leads & lifts, curing etc. complete.	2090	Sq. M		
16	Supply fabrication and erection of steel tubular trusses, purlines,gates, wind ties, base plates, gusset plates, bolts, nuts etc. complete as per drawings, specifications & instructions of engineer including cost of all materials leads, lifts labour charges etc. and one coat of primer and two coats of approved enamel paint for finished products at site complete as per technical specifiction and direction of engineer.		MT		
a)	Trusses (medium grade pipes)	13	MT		
b)	Purlins	14.5	MT		
c)	Wind ties (Flats) 50 x 6 mm thick	2	MT		

BILL OF QUANTITY FOR site office, storage shed and other infrastructure facilities at 2 x 250MW Chhabra TPS Stage I

Sl. NO.	DESCRIPTION OF ITEM	QTY	UNIT	RATE (Rs.)	AMOUNT (Rs.)
17	Providing and fixing steel glazed windows and ventilators of operable standard rolled steel section joints mitred and welded with 15 x 3 mm lugs, 10 cm long, with steel lugs embedded in cement concrete blocks 15 x 10 x 10 cm of 1:3:6 (1 cement : 3 coarse sand : 6 approved graded hard stone aggregate 20 mm nominal size) or with wooden plugs and screws or raw plugs and screws or with fixing clips or with bolts and nuts as required including providing and fixing of glass panels with glazing clips and special metal sash putty of approved make complete including painting with two coats of approved quality synthetic enamel paint over a base coat of red oxide zinc chromate primer including the cost of minor repair work, if required. Windows and ventilators will be provided with horizontal steel bars(8 mm x 8 mm), welded to the frame @ 150 mm	55	Sq. M		
18	Providing and fixing solid core flush door shutters non decorative type, core of black board construction with frame of 1st class hard wood and well matched commercial ply veneering with vertical grains or cross bands and face veneers on both faces of shutters 35 mm thick including all supply and fixing of door frames made up of 40x40x5 Tee section with 15x3 mm, 10cm long lugs embedded in cement concrete blocks 15x10x10 cm of 1:3:6 (1 cement : 3 coarse sand : 6 graded aggregate 20 mm size) including all accessories like aluminium handle/ tower bolt and iron hinges, aldop etc., as per drawings, applying of coat of primer and two coats of enamel paint of approved brand etc., complete as per specification complete.	55	Sq. M		
19	Providing and fixing False Ceiling of 12.5 mm thick Tapered Edge Gypsum Board confirming to IS 2095 including providing and fixing of frame work made of special sections power pressed MS Sheet and galvanised with Zinc Coating as per IS 277 ,of size 600 x 600 mm as detailed in the item description.	500	Sq. M		
20	Providing and fixing 1st quality ceramic glazed tiles conforming to IS: 13753 of minimum thickness 5 mm of approved make like NITCO, ORIENT, SOMANY KAJRIA, or equivalent make in all colours, shades except begundy, bottle green, black of size as approved by Engineer-In-Charge in skirting, risers of steps and dados over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3 kg. per sqm including point in white cement mixed with pigment of matching shade complete.	110	Sq. M		
21	Providing and fixing white vitreous china water closet squatting pan (Indian type / Oriss pattern WC pan) size 580 x 440 mm with 100 mm sand cast iron P trap, 12.5 Lit. high level CI flushing clastern with fittings RS or CI brackets 32 mm dia meter galvanised iron flush pipe with fitting and clamps 20 mm GI over flow pipe with special and mosquito proof coupling of approved design and GI chain and pull complete including painting of clastern and fittings, cutting and making good the walls and floors where required.	2	No.		

BILL OF QUANTITY FOR site office, storage shed and other infrastructure facilities at 2 x 250MW Chhabra TPS Stage I

Sl. NO.	DESCRIPTION OF ITEM	QTY	UNIT	RATE (Rs.)	AMOUNT (Rs.)
22	Providing and laying Ceramic glazed floor tiles 300 x 300 mm (thickness to be specified by the manufacturer) of 1st quality conforming to NITCO, ORIENT, SOMANY KAJRIA, or equivalent make in colours such as white, Ivory, Grey, Fume Red Brown, laid on 20 mm thck cement mortar 1:4 (1 cement : 4 coarse sand) including the joints with white cement and matching pigment etc. complete.	480	Sq.M		
23	Providing and fixing 470 x 420 x bowl depth 178 mm stainless steel kitchen sink (without drain board) with brackets, 40 mm C.P. brass waste and 40mm GI waste pipe all complete including painting of the fittings, cutting and making good the walls floors wherever required etc. complete.	1	No.		
24	Providing and fixing white vitreous china pedestal type water closet (European type W.C. pan) with black plastic sheet and lid G.P. brass hinges and rubber buffers, 12.5 lts. Capacity white approved quality PVC low level flushing cistern with fittings brackets, 40 mm flush bend 20 mm overflow pipe complete including mosquito proof coupling, cutting and making good the walls and floors where required.	3	No.		
25	Providing & fixing flat back white vitreous china wash basin 550 x 400 mm size with single 15 mm C.P.brass pillar with R.S. or C.I. brackets painted white 15 cm C.P. brass pillar taps C.P. brass chain with rubber plug, 32 mm dia CP Brass trap and M.I. unions, C.P. waste, C.P. connection, soap dish, waste pipe complete including cutting and making good the walls wherever required.	5	No.		
26	Providing and fixing marble separator to urinal 20 mm thick as per the instruction of Engineer.	3	Sq.M		
27	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350 mm and 340x410x265 mm size respectively with autohatic flushing cistern with C.I. Brackets, standard size of G.I. Flush pipe and spreaders with brass union and G.I. clamps, P.V.C. waster pipe etc. complete including painting on the inner surface of cistern with anticorrosive bitumastic pain and two coats of synthetic enamel paint over a coat of approved steel primer on the outer face of cistern brackets etc. and cutting and making good the walls and floors wherever required.				
a)	Range of 1 urinal basin with 5 litre automatic flushing cistern.	3	set		
b)	10 Ltrs. C.I. Automatic flushing cistern with three urinals.	1	set		
28	Providing and fixing 300x450 mm bevelled edge not less then 5 mm thick mirror of superior glass of approved quality complete with 6 mm thick ply board back fixed to wooden cleats with C.P.screws and washer etc. , including good quality PVC rack , complete all as specified.	5	Nos.		

BILL OF QUANTITY FOR site office, storage shed and other infrastructure facilities at 2 x 250MW Chhabra TPS Stage I

Sl. NO.	DESCRIPTION OF ITEM	QTY	UNIT	RATE (Rs.)	AMOUNT (Rs.)
29	Providing and fixing 600x20 mm size C.P. brass towel rail complete with 2 nos. C.P. brass brackets fixed to wooden cleats with CP brass screws.	5	Nos.		
30	Providing, laying and jointing glazed stone ware pipes grade A with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testing of joints etc., complete 100 mm dia pipe.	75	RM		
31	Providing, laying, fitting and jointing medium grade GI pipes , conforming to IS 1239 for water lines at various elevations with all fittings stop cock, valve bends, elbows, tees, reducers., etc. making grooves in the brick wall, etc. (Internal work), trenching, refilling etc. (external work) including cost of all materials, labour charges etc. complete as per specifications and drawings.				
(a)	50 mm dia G.I. Pipe (External work)	50	RM		
(b)	25 mm dia G.I. Pipe (External work)	300	RM		
©	20 mm dia G.I. Pipe (Internal work)	125	RM		
(d)	15 mm dia G.I. Pipe (Internal work)	175	RM		
32	Providing and fixing brass full way valve with C.I wheel of approved quality etc. complete.				
(a)	25 mm nominal bore	6	No.		
(b)	50 mm nominal bore	4	No.		
33	Providing and fixing C.P. brass 15 mm stop cock of approved quality of weight not less than 250 gms.	15	NO		
34	Providing and fixing C.P. brass 15 mm bib cock of approved quality of weight not less than 250 gms.	15	No.		
35	Providing and fixing 16 mm thick and 100 mm wide bonded commercial plywood pelmets with end coverings including fixing 20 mm diameter aluminium curtain rod with end brackets. The rate includes painting of the wooden surface with two coats over a priming coat of approved quality and colour of best synthetic enamel paint etc., complete for windows and doors.	70	RM		

BILL OF QUANTITY FOR site office, storage shed and other infrastructure facilities at 2 x 250MW Chhabra TPS Stage I

Sl. NO.	DESCRIPTION OF ITEM	QTY	UNIT	RATE (Rs.)	AMOUNT (Rs.)
36	Construction brick masonry manholes of inside size 90x80 cm and 45-60 cm deep with 75 class designation bricks in cement mortar 1: 5 (1 cement : 5 fine sand), RCC top slabs with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm size), foundation concrete 1:1:8 (1 cement : 4 coarse sand : 8 graded stone aggregate of 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded aggregate of 20 mm nominal size) neatly finished complete as per standard design excluding CI manhole cover.	10	NO.		
37	Providing and fixing 500 x 500 mm precast RCC cover -50 MM thick	12	Sqm		
38	Construction of 2.0x0.90x1.60 size Septic tank in all types of soil with 250 mm thick brick masonry in cement Mortar of 1:6 15 cm thick cement concrete 1:4:8 grade in bed, 75 mm thick 1:2:4 grade cement concrete flooring and 100 mm thick over RCC slab of 1:2:4 grade, 75 mm thick partition wall, 15 mm thick plaster on brick wall finished with neat cement providing M.S. rugs etc., complete as per drawing including excavation, disposal of surplus earth with a load of 50 Mtr. item includes all material, labour, leads, lifts etc., complete but excluding C.I manhole cover.	2	NO.		
39	Providing and fixing square mouth stone ware gully trap grade'A' conforming to IS:651 complete with G.I. Grating, brick masonry chamber with bricks of class designation '50' and water tight C.I. Cover with frame of 300 x 300 mm size (inside), the weight of cover to be not less than 4.5 kgs and frame to be not less than 2.70 kg as per specification.	8	NO.		
40	Providing & fixing 100 mm x 100 mm sand cast iron trap of self cleaning design with sand cast iron screwed down or hinged painting with or without vent arm complete including cost of cutting and making good the walls floors etc. all as specified	20	NO.		
41	Construction soak pit of 2 Mtr dia and 3 Mtr depth filled with brick bats including S.W. drain pipe 100 mm dia and 1.2 meter long complete as per standard design.	2	NO.		
42	Providing and laying of S&S cast iron pipes (class LA) of 100 mm dia.	20	RM		
43	Providing three coats of white wash to give a smooth and even shade including cost of materials, cleaning and preparation of surface, scaffolding etc. complete.	1450	sqm		
44	Finishing walls/ surfaces with water proofing cement paint of approved brand and manufacture and of required shade to give an even shade.	1800	sq.M		
45	Distempering with Oil bound washable distemper of approved brand and manufacture and of required shade to give an even shade on new wall (2 or more coats) over and including priming coat with cement primer.	1400	sq.M		
46	Supplying and installation of HDPE cylindrical and vertical water tank with closed top of SINTEX or approved equivalent of undermentioned capacity with all necessary fittings including supplying and fixing input and out putlines including support of brick pillars of height of 3 Mtrs each complete.				

BILL OF QUANTITY FOR site office, storage shed and other infrastructure facilities at 2 x 250MW Chhabra TPS Stage I

Sl. NO.	DESCRIPTION OF ITEM	QTY	UNIT	RATE (Rs.)	AMOUNT (Rs.)
a)	500 Ltr. Capacity tank	1	set		
b)	1000 Ltr. Capacity tank	1	set		
47	Providing and fixing corrugated GS sheet 22 G with Class IV Galvanising (275 gm/ sq m) roofing fixed with GI J or L hooks bolts and nuts 8mm diameter with bitumen and GI limpet washer complete (upto a pitch of 60 degrees) including steel primer and 2 coats of approved paint at overlaps. as per tech. specification.	1808	Sq.M		
48	Providing and fixing corrugated Transperent Plastic sheet roofing fixed with GI J or L hooks bolts and nuts 8mm diameter with bitumen and GI limpet washer complete (upto a pitch of 60 degrees) including steel primer and 2 coats of approved paint at overlaps. as per tech. specification.	452	Sq.M		
49	Providing and fixing GS ridges including supply and fixing J or L bolts and nuts bitumen & GI washers etc. complete as per Technical Specification including Bitumen coating at all joints .	140	RM		
50	Construction of RCC sleepers of size 1M x 0.2M x 0.15M or any other size as per drawing including cost of all material, labour and shuttering complete as per drg. Using concrete mix 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate) and nominal reinforcement steel.	3	Cu.m.		
51	Providing and fixing PVC pipe (2.5 kg/cm ²) of 200 mm dia. as rain water pipe in above item .	70	RM		
52	Making plinth protection 50 mm thick of cement 1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 20 mm nominal size) over 75 mm bed of dry brick ballast 40 mm nominal size well rammed and consolidated and grouted with fine sand including finishing the top smooth.	365	Sq.M		
53	Providing, fabricating and erection of barbed wire fencing 1.5 m high as per drawing with 50 x 50 x 6 angle posts spaced @ 3 Mtr. C/c and embedded in cement concrete block 45 x 45 x 60 cm of mix 1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 20 mm nominal size) corner and every 10th post to be struted and provided with 6 horizontal lines and two diagonals of GI barbed wire 9.38 kg/100 Mtr. properly fixed with wire hooks spaced at 250 c/c approx. including supply of all materials, excavation, concrete, fabrication, painting of posts with 2 coats of synthetic enamel paint over a coat of primer paint as per direction of engineer, complete as per standad specification.	1200	R.M		
54	Providing of Gate 2m high of Fabricated Pipe structure complete with barbed wire etec etec	20	Sq.M		
55	Providing and Laying of non-Pressure NP2 class (light duty) RCC Pipe with collar of 250 mm dia jointed with stiff mixture of cement motar in proportion of 1:2 (1 cement :2 fine sand)including testing of joints etc complete	1000	RM		

BILL OF QUANTITY FOR site office, storage shed and other infrastructure facilities at 2 x 250MW Chhabra TPS Stage I

Sl. NO.	DESCRIPTION OF ITEM	QTY	UNIT	RATE (Rs.)	AMOUNT (Rs.)
56	Construction of brick masonry road gully chamber 50 cm x 45 cm x 60 cm with MPS Brick of class 75 kg in cement mortar (1 cement : 6 fine sand) including 500 , 450 mm RCC precast horizontal with frame completed as per standard specification	20	EACH		
57	Supply and stacking of hard stone 22.5 cm size at site as per std Specifications , payments to be made on the stack measurements deducting voids	3750	CUM		
58	Supply and stacking of good quality moroom at site as per std Specifications	3000	CUM		
59	Laying soling using 22.5 cm hard stone and blinding material including sorting spreading to template and spreading the moroom over the top of lais stone and consolidated with power rollers of 8 to 10 tons capacity etc and complete . Payments will be made based on as per actual areais multiple by consolidated thickness	3750	CUM		
60	Providing and tilling of quarry dust as levelling course compacting the same with 8 to 10 ton road roller complete in all respects as directed by Engineer-in Charge	11250	CUM		
61	Laying water bound macadam with specified stone aggregate stone screening and blinding material including screening sorting , spreading to template and consolidation with power roller 8 to 10 T capacity (payment for stone aggregate , screening , kankar , moroom and red bajri to be made separately) for Base Course 63 mm to 45 mm size including stone screening 13.2 mm	3100	Sq.M		
ELECTRICAL					
62	Providing and fixing 1 x 40 Watt Batten type fluorescent tube fitting (Crompton / Philips / Bajaj make),fabricated from CRCA sheet steel and finished with stove enamel paint complete with Accessories like fluorescent lamp,copper wound polyester choke, starter, seat, rotor holder and terminal block duly pre-wired with copper conductor, including connections, fixing on wall, false ceiling or under roof tusties with clamps as required	110	Nos.		
63	Providing and fixing 2 x 40 Watt Box type fluorescent tube fitting (Crompton / Philips / Bajaj make),fabricated from CRCA sheet steel and finished with stove enamel paint complete with Accessories like fluorescent lamp,copper wound polyester choke, starter, seat, rotor holder and terminal block duly pre-wired with copper conductor, including connections, fixing on wall, false ceiling or under roof tusties with clamps as required	20	Nos.		
64	Providing and fixing of bulkhead (outdoor) type fixture with glass cover and galvanized wire guard with 1 x 100 W GLS lamp (Crompton / Philips/Bajaj / Mayfare make), complete with lamp and fixing clamp etc.	18	Nos.		
65	Providing and fixing 1 x 250 W HPSV out door type fittings (Crompton / Philips/BajaJ , complete with lamp, ballast control gear box, fixing clamp etc.	24	Nos.		
66	Providing and fixing of following sweep exhaust fan (Khaitan / Crompton make) single phase alongwith gravity louvers, frame / tripod for holding the motor including making necessary opening in wall, supply & fixing of assembly with grouting bolts, making connections, loop earthing etc.		Nos.		

BILL OF QUANTITY FOR site office, storage shed and other infrastructure facilities at 2 x 250MW Chhabra TPS Stage I

Sl. NO.	DESCRIPTION OF ITEM	QTY	UNIT	RATE (Rs.)	AMOUNT (Rs.)
a	230 mm sweep	2	Nos.		
b	300 mm sweep	15	Nos.		
67	Providing & fixing of 240 V, 5 / 15 Amp 6 Pin Power socket outlet point (with 15 A switch). Switch / socket to be fitted in suitable size 20 SWG metal type box with 3mm sunmica sheet	35	Nos.		
68	Providing & fixing of 240 V, 5 3 Pin Power socket outlet point (with switch). Switch / socket to be fitted in suitable size 20 SWG metal type box with 3mm sunmica sheet along with the piano switches and fan regulator	35	Nos.		
69	Providing & fixing 5A piano type switch for Light / Fan Control (Anchor make)	70	Nos.		
70	Providing and Fixing of 20/25 mm PVC Conduit (including fittings) for telephone / LAN Connection / Call bell System	200	mtr		
71	Providing Wires and wiring for Telephone / Call Bell System	500	mtr		
72	Providing and Fixing of suitable box for telephone / LAN/Call Bell points	50	Nos.		
73	Providing & fixing of 240 V, 20 Amp INDUSTRIAL Power socket outlet point (with 20 A MCB). Switch / socket to be fitted in suitable size 20 SWG metal type box .	10	Nos.		
74	Wiring of above power sockets with 4 Sq. mm PVC insulated Copper Conductor wires as per IS, 650 / 1100 V grade including 20 SWG GI earthing wire in PVC medium grade conduit including supply of items.				
	(a) Length per point 6 Mtr. To 10 Mtr.	10	Points		
	(b) Length per point 10 Mtr . To 15 Mtr.	15	Points		
	(c) Length per point 15 Mtr. To 20 Mtr.	20	Points		

BILL OF QUANTITY FOR site office, storage shed and other infrastructure facilities at 2 x 250MW Chhabra TPS Stage I

Sl. NO.	DESCRIPTION OF ITEM	QTY	UNIT	RATE (Rs.)	AMOUNT (Rs.)
75	Wiring of the following points (including supply of Wires, conduits, clamps, boards, other misc. items) with 2.5 sq.mm colour coated PVC insulated copper conductor wires as per IS- 650/1100 volts grade in surface PVC conduits (medium grade) including laying of 20 SWG GI wire, conduit fitting. (Fixing of piano type control switches (Anchor make) in suitable sized 20 SWG metal box with 3 mm sunmica sheet having provision for fan regulator, 5 Amp switch socket (supplied above) included in scope)				
a)	Long Point (Panel to Switch Box)	25	Points		
b)	Medium Point (Switch Box - first Point / Switchboard)	35	Points		
c)	Short Point (among points)	125	Points		
d)	Wiring for ceiling fan and regulator	25	Points		
e)	Wiring for exhaust fan.	18	Points		
f)	1 x 250 W HPSV out door type fitting. One number 10 A DP switch to be used for controlling 2 fittings. D.P Switches to be fixed on outside of the store shed wall	24	Points		
76	Providing and fixing of 32 Amp TPN with HRC fuses along with earth wire. The TPN to be provided on one side of the central shed with rain protection cover.	5	Nos.		
77	Supply and burying of earths electrodes 40mm dia 3 mtrs. Long including earthing upto switch board with 8 SWG GI wire.	12	Nos.		

BILL OF QUANTITY FOR site office, storage shed and other infrastructure facilities at 2 x 250MW Chhabra TPS Stage I

Sl. NO.	DESCRIPTION OF ITEM	QTY	UNIT	RATE (Rs.)	AMOUNT (Rs.)
78	Installation and commissioning of 3-ph 4W 1000 / 400 A Electrical Switchboard (appx size 1600 x 1000 x 2000 mm) . (Foundation will be paid in civil works)	1	set		
79	Providing , Installation and commissioning of 24 W Lighting Panel with 10 no 20 A MCB and 14 nos 16 A MCB with 125 A SFU incomer in Sheet metal housing with double door arrangement , including all earthing and statutory requirements .	1	Nos.		
80	Providing , Installation and commissioning of 18 W Lighting Panel with 18 nos 16 A MCB with 125 A SFU incomer in Sheet metal housing with double door arrangement , including all earthing and statutory requirements .	1	Nos.		
81	Taking delivery from stores and laying of following type of PVC Insulated, PVC armoured standard aluminium conductor cable confirming to IS:1554-1976 (part 1), glanding with single compression gland, termination of both end in DB & SFU. The cable has to be laid underground on sand cushion including backfilling, susitable clamp, clamping on surface including all materials etc. complete.(Only cable will be issued by BHEL as free issue item and all other materials are to be provided by the contractor).This includes road crossing for which suitable GI Pipe to be provided by the contractor.				
a	3 1/2 core x 185 / 300 Sq.mm armoured cable	100	RM		
b	3 1/2 Core x 50 / 95 Sq.mm armoured cable	100	RM		
c	3c/4c upto 16 sq.mm armoured cable	250	RM		
82	Suppling & fixing hydraulic door closer (heavy duty)	10	Nos.		
83	Manual operated Rolling Shutter for Stores Shed of approved quality (appx size 4m x 3m of clear opening)	2	Nos.		
84	Earthing Flat 30 x 6 for Earthing	150	RM		
	TOTAL				

Notes: 1. In case of omission in quoting any rate, the evaluation will be done considering the highest quoted rate obtained against that item but the work, if awarded, will be on the lowest quoted rate obtained against that item.

BILL OF QUANTITY FOR site office, storage shed and other infrastructure facilities at 2 x 250MW Chhabra TPS Stage I

SI. NO.	DESCRIPTION OF ITEM	QTY	UNIT	RATE (Rs.)	AMOUNT (Rs.)
	<p>2. The rate shall be entered in figures as well as in words. In case of difference in rates between words and figures, the lesser of the two will be treated as valid rate.</p> <p>3. The bidders shall enter both 'Unit Rate' & 'Amount'. In case of any mismatch between 'Total Amount based on Unit Rate' & 'Total Amount as quoted', the lower of the two shall be considered for evaluation and award.</p> <p>4. The quantities indicated against each item above are tentative and same are liable to vary depending upon the site requirement. The contractor has to handle all items indicated by BHEL Engineer for completion of work.</p>				