

PART-B						
PROJECT: 1X800 MW HPGCL, DCRTTP, Yamuna Nagar,Haryana,INDIA						
BOQ CUM RATE SCHEDULE (PRICE BID)						
SCOPE OF WORK:- Balance Civil, Structural and Architectural Works for Compressed Air System ,Fire Protection System including Pump Houses , Fuel Oil System including Day Oil Tank and Pump House, Chemical Lab, Ammonia Unloading & Storage, H2 Cylinder Storage Shed, Raw Water System including Pump House ,Fire Protection and Detection System, HVAC System including Air Washer Building, Security cum Main Gate Complex, Parking sheds for four wheelers and two wheelers, Main Plant and Peripheral Roads & Drains (Cast In-Situ, Pre-cast drains), Levelling & Grading, Pipe & Cable rack, paving and Miscellaneous works at 1X800 MW DCRTTP Yamuna Nagar, Haryana.						
ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
100	EARTH WORK: Earth work in excavation, backfilling and disposal including all labour, equipments etc complete as per specification, drawing and as directed by engineer- in-charge for the following.					
A101	Earth work in excavation in all types of soil including ash which can be excavated by any means including setting out, levelling, removing of surface water accumulated due to rain but excluding dewatering to lower the ground water table, dressing the sides & bottom, all lifts, ramming/compacting the excavated bottom, stacking, disposal of surplus excavated materials within a lead upto 1Km, spreading/levelling of disposed materials etc all complete for following depths below ground level.					
A101-a	Depth from ground level but not exceeding 2 m	CUM	75,777			1.7092005501
A101-b	Depth exceeding 2 m but not exceeding 4 m	CUM	14,126			0.3974555729
A101-c	Depth exceeding 4 m but not exceeding 6 m	CUM	3,005			0.1062092391
A101-d	Depth exceeding 6 m but not exceeding 8 m	CUM	1,700			0.0751075596
A101-e	Depth exceeding 8 m but not exceeding 10 m	CUM	350			0.0184745994
A102	Extra over ST No. A101 for dewatering of ground water by well point method as per IS 9759. Ground water table shall be lowered up to 1 m below the founding level to make the site workable for foundation construction till backfilling up to ground level. Mode of measurement shall be the quantity of excavation of soil including ash below ground water table to founding level of the footing.	CUM	6,500			0.9748868221
107	Earthwork in Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/with selected materials from compulsorily excavated earth available within a lead upto 1 Km and compacted as specified including re-excavation of stacked earth, watering, ramming/compaction by manual/mechanical means, dressing etc all complete.for the following.					
107-b	at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	71,850			1.6373215458
108	Earthwork in Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/with selected earth directly from excavation within a lead upto 1Km and compacted as specified including watering, ramming/compaction by manual/mechanical means, dressing etc all complete.for the following:					
108-b	at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	11,500			0.1203348671
109	Extra over ST No. 101 and 103 to 108 for carriage of material/earth for every 500m or part thereof beyond an initial lead of 1km.					
109-a	Carriage for stacking/ backfilling of serviceable material/ earth	CUM	12,000			0.0334844848
109-b	Carriage for disposal of serviceable/unserviceable material/ earth	CUM	52,000			0.1450994340
111	Supplying and filling sand upto any depth under floors, around foundations, plinths etc. in layers not exceeding 250 mm thickness and compacted so as to achieve at least 80% relative density as per IS-2720 (Part-XIV) including spreading, watering, ramming/compaction by manual / mechanical means, dressing, royalty (if any) etc. all complete.					
111-a	For 80% Relative Density	CUM	2,350			0.7688526018
112	Extra over item no. A101 for shoring and strutting in trenches including packing cavities (wherever required as instructed by engineer) all complete as per specification and as directed by engineer in charge.					
112-a	upto depth of 2m	SQM	650			0.0467038803

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112-b	Depth exceeding 2 m but not exceeding 4 m	SQM	175			0.0157481717
200	CONCRETE WORK: Providing and placing concrete work including cost of labour, materials (unless otherwise specified in BOQ/contract specification) and equipment for handling, transportation, batching, mixing, placing, vibrating and curing (excluding cost of centering, shuttering and reinforcement) with mechanised equipments like batching plant, transit mixer, concrete pump etc. complete as per drawing, specifications and as per direction of engineer in charge for the following. Note: Cement shall be issued by BHEL free of cost (unless otherwise specified in BOQ Item Description).					
201	Concrete of grade M7.5 (1 part cement, 4 part sand, 8 parts of 40 mm graded aggregate by volume) as mass filling course, lean concrete, levelling course, mud mat under and around foundations/floors below finished ground floor level upto depth of 10m from FGFL (Finished Ground Floor Level) . (For depth greater than 10m from FGFL, extra over for additional depth to be paid in Item No 224)	CUM	2,077			1.6104667394
202	Concrete of grade M10 (1 part cement, 3 part sand, 6 parts of 40 mm graded aggregate by volume) as lean concrete, levelling course, mud mat under and around foundations/floors below finished floor level upto depth of 10m from FGFL (Finished Ground Floor Level) . (For depth greater than 10m from FFL, extra over for additional depth to be paid in Item No 224)	CUM	89			0.0693020347
203	Concrete of grade M15 (1 part cement, 2 part sand, 4 parts of 40 mm graded aggregate by volume) as lean concrete, levelling course, mud mat under and around foundations/floors below finished ground floor level upto depth of 10m from FGFL (Finished Ground Floor Level). (For depth greater than 10m from FGFL, extra over for additional depth to be paid in Item No 224)	CUM	326			0.2527343801
204	Concrete of grade M20 (1 part cement, 1.5 part sand, 3 parts of 10-20 mm graded aggregate by volume) under floors, paving, plinth protection, pipe encasing etc complete below FGFL (Finished Ground Floor Level) upto depth of 10m from FGFL. (For depth greater than 10m from FGFL, extra over for additional depth to be paid in Item No 224).	CUM	377			0.2818405360
205	Providing and laying Design Mix cement concrete conforming to IS:456 & IS 10262-2009 for reinforced concrete works with sand and graded hard stone aggregate of 20mm nominal size in foundations/substructure, grade slab, paving, drains, under floors etc for any shape, position or thickness etc complete including use of high performance PCE-based BIS approved water reducing admixture of Type-G/F as per ASTM C-494 of approved make FOSROC/SIKA/BASF or Equivalent having minimum water reduction capability of 30% to achieve required slump in concrete all complete as per specification & drawing below finished ground floor level (FGFL) upto a depth of 10m from FGFL (For depths greater than 10m from FGFL, extra over for additional depth to be paid in Item No 224), for the following.					
205-b	M 25 Grade	CUM	2,680			2.2852137716
205-c	M 30 Grade	CUM	8,671			7.4437262537
206	Providing and laying Design Mix cement concrete of grade conforming to IS:456 & IS 10262-2009 for reinforced concrete works with sand and graded hard stone aggregate of 20mm nominal size in superstructure for any shape, position or thickness etc complete including use of high performance PCE-based BIS approved water reducing admixture of Type-G/F as per ASTM C-494 of approved make FOSROC/SIKA/BASF or Equivalent having minimum water reduction capability of 30% to achieve required slump in concrete all complete as per specification & drawing upto 10m above finished ground floor level (FGFL) (For height greater than 10m from FGFL, extra over for additional height to be paid in Item No 225), for the following.					
206-c	M 30 Grade	CUM	1,470			1.2999444339
A211	Providing and encasing of structural steel member with concrete using nominal aggregate size of 12.5mm down. Member shall be wrapped with welded wire mesh/chicken wire mesh with proper lap etc. complete as per specification for the following grades. (Chicken wire mesh to be paid separately)					
A211-a	M 20	CUM	105			0.0814021777
212	Screed concrete conforming to IS 456 with sand and graded hard stone aggregate 12.5mm/6 mm nominal size on the roof upto 10m level above finished ground floor level (FGFL) (For height greater than 10m from FGFL, extra over for additional height to be paid in Item No 225) or thickness, drains etc complete as per following.					
212-a	1:2:4	CUM	400			0.3101035339
213	Providing and laying Design Mix cement concrete as per IS:456 & IS 10262-2009 for reinforced concrete works using graded aggregate for Concrete in precast works like roof slabs/trench covers, fins, lintels, chajjas, beams, columns, fencing posts, wall panels, facias etc.at all levels in all kinds of work including formwork/moulds, curing, rendering the top exposed surface with cement sand mortar (1:3), handling, storing, transpoting, all leads, erection without damage, setting in position with cement sand mortar (1:3), filling the gaps between adjacent precast units with M30 grade concrete or cement sand mortar (1:3) and including making of holes for bolts for fixing, welding etc.complete with graded aggregate (20/12.5/10 mm) and as per specification and drawing for following grades.					

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213-b	M25	CUM	160			0.2396000910
213-c	M30	CUM	60			0.0901988308
214	Providing and laying Design Mix cement concrete as per IS:456, IS 3370 & IS 10262-2009 for reinforced concrete works using graded aggregate for Concrete in water retaining/conveying structures including addition of high performance PCE-based BIS approved water reducing admixture of Type-G/F as per ASTM C-494 of approved make FOSROC/SIKA/BASF or Equivalent having minimum water reduction capability of 30% and suitable waterproofing cement additives to achieve a slump more than 125 mm in concrete as per manufacturers recommendation and conforming to limits of permeability as per IS 2545 and specification with 20 mm nominal size graded aggregate upto depth of 10m from finished ground floor level (FGFL), (For depth greater than 10m from FGFL, extra over for additional depth to be paid in Item No 224). for following grades. Watertightness is to be ensured including structural grouting if required.					
214-b	M30	CUM	1,750			1.6594585107
215	Dismantling concrete work for all types of structures at all levels including stacking of servicable material to a lead of 500 m and disposal of unservicable material upto a lead of 2 km, cutting of reinforcement, labour, equipment, safety precautions etc all complete as per drawings, specification and instructions of engineer in charge.					
215-a	Plain cement concrete of all grades	CUM	100			0.0224392554
215-b	Reinforced cement concrete of all grades	CUM	200			0.0685501813
216	Chipping of concrete in reinforced concrete work, cutting pockets, making openings at all levels and according to shapes, disposal of waste materials upto a lead of 2 km as directed by engineer including equipment, safety precautions, making good the broken surface etc all complete as per specification, drawing, instructions of engineer in charge but excluding cutting of reinforcement .	CUDM	950			0.0150215119
217	Extra over and above St No 216 for cutting of reinforcement, all sizes and types including labour, equipment, return of cut reinforcement to store etc all complete as per specification, drawings and instructions of engineer in charge. Measurement shall be on the cross sectional area of reinforcement cut.	SQCM	175			0.0002441577
218	Cutting Reinforced concrete with mechanised tools like Core drilling machine etc. for cutting pockets, holes, cores in slab, beam, column or foundation as per direction of engineer in charge.	CUDM	100			0.0066503907
219	Providing and applying curing compound (water based) of approved make where ever required as per manufacturer's specification.	SQM	70			0.0020997562
220	Providing & laying Plum cement concrete 1:3:6 with 75% graded metal of maximum size 40 mm and 25% plums of maximum size 150 mm.	CUM	125			0.0955703003
222	Cutting of groove of 10mm X 40mm size with groove cutting machine in concrete paving all complete.	RM	350			0.0047203822
223	Cutting of existing concrete/ RCC work inside control room/ pump house or anywhere inside boundary using power tools of (DD2E of HILTI/ BOSCH make) with low noise and dust including cutting reinforcements, removing the rubbish within a lead of 1 km, including making good the broken edges/ surface with cement mortar, painting, finishing to match with existing finishing, scaffolding/ supporting at any level, all complete and as directed by Engineer (measurements shall be taken as per cutting surface area).	SQM	175			0.1053133552
225	Extra over item no. 206 and 212 for height above FGFL (Finished Ground Floor Level) as per following:					
225-a	Height exceeding 10m from FGFL but not exceeding 20m	CUM	80			0.0069201269
225-b	Height exceeding 20m from FGFL but not exceeding 30m	CUM	70			0.0109057107

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300	FORMWORK: Providing, fixing and removing formwork at all elevations for all structures, as per specifications and including all labour, material, scaffoldings and centereing etc. complete as per drawing, specifications and as per direction of engineer in charge for the following.					
301	Fairface form work with good quality water proof ply wood of minimum 12mm thickness and smooth surface below finished ground floor level for foundations, footings, base of columns, walls, columns, pilasters, beams & slabs (for which scaffolding work not required for vertical support of bottom face of formwork), mass concrete, trenches, grade slab, paving etc.including chamfering of edges as per drawing, specification and instruction of engineer in charge.					
301-a	Upto Depth 10m From FGL	SQM	48,924			7.1444138579
302	Fairface form work with good quality water proof ply wood of minimum 12mm thickness and smooth surface above finished ground floor level for columns, beams, suspended/intermediate floors, roofs, lintels, cantilevers, staircases, landings, balconies, etc. including chamfering of edges as per drawing.for all heights as per specification, drawing and instruction of engineer in charge.					
302-a	For Height Upto 20m from FGL	SQM	11,160			1.9774262479
304	Providing, fixing and removing formwork in block-outs/pockets and openings (below 0.1 sqm plan area) at all elevations including cutting, formation of all shapes and all other operations required for making the required shape and size all complete as per specification, drawing and instruction of engineer in charge.					
304-a	Upto 150 mm depth	EACH	75			0.0041681208
304-b	Pockets of depths more than 150mm and upto 300 mm depth	EACH	105			0.0097174765
304-c	Pockets of depths more than 300mm and upto 600 mm depth	EACH	160			0.0263411280
304-d	Pockets of depths more than 600mm and upto 1000 mm depth	EACH	150			0.0386117965
304-e	Pockets of depths more than 1000mm and upto 1500 mm depth	EACH	100			0.0370422113
304-f	Pockets of depths more than 1500mm and upto 2000 mm depth	EACH	20			0.0097802599
305	Extra over item no.301 and 302 for curved form work for foundations, footings, beams, walls, trenches, domes, arches etc as per specification.					
305-a	Extra for Curve Shuttering for Item No. 301	SQM	350			0.0101732376
305-b	Extra for Curve Shuttering for Item No. 302	SQM	5			0.0001767237
306	Fairface form work with good quality water proof ply wood of minimum 12mm thickness and smooth surface below finished ground floor level for Beams, suspended/intermediate floors, lintels, cantilevers, staircases, landings, etc. where scaffolding work is required for vertical support of bottom face of formwork including material, scaffolding, chamfering of edges as per drawing, specification and instruction of engineer in charge.	SQM	700			0.1305429844
400	REINFORCEMENT WORK : Reinforcement work including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling etc at all level as per specification, drawings and as directed by engineer - in - charge.					
A402	Transportation, straightening, cutting, bending, placing in position at any level, binding in position of steel reinforcements of TMT steel of grade Fe-500D / Fe-550D confirming to IS:1786 including cost of binding wire, labour, scaffolding, transportation to & from stores etc complete all as per specifications, drawings and as directed by Engineer. Note: Reinforcement Steel shall be issued by BHEL free of cost.	MT	1,710			4.3354088925

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405	Providing & fixing of Rebar in existing concrete surface by inserting reinforcemnet bar with Epoxy based suitable bonding compound of Hilti or equivalent make (HIT-RE-500 of Hilti or equivalent make) for interconnection of new R.C. structure with existing R.C. structure. Depth of drilled hole should be suitable to develop maximum recommended strength as per approved manufacturer's recommendation. This item includes supply of all materials including bonding chemicals, T&P required to execute the work, cost of all labour, transportation of chemical, staging to reach work place etc. all complete as directed by Engineer - in - Charge. Random Pull out non destructive test as directed by engineer shall beconducted to ensure strength of bond and same is included in this item. Reinforcement bar shall be paid separately under item no. A402 as applicable.					
405-a	12mm Reinforcement bar	EACH.	25			0.0036158593
405-b	16mm Reinforcement bar	EACH.	25			0.0059062911
405-c	20mm Reinforcement bar	EACH.	50			0.0171840516
405-Ad	25mm Reinforcement bar	EACH.	25			0.0107400322
405-Ae	32mm Reinforcement bar	EACH.	25			0.0137472412
500	Roof Treatment works: Roof treatment works including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, curing, sampling, testing etc at all level as per specification, drawings and as directed by engineer - in - charge. Note: Cement shall be issued by BHEL free of cost (unless otherwise specified in BOQ Item Description).					
501	Providing and laying underbed/topping grading plaster with cement mortar 1:4 (1 cement : 4 sand) and average thickness of 25 mm including preparation of surface, batching, mixing, leveling etc. all complete.	SQM	3,950			0.2195210267
A506	Providing and applying high solid content liquid (90+/-2%, single component) applied elastomeric water proofing membrane (dry film thickness of minimum 1.5 mm as per ASTM C 836 and C 898) including application of polymerized mastic over the roof to achieve smooth surface and primer coat, geotextile fabric (min 200 g/sqm), surface preparation, etc all complete as per specifications and directions of engineer in charge.	SQM	3,950			1.0645392048
508	Providing and laying wearing course consisting of 40mm thick plain cement concrete of grade M15 (1:2:4) with graded aggregate of 12.5mm size cast in panels of maximum size 1.2mx1.2m and reinforced with 0.56 mm dia. galvanised chicken wire mesh and sealing of joints (in grooves of 6mm X 6mm) using silicon /elastomeric compound etc all complete.	SQM	3,950			0.5097664009
A510	Providing and laying cement concrete chequered flooring tiles of 25 mm thickness and size 300x300 mm conforming to IS 13801 with underbed of 15 mm thick 1:3 cement mortar over the top most layer of roofing treatment in pathway or entire area with fine joints including sealing of joints (silicon/elastomeric sealant) and providing expansion gap in both directions including underbed(as per drawings) filled up with (silicon/elastomeric) joint sealant etc all complete. (Water proofing paid elsewhere)(including cost of cement for tiles making)	SQM	830			0.1555586849
511	Providing and applying two coats of bitumen grade 85/25 as per IS 702 (@ 1.7kg/sqm)with 1% antistripping compound conforming to IS 642 in foundation, wall, column etc on concrete surfaces exposed to soil / ash including surface preparation etc. all complete.	SQM	200			0.0111149887
513	Providing and mixing water proofing compound conforming to IS:2645 in concrete or cement mortar all complete.	KG	850			0.0118590884
517	Providing and laying foam concrete blocks in the toilets/sunken slab etc. complete as directed by engineer in charge.	cum	70			0.0420439562
A518	Providing and applying two coats of acrylic polymer modified cementitious coating as per manufacturer's specifications including surface preparation, minor cleaning works, removal of loose concrete, laitance, dust particles, etc. all complete as per specification.	SQM	1,400			0.1832810479
A519	Providing and laying water proofing treatment for wet areas like toilets, kitchen, pantry of sunken slab etc. material like with three coats of Acrylic Polymer Modified Flexible Cementitious Waterproofing Coating material like Danocrete I-protect flex or equivalent make applied @ 0.70 to 0.8 0 Kg./m2 per coat, while embedding 34 gsm polyester scrim armor Armadura IP 34 or equivalent as reinforcing layer between first and second coat, the waterproofing coat applied by stiff bristle brush to build total thickness of 1.3 to 1.5 mm in three coats including reinforcing layer, while maintaining a gap of 4 to 8 hours between the coats all complete with water ponding test as per IS Code and as directed by engineer in charge	SQM	100			0.0143360567
600	JOINTS AND FILLERS: Joints & fillers including all labour, material, equipment, transportation, handling etc at all level as per specification, drawings and as directed by engineer - in - charge.					

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601	Supplying & installation of bitumen impregnated fibre board confirming to IS 1838 as joint filler at joints in concrete including nailing, coating of both faces with coal tar pitch/bitumin etc. all complete.					
601-a	12 mm wide joints.	SQM	50			0.0073944904
601-b	20 mm wide joints.	SQM	100			0.0178351388
601-c	25 mm wide joints	SQM	250			0.0652249860
601-d	50 mm wide joints	SQM	50			0.0273689157
602	Supplying and installation of Dura board HD100 or its equivalent as approved by the Engineer, as filler material in joints including nailing, installation as per manufacturer's recommendation etc. all complete.					
602-a	12 mm wide joints.	SQM	25			0.0039065232
602-b	20 mm wide joints.	SQM	25			0.0061795152
602-c	25 mm wide joints	SQM	25			0.0063887932
602-d	50 mm wide joints	SQM	25			0.0130682503
A603	Providing and applying polysulphide based sealant conforming to IS:12118 in expansion joints in concrete including cleaning of joints, raking out groove, application of primer, scaffolding etc. all complete for following size grooves.					
A603-a	25mmX25mm groove size	RM	300			0.0453435731
A603-b	50mmX25mm groove size	RM	400			0.1146843603
604	Supplying and filling in position hot applied bitumin sealing compound (Grade A) confirming to IS 1834 including cleaning, mixing, heating, pouring/injecting sealing compound in gaps in joints including application of primer etc. all complete.					
604-a	10mm X 40mm	RM	100			0.0015579587
604-b	12mm X 25mm	RM	100			0.0013486806
604-c	20mmX25mm	RM	100			0.0017904898
605	Supplying and installation of commercial quality of expanded polystyrene products from reliable manufacturers as approved by the Engineer, as filler material in joints including nailing, installation as per manufacturer's recommendation etc. all complete.					

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605-a	12 mm wide joints.	SQM	50			0.0008952449
605-b	20 mm wide joints.	SQM	50			0.0011394026
605-c	25 mm wide joints	SQM	50			0.0013021744
605-d	50 mm wide joints	SQM	50			0.0029647721
606	Providing and installing PVC joint sealing strips of minimum 3mm thickness and minimum width 100 mm at the construction, expansion and isolation joints from reputed manufacturers as a continuous diaphragm to contain the filler material and/ or to exclude passage of water or any other material into or out of the structure, without any longitudinal joint; and shall be procured and installed in largest practicable lengths having a minimum number of transverse joints with jointing procedure as per the manufacturer's recommendations including the material and tools required for jointing, testing, protection, etc all complete. The joints in rubber seals shall be vulcanished as needed.	RM	50			0.0016974774
607	Providing and installing strong and tough alkathene sheet or equivalent of about 1 mm in thickness in isolation joints and shall be fixed by an approved adhesive compound on the cleaned surface of the already set concrete as per the manufacturer's recommendations, to cover it fully including the material and tools required for jointing, testing, protection, etc all complete.	SQM	50			0.0039879091
610	Providing and fixing PVC water stops in joints conforming to IS 12200 & IS 15058 all complete for the following: (Bulb or Kicker type)					
610-d	230 mm wide and 6 mm thick	RM	450			0.0374607673
613	Providing and fixing G.I strips minimum 1.5mm thk and 150mm wide including fixing accessories etc. all complete.	Kg	50			0.0031391704
614	Providing and fixing aluminium strips minimum 18 SWG thk and 300mm wide over expansion joints with minimum lap of 50mm length including brass / aluminium screws, rawl plugs etc. all complete.	Kg	50			0.0071503327
615	Providing and fixing 300 mm wide Stainless steel strips over expansion joints with minimum lap of 50mm length including stainless steel screws, rawl plugs etc. all complete.	Kg	50			0.0078014199
700	MS EMBEDMENTS: Embedments including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling etc. at all level as per specification, drawings and as directed by engineer - in - charge.					
701	Supply, fabricating and fixing of mild steel embedments, inserts, pipe sleeves, angle pieces, rungs of various diameters, plates of dimensions as required etc. including welding, bolting, cutting, drilling, scaffolding, setting etc. all complete. Payment Breakup: 1. On Supply & receipt of materials at site - 60% 2. On completion of fabricating, fixing, welding, etc. complete as per description/specification - 40%	MT	84			2.1514851250
702	Supply, Fabrication, transportation, delivery at site and erection, installation and alignment of mild steel foundation bolt assembly conforming to IS:2062 and grade 1 of IS:432 in concrete along with nuts, lock nuts (as per IS:1363, 1364 and IS:3138), washers, anchor plates, stiffner plates, protective tape, pipe sleeves, templates etc. including welding, cutting, grinding, threading, drilling etc. all complete. Payment Breakup: 1. On Supply & receipt of materials at site - 60% 2. On completion of fabricating, fixing, welding, etc. complete as per description/specification - 40%	MT	22			0.6919244454
A703	Same as above item 701 with BHEL supplied material free of cost including loading, transportation, unloading etc. all complete from BHEL store to plant site.					
A703-a	Mild steel embedments, inserts, pipe sleeves, angle pieces, rungs of various diameters, plates of dimensions as required etc.	MT	11			0.0662788171
B703	Fixing of Anchor / Foundation Bolts of various diameters along with nuts, lock nuts, washers, anchor plates, stiffener plates, protective tape, pipe sleeves, templates, pipe sleeves etc. including scaffolding, setting in position, transportation from BHEL site stores to work spot etc. all complete. Note: Fabricated structural steel material shall be issued by BHEL free of cost.	MT	5			0.0290977847

PART-B						
PROJECT: 1X800 MW HPGCL, DCRTPP, Yamuna Nagar,Haryana,INDIA						
BOQ CUM RATE SCHEDULE (PRICE BID)						
SCOPE OF WORK:- Balance Civil, Structural and Architectural Works for Compressed Air System ,Fire Protection System including Pump Houses , Fuel Oil System including Day Oil Tank and Pump House, Chemical Lab, Ammonia Unloading & Storage, H2 Cylinder Storage Shed, Raw Water System including Pump House ,Fire Protection and Detection System, HVAC System including Air Washer Building, Security cum Main Gate Complex, Parking sheds for four wheelers and two wheelers, Main Plant and Peripheral Roads & Drains (Cast In-Situ, Pre-cast drains), Levelling & Grading, Pipe & Cable rack, paving and Miscellaneous works at 1X800 MW DCRTPP Yamuna Nagar, Haryana.						
ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
704	Supplying, fabricating, erecting and installing following items in concrete/brickwall for all kind of works, including setting material in concrete, layout, scaffolding, cutting, forming, grinding, drilling, bolting, welding, jointing, testing etc. all complete.					
704-a	MS pipes of all diameters	kg	75			0.0019707014
704-b	PVC pipes / conduits of all diameters	kg	4,500			0.3986746468
704-c	UPVC pipes / conduits of all diameters	kg	175			0.0196140020
704-d	Expansion anchor fasteners (galvanised) of HILTI make(HUD-1 Universal Fastners) or equivalent of safe tensile capacity as specified below for brick work with expansion sleeve of A6 polyamide:					
704-d(i)	8mm Dia	EACH	50			0.0005231951
704-d(ii)	10mm Dia	EACH	50			0.0006975934
704-d(iii)	12mm Dia	EACH	50			0.0008719918
704-d(iv)	14mm Dia	EACH	50			0.0013951869
704-e	Expansion fasteners (mechanical galvanised) of HILTI make or equivalent of safe tensile capacity as specified below for concrete work with expansion sleeve of stainless steel:					
704-e(i)	HST M8	EACH	50			0.0031507970
704-e(ii)	HST M10	EACH	50			0.0043367058
704-e(iii)	HST M12	EACH	50			0.0077781668
704-e(iv)	HST M16	EACH	50			0.0138472296
704-e(v)	HST M20	EACH	50			0.0236716705
704-e(vi)	HST M24	EACH	50			0.0487617809
704-f	Chemical Expansion fasteners (galvanised)of HILTI make or equivalent of safe tensile capacity as specified below for concrete work with anchoring rod,nuts,washers,chemicals all complete,etc:					
704-f(i)	HAS-E5.8 M8	EACH	50			0.0060806894

PART-B						
PROJECT: 1X800 MW HPGCL, DCRTPP, Yamuna Nagar,Haryana,INDIA						
BOQ CUM RATE SCHEDULE (PRICE BID)						
SCOPE OF WORK:- Balance Civil, Structural and Architectural Works for Compressed Air System ,Fire Protection System including Pump Houses , Fuel Oil System including Day Oil Tank and Pump House, Chemical Lab, Ammonia Unloading & Storage, H2 Cylinder Storage Shed, Raw Water System including Pump House ,Fire Protection and Detection System, HVAC System including Air Washer Building, Security cum Main Gate Complex, Parking sheds for four wheelers and two wheelers, Main Plant and Peripheral Roads & Drains (Cast In-Situ, Pre-cast drains), Levelling & Grading, Pipe & Cable rack, paving and Miscellaneous works at 1X800 MW DCRTPP Yamuna Nagar, Haryana.						
ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
704-f(ii)	HAS-E5.8 M10	EACH	50			0.0075107560
704-f(iii)	HAS-E5.8 M12	EACH	50			0.0096616690
704-f(iv)	HAS-E5.8 M16	EACH	50			0.0162888067
704-f(v)	HAS-E5.8 M20	EACH	50			0.0258690898
704-f(vi)	HAS-E5.8 M24	EACH	50			0.0359028087
706	Supply and installation of approved 25mm thick vibration damping resilient pads on/around foundation of vibrating equipment and at other locations all complete.	SQM	40			0.0213928653
707	Providing, laying and fixing rails(52kg/rm) and guide rails in concrete for transformer, rail track including cutting of rails, joining of rails, anchoring lugs etc all complete.	MT	5			0.1238274849
800	GROUTING: Grouting including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, roughening surface, cleaning, ramming, curing etc. at all level , drawings and as directed by engineer - in - charge. Note: Cement shall be issued by BHEL free of cost (unless otherwise specified in BOQ Item Description).					
801	Providing & grouting with cement slurry mix of approved ratio using pressure pump for water retaining concrete structures as per approved procedure including cost of nipples/ nozzles, cement, admixture, curing, pressure pumps, slurry agitator etc. all complete. Cost shall include fixing of nipples at maximum 500 mm centre to centre spacing, cutting of nipples after completing of grouting, making good of the nipple hole with appropriate non-shrink cement paste, water tightness test etc. all complete wherever specified in the drawing.	SQM	5			0.0007278225
802	Providing & grouting of pocket holes, pipe sleeves under base plates, machinery, pipe supporting structures etc. with mix 1:1 (1 cement :1 sand) using non shrink admixture etc. all Complete.	CUM	4			0.0198237451
803	Providing & grouting of pocket holes, pipe sleeves and under base plate of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing etc. all complete with mix 1:1:2 (1 cement : 1 coarse sand : 2 aggregate of 6 mm down graded stonechips) using non shrink admixture as per specification, drawing and direction of engineer-in-charge. (Cost of all material and cleaning the pocket by compressed air shall be in the scope of the contractor).	CUM	4			0.0193493816
804	Providing & grouting of pocket holes, pipe sleeves and under base plates of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing etc. all complete with ConbextraGP-1 or equivalent as per specification, drawing and direction of engineer-in-charge. (Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor).	CUM	21			0.2174419657
805	Providing & grouting of pocket holes, pipe sleeves and under base plates of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing, etc. all complete with Conbextra GP-2 or equivalent as per specification, drawing and direction of engineer-in-charge.(Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor).	CUM	2			0.0217002714
806	Providing Chemical (epoxy) injection grouting with pressure pump for water retaining concrete structures conforming to IS:6494, including fixing nozzles, cost of approved chemical, admixture, curing etc. all complete . Payment shall be made as per the consumption of chemical grout.	Kg	70			0.0202488120
900	DOORS & WINDOWS: Doors, windows, ventilators, louvers, roof ventilators, rolling shutters, partitions including all labour, material (unless otherwise specified in BOQ/contract specification), equipments, transportation, handling, preparation of working drawings etc. at all level as per specification, drawings and as directed by engineer - in - charge.					
901	Providing and fixing wooden frame conforming to IS 4021 made of best quality seasoned CP teakwood free from large or loose knots, cracks or other defects including sand paper smoothening, hold fasts, beading, primer and finish painting / polishing etc. all complete with proper wood joinery, accurately set to required lines or levels and rigidly secured in place. (Finish painting / polishing paid separately)	CUM	1			0.0544571663
902	Providing and fixing teak wood frame panel door shutter as per IS 1003 with 35 mm x 150 mm vertical rail & 35mm x 125 mm horizontal rail and 12 mm thick interlocked panels of teakwood with proper wood joinery including beading, preperation of working drawings, godrej or equivalent make mortice lock with handels on both sides,approved ISI mark anodised fittings like door stopper,300mm long tower bolts,16x300mm long aldrops ,125mm long handles on both sides etc. butt hinges, sliding bolt ,knobs, (all fitting shall be anodised aluminium color dyed), screws, primer and finish painting / polishing etc. all complete. (Finish painting / polishing paid separately)	SQM	25			0.0481978929
A902	Providing and fixing wooden wall panels consisting of teak wood batten grid of size 600x600 mm or as per site requirement. The size of batten shall be 2 inch x 1 inch. BWP grade plywood conforming to IS:710 shall be fixed on this grid. The Venner of approved quality and shade shall be fixed on the plywood as exterior finish with suitable adhesive including beading, preperation of working drawings etc. all complete as per specification and as per direction of Engineer-in-charge.	SQM	25			0.0481978929

PART-B						
PROJECT: 1X800 MW HPGCL, DCRTPP, Yamuna Nagar,Haryana,INDIA						
BOQ CUM RATE SCHEDULE (PRICE BID)						
SCOPE OF WORK:- Balance Civil, Structural and Architectural Works for Compressed Air System ,Fire Protection System including Pump Houses , Fuel Oil System including Day Oil Tank and Pump House, Chemical Lab, Ammonia Unloading & Storage, H2 Cylinder Storage Shed, Raw Water System including Pump House ,Fire Protection and Detection System, HVAC System including Air Washer Building, Security cum Main Gate Complex, Parking sheds for four wheelers and two wheelers, Main Plant and Peripheral Roads & Drains (Cast In-Situ, Pre-cast drains), Levelling & Grading, Pipe & Cable rack, paving and Miscellaneous works at 1X800 MW DCRTPP Yamuna Nagar, Haryana.						
ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
903	Providing, fitting and fixing solid core flush door shutter as per IS 2202 part II, 35mm thick homogenous particle board bonded with BWP type phenolformaldehyde synthetic resin, partial board core conforming to IS 3087 type I, 35x12 mm thick teakwood beading all around including preparation of working drawings. godrej or equivalent make mortice lock with handles on both sides,approved ISI mark anodised fittings like door stopper,300mm long tower bolts,16x300mm long aldraps ,125mm long handles on both sides etc. butt hinges, sliding bolt, knobs, (all fittings shall be anodised aluminium color dyed), finish synthetic paint over primer, screws etc. all complete as per drawing, specification and instruction of engineer in charge. with commercial faces and teak wood edges. (Finish painting paid separately)	SQM	20			0.0344099587
904	Providing and fixing single or double steel door shutters with 45mm thk flush design shutter comprising of two outer sheets of 18 gauge steel sheets rigidly connected and reinforced inside with continuous vertical 20 gauge stiffeners, spot welded in position at not more than 150mm on centres including void filled with mineral wool (density as per specification), all fittings, Godrej or equivalent make mortice lock with handle on both sides, side, top & bottom edges of shutter shall be reinforced by continuous pressed steel channel with min 18G, shop and final painting etc all complete.	SQM	95			0.2990385394
906	Providing and fixing anodized extruded aluminium doors (single or double shutter) conforming to IS:1948, IS:1949 fabricated from extruded sections of HINDALCO/JINDAL or equivalent make having minimum 3mm wall thickness as per IS:1285, IS:733 and anodized and electro color coating of required shade as per IS 1868 (minimum anodized coating of grade AC15). fixed with rawl plugs, expansion fasteners,SS screws / fixing clips necessary filling of gaps at junctions, at top, bottom & sides with required PVC / neoprene felt for bi-metallic protection etc. Glazing shall be clear float glass of 6mm thickness including snap fit type beading, concealed screws, fixtures, Godrej or equivalent make Mortice lock with handle on both sides, etc all complete. Aluminium section shall be smooth, free of stains, straight, mitred & jointed mechanically wherever required. (Glazing shall be paid separately) Payment Breakup: a) On Supply & receipt of material at site - 50% b) On complete execution as per item description - 50%	KG	2,100			0.2544123249
A906	Providing and fixing sensor operated sliding type anodized extruded aluminium doors conforming to IS:1948, IS:1949 fabricated from extruded sections of HINDALCO/JINDAL or equivalent make having minimum 3mm wall thickness as per IS:1285, IS:733 and anodized and electro color coating of required shade as per IS 1868 (minimum anodized coating of grade AC15). fixed with rawl plugs, expansion fasteners, sensors, SS screws / fixing clips necessary filling of gaps at junctions, at top, bottom & sides with required PVC / neoprene felt for bi-metallic protection etc. Glazing shall be toughened sheet glass of 6mm thickness including snap fit type beading, concealed screws, fixtures, Godrej or equivalent make Mortice lock with handle on both sides, etc all complete. Aluminium section shall be smooth, free of stains, straight, mitred & jointed mechanically wherever required. (Glazing shall be paid separately) Payment Breakup: a) On Supply & receipt of material at site - 50% b) On complete execution as per item description - 50%	SQM	25			0.0750837228
907	Providing and fixing fire proof steel doors (single or double shutter) with vision panel, panic devices, shall be 45mm thk flush design comprising of two outer sheets of 18 gauge steel sheets rigidly connected and reinforced inside with continuous vertical 20 gauge stiffeners, spot welded in position at not more than 150mm on centers including all fittings, shop painting with approved post office/signal red color fire resistant paint and mineral wool insulation (64 kg/cum density) complete and shall be fire proof as per IS:3614, NBC 2016 & TAC requirements and as per specification. Vision panel shall be provided with interlayered fire rated glass. Minimum ratings shall be 2 Hrs. Payment Breakup: a) On Supply & receipt of material at site - 50% b) On complete execution as per item description - 50%	SQM	10			0.0267573588
908	Providing and fixing steel windows/ventilator with steel sections as per IS:1038, IS:1361 & IS:7452 latest revision including all fittings, metal beadings, hold fasts, shop and final painting ,glazing etc. all complete. (Glazing shall be paid separately) Payment Breakup: a) On Supply & receipt of material at site - 50% b) On complete execution as per item description - 50%					
908-a	Openable type	SQM	55			0.0378560703
908-b	fixed type	SQM	60			0.0265364542
909	Providing and fixing anodised aluminum work of Jindal, Hindalco or other equivalent approved make for door frames, windows, grills, ventilators, partitions, railing etc with extruded standard tubular and other sections including all fittings & fixtures and accessories of approved make conforming to IS733 and IS1285, anodised and electro color dyed to required shade according to IS 1868 (minimum anodic coating of grade AC15), fixed with rawl plugs, expansion fasteners, SS screws or with fixing clips, including necessary filling of gaps at junctions, at top, bottom and sides with required PVC/neoprene felt for bi-metallic protection etc. including preparation of working drawings, aluminum cleat angle, aluminum snap-on-beading for glazing/paneling, stair case tread nosing, with all fittings and fixtures (like tower bolts, handles, door stopper with rubber shoes, 'L' drops, stays, floor springs, hydraulic door closures etc.), CP brass/stainless steel screws, providing and fixing hinges/pivots, and making provision for fixing of fitting wherever required including cost of PVC/neoprene gasket, all complete as per drawing, specification and instructions of engineer in charge (Glazing and paneling shall be paid separately).Weight of aluminum section only shall be measured. Payment Breakup: a) On Supply & receipt of material at site - 50% b) On complete execution as per item description - 50%	Kg	4,400			0.7642833648
910	Providing and fixing of aluminium composite panel (ACP) of following thickness with PVDF or polyester coating for interior partition of approved shade ,color etc all complete as per specification. Payment Breakup: a) On Supply & receipt of material at site - 50% b) On complete execution as per item description - 50%					
910-b	4mm	SQM	50			0.0606906286

PART-B						
PROJECT: 1X800 MW HPGCL, DCRTTP, Yamuna Nagar,Haryana,INDIA						
BOQ CUM RATE SCHEDULE (PRICE BID)						
SCOPE OF WORK:- Balance Civil, Structural and Architectural Works for Compressed Air System ,Fire Protection System including Pump Houses , Fuel Oil System including Day Oil Tank and Pump House, Chemical Lab, Ammonia Unloading & Storage, H2 Cylinder Storage Shed, Raw Water System including Pump House ,Fire Protection and Detection System, HVAC System including Air Washer Building, Security cum Main Gate Complex, Parking sheds for four wheelers and two wheelers, Main Plant and Peripheral Roads & Drains (Cast In-Situ, Pre-cast drains), Levelling & Grading, Pipe & Cable rack, paving and Miscellaneous works at 1X800 MW DCRTTP Yamuna Nagar, Haryana.						
ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
911	Providing and fixing of door closers as per IS 3564 ,of approved make & quality all complete of following type : Payment Breakup: a) On receipt of material at site - 60% b) On complete execution as per item description - 40%					
911-a	Over head hydraulic door closures	EACH	25			0.0120218602
911-b	Floor mounted Hydraulic door closers	EACH	25			0.0263515919
A912	Providing and fixing pressed steel frames fabricated from 18 gauge M.S sheet mortised, reinforced drilled and tapped for hinges and locks bolts strikes, hold fasts adjustable floor anchors, floor tiles/weather bars, paintings etc. all complete as per specifications. Payment Breakup: a) On receipt of material at site - 50% b) On complete execution as per item description - 50%	Kg	1,300			0.0559237402
913	Providing and fixing in position rolling shutter of hot rolled double dipped galvanised steel lath section of 18 SWG tested mild steel strips at 75mm rolling centres interlocked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation including wire springs, top cover, primer & shop coats of approved enamel paint etc, all complete as per IS 6248 and specification of approved make of following types: The bottom lath shall be coupled to a lock plate fabricated from 3mm thick galvanised steel plate and securely rivetted with stiffening angles.(partly coiled and lath/full lath). Payment Breakup: a) On receipt of material at site - 50% b) On complete execution as per item description - 50%					
913-a	Hand Operated	SQM	25			0.0212359067
913-b	Mechanically Operated	SQM	25			0.0272003306
913-c	Electrically operated	SQM	160			0.2240484081
914	Providing and fixing PVC doors (25 thk double skin) of sintex or equivalent make including all fitting & fixtures as per specification, drawing and instructions of engineer in charge.	SQM	15			0.0104464617
A915	Providing, fixing and fitting of glazing of first grade class in steel/aluminium/wooden frames, where ever required, cleaning after fixing including hardware, gaskets, clips, beadings etc. all complete.					
A915-a	4 mm thick clear sheet glass	SQM	30			0.0110429040
A915-b	4 mm thick clear float glass	SQM	200			0.0748750284
A915-Ac	5 mm thick clear float glass	SQM	50			0.0211952138
A915-d	6 mm thick wired glass	SQM	75			0.0334496051
A915-Ad	6 mm thick toughened glass	SQM	580			0.3130287757
A915-e	6mm thick Polycarbonate sheet multi (twin) wall fire retardant and ultra violet resistant with sealed open edges.	SQM	50			0.0290431399

PART-B						
PROJECT: 1X800 MW HPGCL, DCRTPP, Yamuna Nagar,Haryana,INDIA						
BOQ CUM RATE SCHEDULE (PRICE BID)						
SCOPE OF WORK:- Balance Civil, Structural and Architectural Works for Compressed Air System ,Fire Protection System including Pump Houses , Fuel Oil System including Day Oil Tank and Pump House, Chemical Lab, Ammonia Unloading & Storage, H2 Cylinder Storage Shed, Raw Water System including Pump House ,Fire Protection and Detection System, HVAC System including Air Washer Building, Security cum Main Gate Complex, Parking sheds for four wheelers and two wheelers, Main Plant and Peripheral Roads & Drains (Cast In-Situ, Pre-cast drains), Levelling & Grading, Pipe & Cable rack, paving and Miscellaneous works at 1X800 MW DCRTPP Yamuna Nagar, Haryana.						
ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
A915-f	4 mm thick ground glass	SQM	75			0.0289152478
A915-g	6 mm thick tinted heat reflecting type float glass	SQM	10			0.0050924321
A915-Ai	Two nos. 6 mm thick clear toughened safety glass hermetically sealed and separated by 12 mm thick air gap for thermal insulation (only single elevation area to be measured)	SQM	75			0.0714510073
916	Supplying and fixing weather stripping of approved make and quality to doors as per instructions of engineer in charge and specification complete.	RM	50			0.0036042327
A917	Providing and fixing 12 mm thick factory made prelaminated particle board (MDF exterior grade), decorative veneer (prelaminated) on both sides, as panels in aluminium framed door shutter, fixed with necessary snap-on-beading etc. all complete (excluding aluminium works).	SQM	75			0.0274851812
919	Providing and fixing 1 mm thk. MS sheet sliding shutters with frame and diagonal braces of 50X50X6 angle iron, 3 mm MS gusset plates at junction and corners, 25 mm dia pulley, 50X50X6 angle and T-iron guide at the top and bottom respectively including painting etc. all complete.	SQM	25			0.0322985759
920	Roof skylight structure for atrium with 6mm thick Polycarbonate sheet multi (twin) wall fire retardant and ultra violet resistant with sealed open edges for sky light for approved shape like dome, pyramidal etc. Joints are properly sealed with sealent, screws with pvc cap, self tapping screws, epdm rubber gasket.etc all complete as per detailed drawing and specification.	SQM	75			0.0569759436
1000	BRICKWORK: Brickwork masonry including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, scaffolding etc. at all levels as per specification, drawings and as directed by engineer - in - charge. Note: Cement shall be issued by BHEL free of cost (unless otherwise specified in BOQ Item Description).					
A1001	Providing brick work in cement mortar 1:5 (1 part cement 5 parts coarse sand) in walls, chambers etc. in thickness varying from 230 mm to 460mm at all depths, places and positions below plinth including raking out joints, curing, scaffolding etc. complete excluding plastering and painting.					
A1001-a	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm2 (including cost of cement for brick making)	CUM	952			1.5185957942
A1001-b	Using burnt clay bricks of class designation 7.5 of nominal dimension	CUM	5			0.0086455079
A1002	Providing brick work in cement mortar 1:5 (1 cement 5 coarse sand) in walls, chambers etc. in thickness 230mm upto 10m level above finished ground floor level (For height greater than 10m from FGFL, extra over for additional height to be paid in Item No 1014), places and position above plinth including raking out joints, curing, scaffolding etc complete but excluding plastering and painting.					
A1002-a	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm2 (including cost of cement for brick making)	CUM	1,960			3.8616633145
A1002-b	Using burnt clay bricks of class designation 7.5 of nominal dimension	CUM	10			0.0203743789
B1002	Providing brick work in cement mortar 1:5 (1 part cement 5 parts coarse sand) in walls, chambers etc. in thickness varying from 345mm to 460mm at all heights, places and positions above plinth including raking out joints, curing, scaffolding etc. complete excluding plastering and painting.					
B1002-a	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm2(including cost of cement for brick making)	CUM	10			0.0193163621
A1003	Providing brick work in cement mortar 1:4 (1 cement 4 coarse sand) in partition walls, chambers etc. in thickness 115mm upto 10m above finished ground floor level (For height greater than 10m from FGFL, extra over for additional height to be paid in Item No 1015), places and position above or below plinth/graded level including providing two nos. 8 mm diameter reinforcement bar at every fourth layer, raking out joints, curing, scaffolding etc complete excluding plastering and painting as per specification. (Reinforcement payment shall be made seperately as per applicable BOQ in 400 Series)					
A1003-a	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm2 (including cost of cement for brick making)	SQM	250			0.0600511680

PART-B						
PROJECT: 1X800 MW HPGCL, DCRTPP, Yamuna Nagar,Haryana,INDIA						
BOQ CUM RATE SCHEDULE (PRICE BID)						
SCOPE OF WORK:- Balance Civil, Structural and Architectural Works for Compressed Air System ,Fire Protection System including Pump Houses , Fuel Oil System including Day Oil Tank and Pump House, Chemical Lab, Ammonia Unloading & Storage, H2 Cylinder Storage Shed, Raw Water System including Pump House ,Fire Protection and Detection System, HVAC System including Air Washer Building, Security cum Main Gate Complex, Parking sheds for four wheelers and two wheelers, Main Plant and Peripheral Roads & Drains (Cast In-Situ, Pre-cast drains), Levelling & Grading, Pipe & Cable rack, paving and Miscellaneous works at 1X800 MW DCRTPP Yamuna Nagar, Haryana.						
ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
1005	Breaking of existing brick work at all levels including plastering, removing the rubbish up to a distance of 500 m including transportation, loading, unloading etc. all complete as directed by the engineer.	CUM	60			0.0257272458
A1006	Providing and encasing of structural steel member with masonry work around flanges, webs etc. and filling the gap between steel and masonry by minimum 12mm thick mortar of 1:5 upto 10m level above finished ground floor level (For height greater than 10m from FGFL, extra over for additional height to be paid in Item No 1014). Encased member shall be wrapped with chicken wire mesh with 50mm lap etc. complete as per specification. (Chicken wire mesh to paid separately)					
A1006-a	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm2(including cost of cement for brick making)	CUM	25			0.0411870789
1007	Providing and laying 75 mm thick bed of dry brick aggregate including of excavation, disposal of surplus earth spreading of earth, ramming, watering etc. complete in all respects as directed by the engineer.	SQM	50			0.0026159754
1008	Making openings in existing brick wall or partition wall including making good the broken edges/surface with cement mortar 1:5 etc. complete.	CUM	4			0.0019774449
1009	Supply and placing in position mild steel wire fabric (Chicken Wire Mesh) of square mesh 25 mm size and wire diameter of 2 mm for encasing of steel sections in concrete including cutting, bending, fixing etc. complete.	SQM	10			0.0004883154
1010	Filling existing brick wall/ partition wall opening at all level including making good the broken edges/surface with cement mortar 1:5, painting, finishing to match with existing finishing, scaffolding/supporting at any level, removal of debris upto a lead of 1 km including loading, unloading, transportation etc. all complete.	SQM	5			0.0012800839
1011	Providing and filling brick bats in soak pits all complete.	CUM	25			0.0091384740
1014	Extra over item no. A1002, A1006 for height above FGFL (Finished Ground Floor Level) as per following:					
1014-a	Height exceeding 10m from FGFL but not exceeding 20m	CUM	210			0.0382350960
1014-b	Height exceeding 20m from FGFL but not exceeding 30m	CUM	50			0.0163934457
1014-c	Height exceeding 30m from FGFL but not exceeding 40m	CUM	50			0.0218579276
1014-d	Height exceeding 40m from FGFL and above	CUM	50			0.0254970400
1015	Extra over item no. A1003 for height above FGFL (Finished Ground Floor Level) as per following:					
1015-a	Height exceeding 10m from FGFL but not exceeding 20m	SQM	25			0.0003313569
1015-b	Height exceeding 20m from FGFL but not exceeding 30m	SQM	25			0.0005987677
1015-c	Height exceeding 30m from FGFL but not exceeding 40m	SQM	10			0.0003185677
1015-d	Height exceeding 40m from FGFL and above	SQM	10			0.0003720498

PART-B						
PROJECT: 1X800 MW HPGCL, DCRTTP, Yamuna Nagar,Haryana,INDIA						
BOQ CUM RATE SCHEDULE (PRICE BID)						
SCOPE OF WORK:- Balance Civil, Structural and Architectural Works for Compressed Air System ,Fire Protection System including Pump Houses , Fuel Oil System including Day Oil Tank and Pump House, Chemical Lab, Ammonia Unloading & Storage, H2 Cylinder Storage Shed, Raw Water System including Pump House ,Fire Protection and Detection System, HVAC System including Air Washer Building, Security cum Main Gate Complex, Parking sheds for four wheelers and two wheelers, Main Plant and Peripheral Roads & Drains (Cast In-Situ, Pre-cast drains), Levelling & Grading, Pipe & Cable rack, paving and Miscellaneous works at 1X800 MW DCRTTP Yamuna Nagar, Haryana.						
ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
1100	DAMP PROOF COURSE: Damp proof course including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, shuttering, centering, curing etc at all level as per specification, drawings and as directed by engineer - in - charge. Note: Cement shall be issued by BHEL free of cost (unless otherwise specified in BOQ Item Description).					
1101	Providing Damp Proof Course of following thickness with 1:1.5:3 concrete (10mm and down graded aggregate) with 2% of approved admixture of water proofing compound all complete. Two layers of hot bitumen coating 85/25 grade as per IS:702 @ 1.7Kg./sqm shall be applied one before & one after the DPC.					
1101-b	50mm thick	SQM	830			0.0731473220
1200	PLASTERING: Cement mortar plaster including making grooves wherever required including all labour, material (unless otherwise specified in BOQ/contract specification), scaffolding, curing etc at all level as per specification, drawings and as directed by engineer - in - charge. Note: Cement shall be issued by BHEL free of cost (unless otherwise specified in BOQ Item Description).					
A1201	Providing 20mm thick plaster in two layers (base coat followed by finishing coat) for outside the building/boundary wall in cement mortar as applicable upto 10m above FGL (For height greater than 10m from FGL, extra over for additional height to be paid in Item No 1206) on walls, finished to a smooth finish including providing 3mmx3mm size grooves at junctions of two dissimilar materials all complete as per specification.					
A1201-a	Cement Mortar 1:4	SQM	10,023			0.8553520947
A1202	Providing 12mm thick plaster on internal walls of buildings in cement mortar as applicable above Finished Ground Floor Level (For height greater than 10m from FGFL, extra over for additional height to be paid in Item No A1206) on walls finished to a smooth finish as per specification all complete.					
A1202-a	Cement Mortar 1:3	SQM	8,923			0.6286872461
A1204	Providing 6mm thick plaster on ceiling in cement mortar 1:3 finished to a smooth all complete.	SQM	5,270			0.3247413695
1206	Extra over Item A1201 for plastering on exterior walls over & above 10m height from FGL (Finished Ground Level)					
1206-a	Height exceeding 10m from FGL but not exceeding 20m	SQM	75			0.0007847926
1206-b	Height exceeding 20m from FGL but not exceeding 30m	SQM	75			0.0014126267
1206-c	Height exceeding 30m from FGL but not exceeding 40m	SQM	75			0.0018835023
1206-d	Height exceeding 40m and above	SQM	75			0.0021799795
A1206	Extra over Item A1202 for plastering on interior walls over & above 10m height from FGFL (Finished Ground Floor Level).					
A1206-a	Height exceeding 10m from FGFL but not exceeding 20m	SQM	75			0.0007847926
A1206-b	Height exceeding 20m from FGFL but not exceeding 30m	SQM	75			0.0014126267
A1206-c	Height exceeding 30m from FGFL but not exceeding 40m	SQM	75			0.0018835023

PART-B						
PROJECT: 1X800 MW HPGCL, DCRTTP, Yamuna Nagar,Haryana,INDIA						
BOQ CUM RATE SCHEDULE (PRICE BID)						
SCOPE OF WORK:- Balance Civil, Structural and Architectural Works for Compressed Air System ,Fire Protection System including Pump Houses , Fuel Oil System including Day Oil Tank and Pump House, Chemical Lab, Ammonia Unloading & Storage, H2 Cylinder Storage Shed, Raw Water System including Pump House ,Fire Protection and Detection System, HVAC System including Air Washer Building, Security cum Main Gate Complex, Parking sheds for four wheelers and two wheelers, Main Plant and Peripheral Roads & Drains (Cast In-Situ, Pre-cast drains), Levelling & Grading, Pipe & Cable rack, paving and Miscellaneous works at 1X800 MW DCRTTP Yamuna Nagar, Haryana.						
ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
A1206-d	Height exceeding 40m and above	SQM	75			0.0021799795
1208	Providing and laying encasement to box type steel beams at all levels with lath plaster 50 mm nominal thickness with cement plaster (1:3) over chicken wire mesh including all labour, materials, equipment, handling, transporting, mixing, placing, leveling, curing and cleaning, finishing the exposed surfaces etc including centering and shuttering all complete as per specification, drawing and instructions of enginner in charge. (chicken wire mesh to be paid separately)	SQM	350			0.0483432249
1300	FINISHES TO CONCRETE / PLASTERED SURFACES: Finishes, painting to concrete, plastered surfaces including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, surface preparation, scaffolding etc. at all level as per specification, drawings and as directed by engineer - in - charge.					
1301	Two or more coats of white wash/ colour wash as per IS 627 of approved brand and manufacture to give an even shade including a priming coat as per specifications.	SQM	450			0.0038957105
A1304	Providing and applying two or more coats of acrylic washable distemper as per IS 428 of approved brand, shade and manufacture to give smooth, hard, durable & glossy finish, including a priming coat over prepared plaster surface as per manufacturers guideline.	SQM	8,842			0.2319419149
1305	Providing and applying two or more coats of acrylic emulsion paint as per IS 5411 of approved brand, shade and manufacture to give smooth, hard, durable & glossy finish including a priming coat over prepared plaster surface as per manufacturers guideline.	SQM	2,600			0.0920051328
1306	Providing and applying 2 or more coats of acid/alkali resistant paint of approved brand and colour to floors, walls and ceiling including preparation of surface to receive paint, providing and applying bitumen primer confirming to IS 158 complete all as per manufacturer's recommendations and as approved by engineer, at all heights above or below grade level, complete as per specifications.	SQM	70			0.0062476700
1307	Providing and applying two coats of Epoxy coating with suitable pigments of approved shade as per specification and direction of Engineer. The epoxy paint shall be a two pack material and shall be resistant to water, oil, splash, spillage & acidic environment. The epoxy paint coating shall be of minimum 150 micron thickness over epoxy primer.	SQM	70			0.0042486695
1308	Providing and applying 2 or more coats of Chlorinated Rubber paint of approved brand and colour to floors, walls and ceiling including preparation of surface to receive paint, providing and applying chlorinated rubber zinc phosphate primer confirming to IS 158 complete all as per manufacturer's recommendations and as approved by engineer, at all heights above or below grade level, inclusive of intermediate coat of Titanium dioxide / micaceous iron oxide complete as per specifications.	SQM	150			0.0080474378
1309	Two or more coats of fire resistant transparent paint (@3.5 sqm per litre per coat) as per IS 162 on all woodwork over french polish as per IS 348 or flat oil paint as per IS 137 of approved grade and manufacture to give an even shade as per specifications. French polish payment will be made seperately.	SQM	50			0.0060919672
1310	Two or more coats of black anti-corrosive bitumastic painting of approved brand and manufacture to give an even shade complete.	SQM	50			0.0010732475
A1312	Providing and applying 3 coats of water proof cement based paint of approved make and color as per IS 5410 on exterior surface at all heights including material, labour, scaffolding, curing etc. including primer coat complete as per specification.	SQM	9,573			0.2711070542
1313	Providing and applying resin bonded granular textured finish for external applications shall consist of crushed stone/quartz chips of .5 mm to 2.5 mm size and of approved natural color/shade and bonded with synthetic resins, adhesives and additives altogether in a single pack mix, applied on cured and dried plaster surface with a dry film thickness of minimum 2 mm. The final finish shall have UV resistance, fungus, bacterial resistance properties all complete with grooves filled with poly sulfide sealant of matching color and shade as per specification/drawing/approval of engineer in charge.	SQM	70			0.0257824022
1316	Providing and applying 2 mm thick plaster of paris punning on walls including preparation of surface, staging, etc. to achieve a smooth even surface all complete as per specification and as directed by Engineer.	SQM	1,120			0.0333643127
1317	Providing and applying 2 mm thick white cement punning on walls including preparation of surface, staging, etc to achieve a smooth even surface all complete as per specification and as directed by engineer.	SQM	5,000			0.1582025640
1320	Providing and applying acid alkali and oil resistant high build, solvent free, self smoothing, seamless epoxy based amine cured floor finish 150 microns over primer on C.C. flooring	SQM	850			0.0760859344
1321	Providing and applying french polish (minimum 2 coats) on wood surface made from best quality shelac, denatured spirit and other suitable alcohol soluble ingredients and made by a well known approved manufacturer as per IS 348 including required base preparation etc. all complete as per specification	SQM	50			0.0055974897
1400	FLOORING AND SKIRTING: Flooring and skirting at all level including base layer, labour, material (unless otherwise specified in BOQ/contract specification), equipments, transportation, handling, curing, polishing etc. at all level as per specification, drawings and as directed by engineer - in - charge. Note: Cement shall be issued by BHEL free of cost (unless otherwise specified in BOQ Item Description).					

PART-B						
PROJECT: 1X800 MW HPGCL, DCRTTP, Yamuna Nagar,Haryana,INDIA						
BOQ CUM RATE SCHEDULE (PRICE BID)						
SCOPE OF WORK:- Balance Civil, Structural and Architectural Works for Compressed Air System ,Fire Protection System including Pump Houses , Fuel Oil System including Day Oil Tank and Pump House, Chemical Lab, Ammonia Unloading & Storage, H2 Cylinder Storage Shed, Raw Water System including Pump House ,Fire Protection and Detection System, HVAC System including Air Washer Building, Security cum Main Gate Complex, Parking sheds for four wheelers and two wheelers, Main Plant and Peripheral Roads & Drains (Cast In-Situ, Pre-cast drains), Levelling & Grading, Pipe & Cable rack, paving and Miscellaneous works at 1X800 MW DCRTTP Yamuna Nagar, Haryana.						
ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
A1401	Providing and laying 50 mm thick heavy duty cement concrete in flooring with metallic hardener pigmented topping 12mm thick uniform graded treated iron particles in flooring. Under layer of 38mm thick cement concrete mix 1:1:2 (1 cement: 1 sand : 2 stone aggregates 12.5 mm well graded) and top layer of 12mm thick metallic concrete of mix 1:2 (1 cement hardner mix with approved quality metallic hardening compound :2 stone aggregate 6mm nominal size) by volume including cement slurry, rounding off edges, aluminium strips etc. all complete for following (Quoted item rate shall be inclusive of providing glass joint strips):	SQM	4,902			0.6520043066
B1401	Providing and laying 50 mm thick heavy duty cement concrete in flooring with non-metallic hardener pigmented topping 12mm thick uniform graded in flooring. Under layer of 38mm thick cement concrete mix 1:1:2 (1 cement: 1 sand : 2 stone aggregates 12.5 mm well graded) and top layer of 12mm thick metallic concrete of mix 1:2 (1 cement hardner mix with approved quality non metallic hardening compound :2 stone aggregate 6mm nominal size) by volume including cement slurry, rounding off edges, aluminium strips etc. all complete for following (Quoted item rate shall be inclusive of providing glass joint strips):	SQM	1,000			0.1304499719
C1401	Providing and laying 50 mm thick heavy duty cement concrete in flooring in cement concrete mix 1:1:2 (1 cement: 1 sand : 2 stone aggregates 12.5 mm well graded) by volume including cement slurry, rounding off edges, aluminium strips etc. all complete for following (Quoted item rate shall be inclusive of providing glass joint strips):	SQM	850			0.1134519453
A1403	Providing and laying precast polished heavy duty cement concrete tiles (Carborundum topping pigment content is 3.5 kg per 50 Kg of Cement) of size 300X300X22 thick of approved shade as per IS 1237, including minimum 28 mm cement mortar bedding of 1:3 (1 cement : 3 sand) jointed with neat cement slurry @ 4.4 kg/sqm, labour, materials, etc. all complete with pigment to match the shade of the tiles including rubbing, curing, grinding and polishing complete with laying as per IS 1443 etc. (inclusive of cost of cement for tiles manufacturing) all complete for following:					
A1403-a	Laid in floors	SQM	70			0.0215509864
A1403-b	Laid in skirting	SQM	5			0.0020323222
1404	Providing and laying interlocking M30 Grade concrete blocks in paving with approved colour and pattern and should be laid on the subbase and bedding of sand minimum 50mm thick as per specifications and recommendations of manufacturer (inclusive of cost of cement for paver manufacturing) Payment Breakup: a) On Supply & receipt of materials at site - 50% b) On complete execution as per item description - 50%					
1404-b	75mm	SQM	650			0.1577956345
1406	Providing and laying polished Kota stone 18mm to 20mm thk in flooring. Under bed shall average 30mm thk of 1 cement : 2 sand : 4 stone aggregates by volume and brought to proper level. The kota stone slabs/tiles laid over under bed, pressed and tapped down with wooden mallet to the proper level, lifted and pressed again with thick cement slurry @4.4kg/sqm spread over the surface with fine joint finished including pigments, curing, grinding, granite polishing etc. all complete. Payment Breakup: a) On Supply & receipt of materials at site - 50% b) On complete execution as per item description - 50%	SQM	80			0.0286478370
1412	Providing and laying 18-20mm thick polished Granite stone of approved color and texture in flooring with brass/ stainless steel strips. Under bed shall average 30 mm thick of 1 cement : 2 sand : 4 stone aggregate by volume and brought to proper level. The granite stone slabs/tiles laid over under bed, pressed and tapped down with wooden mallet to the proper level, lifted and pressed again with thick cement slurry @3.3kg/sqm spread over the surface with fine joint finished including pigments, curing, grinding, granite polishing etc. all complete. Payment Breakup: a) On Supply & receipt of materials at site - 50% b) On complete execution as per item description - 50%	SQM	75			0.0744855388
1414	Providing and laying polished Granite stone 18-20mm thk in skirting and dado with 6mm thick projection from adjacent plaster minimum 12 mm thick cement mortar bedding of 1:3 (1 cement : 3 sand) with thick cement slurry @3.3kg/sqm spread over the surface with fine joint finished including cutting brickwall upto the required depth, edging, finishing etc. all complete. including mortar ,cement slurry ,pigments, curing, grinding,moulding, granite polishing etc. all complete. Payment Breakup: a) On Supply & receipt of materials at site - 50% b) On complete execution as per item description - 50%	SQM	75			0.0753400907
A1418	Providing and laying 600mmX600mmx10 mm thick dobule charge glazed vitrified tiles in flooring and skirting over 40 mm thick underbed of 1 part cement and 3 parts coarse sand by weight mixed with sufficient water, cement slurry 3.3kg/sqm complete as per specification laid in pattern of following sizes Payment Breakup: a) On Supply & receipt of materials at site - 50% b) On complete execution as per item description - 50%	SQM	560			0.2175933435
A1419	Providing and laying granite stone slab of 12 mm thickness single piece for wash basin / sink slab /facia of black or approved colour including 20mm underbed of cement mortar 1:3 with cutting, making corners, moulding and opening etc. all complete.	SQM	2			0.0018555985
A1422	Providing & fixing Acid / Alkali resistant (Chemical resistant) tiles confirming to IS:4457 in flooring/Dado and shall be laid over bitumastic lining of min 12mm thick (to be laid in layers of 6mm each). The tiles shall be applied with 6mm thick Potassium Silicate bedding mortar as per IS:4441, 4443 & 4832 and including preparation of surface, application of bitumen primer, curing, joining by resin based epoxy mortar etc. all complete for following thickness. The tiles should be abrasion resistant & durable. Payment Breakup: a) On Supply & receipt of materials at site - 50% b) On complete execution as per item description - 50%					
A1422-a	20 mm thick	SQM	850			0.6455297095
A1422-b	38 mm thick	SQM	75			0.0613533424

PART-B						
PROJECT: 1X800 MW HPGCL, DCRTTP, Yamuna Nagar,Haryana,INDIA						
BOQ CUM RATE SCHEDULE (PRICE BID)						
SCOPE OF WORK:- Balance Civil, Structural and Architectural Works for Compressed Air System ,Fire Protection System including Pump Houses , Fuel Oil System including Day Oil Tank and Pump House, Chemical Lab, Ammonia Unloading & Storage, H2 Cylinder Storage Shed, Raw Water System including Pump House ,Fire Protection and Detection System, HVAC System including Air Washer Building, Security cum Main Gate Complex, Parking sheds for four wheelers and two wheelers, Main Plant and Peripheral Roads & Drains (Cast In-Situ, Pre-cast drains), Levelling & Grading, Pipe & Cable rack, paving and Miscellaneous works at 1X800 MW DCRTTP Yamuna Nagar, Haryana.						
ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
1424	Providing & fixing chemical resistant (AR)(Acid / Alkali) bricks (75mm thick) conforming to IS:4860 in the floor of neutralization pit. Surface on which lining to be applied shall be prepared in accordance with IS:2395. Bitumen primer as per IS:158 followed by 18mm thick bitumastic layer followed by 6mm thick potassium silicate mortar bedding shall be provided before laying AR bricks. The joints between AR bricks shall be filled with resin type of mortar conforming to IS:4832, part II, seal coat of readymade epoxy paint shall be provided on joints to cover up any porosity that may be left in mortar. End sealing shall be done with bituminastic AR bricks shall be laid with 6mm wide & 50mm deep pointing (epoxy / furnace / CNSL) & acid curing shall be done all complete as per specification. Payment Breakup: a) On Supply & receipt of materials at site - 50% b) On complete execution as per item description - 50%	SQM	175			0.1916231027
A1424	Providing & fixing chemical resistant (AR)(Acid / Alkali) bricks (115mm thick) conforming to IS:4860 in the flooring/wall. Surface on which lining to be applied shall be prepared in accordance with IS:2395. Bitumen primer as per IS:158 followed by 12mm thick bitumastic layer followed by 6mm thick potassium silicate mortar bedding shall be provided before laying AR bricks. The joints between AR bricks shall be filled with resin type of mortar conforming to IS:4832, part II, seal coat of readymade epoxy paint shall be provided on joints to cover up any porosity that may be left in mortar. End sealing shall be done with bituminastic AR bricks shall be laid with 6mm wide & 50mm deep pointing (epoxy / furnace / CNSL) & acid curing shall be done all complete as per specification. Payment Breakup: a) On Supply & receipt of materials at site - 50% b) On complete execution as per item description - 50%	SQM	500			0.6725963346
A1427	Providing and fixing decorative coloured ceramic tiles of approved of size 200x300mm / 300x300mm in dado of approved size, projecting 6mm uniformly from adjacent plaster or wall finish. The mix for 20mm thick underbed plaster shall consist of 1part cement and 3 parts sand by weight. fairly moist but firm, tiles shall be pressed over under bed by applying cement slurry @ 3.3kg/sqm including pigments, curing etc all complete for following thicknesses: Payment Breakup: a) On Supply & receipt of materials at site - 50% b) On complete execution as per item description - 50%					
A1427-a	5mm thick	SQM	100			0.0247645669
B1427	Providing and fixing heavy duty anti skid ceramic tiles with matt finish of approved color and design of size 200x300mm / 300x300mm in flooring and dado of approved size, projecting 6mm uniformly from adjacent plaster or wall finish. The mix for 20mm thick underbed plaster shall consist of 1part cement and 3 parts sand by weight. fairly moist but firm, tiles shall be pressed over under bed by applying cement slurry @ 3.3kg/sqm including pigments, curing etc all complete as per specification. Payment Breakup: a) On Supply & receipt of materials at site - 50% b) On complete execution as per item description - 50%					
B1427-a	7 mm thick	SQM	350			0.0958725908
B1427-b	10 mm thick	SQM	280			0.0955796015
A1428	Providing and laying 3mm thick insulating mat as per IS:15652 all complete as per specification.	SQM	50			0.0072200920
A1429	Providing and fixing removable type flooring system consisting of composite panels made of high density 675 kg/m3 waterproof chipboard and aluminium sheets including substructure with adjustable pedestals and stringers, high pressure laminate 1.3 mm thick topping, proprietary floor supporting system etc. complete as per specification.	SQM	75			0.1243460294
1431	Providing and laying wodden panel flooring and skirting of PERGO or equivalent of approved color,shade all complete as per manufacturer specification.	SQM	75			0.0637425999
1500	ROOFING / SIDE CLADDING: Roofing / side cladding work including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, scaffolding, laps, hooks, washers, corner pieces etc. at all level as per specification, drawings and as directed by engineer - in - charge.					
A1501	METAL DECK SHEET Designing, providing and fixing permanently color coated galvanised MS troughed metal sheet decking plate of approved colour and conforming to class3 of IS 14246 and CR rolls conforming to IS:513 over roof purlins for cast-in-situ roof slab as per relevant IS code and specification. Bare metal thickness of deck plate shall be minimum 0.8mm with minimum trough depth of 51 mm having minimum yield strength of 250 MPa and shall serve as permanent shuttering to the floor/roof slab 150mm thick measured over crest of metal decking & shall have adequate strength to support weight of green concrete and imposed loads of min 150 kg/sqm during construction between purlins as per manufacturer's recommendations/ calculations/ test certificates for approval including fixing of plates to purlins, side lapping, end lapping etc. all complete for below mentioned spans. The sheet shall be permanently coated with silicon modified polyster paint of minimum 20 micron DFT on exposed surface and minimum 7 micron on other face over a coat of zinc chromate red oxide primer on both faces applied over hot dipped galvanising @ 275 gm/sqm including fixing of sheet to purlin with self drilling white zinc plated heat treated carbon steel screws of minimum 5.6 mm dia @ 260mm c/c in the trough and stich screws between two adjacent sheets and sealing with epoxy sealant. Measurement of profile sheeting shall be of the plan area of roof covered by MS trough metal decking. Payment Breakup: a) On Supply & receipt of materials at site - 60% b) On complete execution as per item description - 40%					
A1501-a	Span Upto 1800mm	SQM	2,300			1.1193816751

PART-B						
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BOQ CUM RATE SCHEDULE (PRICE BID)						
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ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
A1501-b	Span Exceeding 1800mm and upto 2500 mm	SQM	50			0.0252180026
1503	Providing and fixing shear connectors of mild steel studs having 16mm dia and minimum 75 mm projected length above purlin passing through metal decking as per relevant IS codes and specification. Payment Breakup: a) On Supply & receipt of materials at site - 60% b) On complete execution as per item description - 40%	QUINTAL	10			0.0982165047
A1507	Designing, providing and fixing permanent colour coated troughed galvanised MS sheets having 0.6 mm minimum thickness with minimum rate of galvanization of 275 gm./sq.m. The permanent colour coated sheet shall meet the general requirements of IS:14246 and shall conform to class 3 for the durability, including fixing to supports / rails by concealed fixing system, corrosion resistant self tapping / self drilling type fasteners with suitable cap, flashing etc. all complete. The sheets shall be permanently coated with silicon modified polyster paint of minimum 20 micron DFT on outerside (exposed face) and minimum 20 micron on inner face over suitable primer. Payment Breakup: a) On Supply & receipt of materials at site - 60% b) On complete execution as per item description - 40%	SQM	2,500			0.7818859724
A1514	Providing and installing under deck insulation with PUF 50 mm nominal thickness having a density 36 kg/cubic meter using minimum 0.05 mm thick aluminum foil on exposed surface follwed by 24Gx25 mm GI wire mesh netting fixed at various elevations with rawl plugs including clips, wires etc. complete as per specifications.	SQM	660			0.1439553808
A1517	Designing, providing and fixing permanent colour coated troughed galvanised MS sheets having 0.8 mm minimum thickness with minimum rate of galvanization of 275 gm./sq.m. The sheets shall be permanently coated with silicon modified polyster paint of minimum 20 micron DFT on outerside (exposed face) and minimum 20 micron on inner face over suitable primer. The permanent colour coated sheet shall meet the general requirements of IS:14246 and shall conform to class 3 for the durability, including fixing to supports/purlins, corrosion resistant self tapping / self drilling type fasteners with suitable cap, flashing,with minimum 150mm overlapping, 8 dia G.I. hook bolts or 'J' Bolts and nuts @ maximum 305 mm c/c along with G.I. and bitumen washers including cutting of sheets for opening etc. all complete. Payment Breakup: a) On Supply & receipt of materials at site - 60% b) On complete execution as per item description - 40%	SQM	3,940			1.1250600857
1518	Supply & fixing FRP (fibre reinforced plastic) sheets 2 mm thick including GI hooks/ J or L bolts, nuts, washers, bitumen washers etc. complete including overlap 100mm.	SQM	70			0.0369166445
A1519	Designing, providing and fixing permanent colour coated sanwiched insulated metal cladding system comprising of outer (troughed sheet) & inner sheets (plain) of galvanized M.S. sheets having 0.6 mm minimum thickness with minimum rate of galvanization of 275 gm./sq.m. The sheets shall be permanently coated with silicon modified polyster paint of minimum 20 micron DFT on outerside (exposed face) and minimum 7 micron on inner face. The permanent colour coated sheet shall meet the general requirements of IS:14246 and shall conform to class 3 for the durability. The insulation shall be of bonded mineral wool of minimum thickness 50 mm conforming to IS:8183, having a density of 32 kg/cu.m for glass wool, 48 kg/cu.m for rock wool or 40-45 kg./cu.m for polyurethane foam (fire retardants and nontoxic) conforming to IS:12436. The sheets shall be fixed by means of concealed fixing system or any other compatible method approved by the Engineer. The fasteners shall be of high quality corrosion resistant grade of self tapping / self drilling type provided with suitable cap. Inner sheet shall be fixed directly to side runner and Z spacers made of at least 2 mm thick galvanized sheet of grade 375 as per IS:277. Inner sheet shall be fixed at the rate not more than 1.50m centre to centre to hold the insulation and external sheeting. All complete including flashings, trim closures, caps, z spacers, fittings and fixtures etc. as per specification and direction of engineer in charge. Payment Breakup: a) On Supply & receipt of materials at site - 60% b) On complete execution as per item description - 40%	SQM	350			0.2247878571
1600	FALSE CEILING: False ceiling including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, suspension system etc at all level as per specification, drawings and as directed by engineer - in - charge.					
1601	Providing and fixing glass fibre reinforced gypsum plaster board (GRG) ceiling (having gypsum core mixed with glass fibre) system consisting of metal supporting grid system forming panels of specified size, suspended from RCC slab/structural steel or catwalkway grid above with 4 mm (minimum) galvanised wires (rods) with special height adjustment clips, including preperation of working drawing, providing openings for AC ducts, return air grills, light fixtures etc (but excluding the cost of catwalkway grid) all complete as per drawings, specification and instructions of the engineer. (Underdeck insulation to be paid separately under ST No A1514)					
1601-a	12 mm thick GRG board with galvanised light gauge steel load bearing supporting GI frame and finished flat (seamless).	SQM	50			0.0135914454
1601-b	12 mm thick GRG board in profile (dome ,curved profiled etc.) with galvanised light gauge steel load bearing supporting GI frame and finished smooth (seamless).	SQM	50			0.0203929813
A1603	Providing and fixing permanently colour coated aluminium false ceiling comprising of 84 mm wide 12.5 mm deep closed type plain panels of approved colour, roll formed out of 0.5 mm thick corrosion resistant aluminum alloy AA 5050 fixed on roll formed carriers. Additional hangers and height adjustment clips shall be provided for return air grills, supply air diffusers, light fixtures, AC ducts etc. all complete. Suitable M.S channel (minimum ISMC100) grid shall be provided above false ceiling for movement of personnel to facilitate maintenance of lighting fixtures, AC ducts etc. (Materials for structural platform grid made up of MS Channels/ Beams / Angles shall be shall be paid under ST No 2301) (Underdeck insulation to be paid separately under ST No A1514) Payment Breakup: a) On Supply & receipt of material site - 60% b) On complete execution as per item description - 40%	SQM	960			1.2244159930

PART-B						
PROJECT: 1X800 MW HPGCL, DCRTTP, Yamuna Nagar,Haryana,INDIA						
BOQ CUM RATE SCHEDULE (PRICE BID)						
SCOPE OF WORK:- Balance Civil, Structural and Architectural Works for Compressed Air System ,Fire Protection System including Pump Houses , Fuel Oil System including Day Oil Tank and Pump House, Chemical Lab, Ammonia Unloading & Storage, H2 Cylinder Storage Shed, Raw Water System including Pump House ,Fire Protection and Detection System, HVAC System including Air Washer Building, Security cum Main Gate Complex, Parking sheds for four wheelers and two wheelers, Main Plant and Peripheral Roads & Drains (Cast In-Situ, Pre-cast drains), Levelling & Grading, Pipe & Cable rack, paving and Miscellaneous works at 1X800 MW DCRTTP Yamuna Nagar, Haryana.						
ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
A1606	Providing and fixing 12mm thick Gypsum board plain/perforated false ceiling tile (600x600mm) conforming to IS: 2095 in plan or elevation with aluminium grid, metal suspension system, anchor fasteners, adjustable hangers etc. including smooth wall putty finish and two coats of approved acrylic emulsion paint over one coat of primer to give an even shade with smooth finish all complete as per specification and architectural design and details. Metal suspension system with main aluminium member of 38x25x1.5 mm , cross tie of 25x25x1.5 mm and aluminium angle of 25x25x1.5 mm suspended by 6 mm diameter galvanised steel rods from main ceiling.The work to be complete as per specifications, drawings and direction of engineer. (Materials for structural platform grid for movement made up of MS Channels/ Beams / Angles shall be supplied by BHEL and shall be paid under ST No A 2301) (Underdeck insulation to be paid separately under ST No A1514)	SQM	250			0.0794093857
1700	RAIN WATER DOWN TAKE PIPES: Rain water down take pipes at all level including all labour, material (unless otherwise specified in BOQ/contract specification), transportation, 2 coats of approved paint over one primary coat, fixtures, accessories etc as per specification, drawings and as directed by engineer - in - charge.					
1704	Providing and fixing galvanised MS down take pipes of 150 mm dia- Medium quality as per IS:1239(part-I) all complete. Payment Breakup: a) On Supply & receipt of material site - 60% b) On complete execution as per item description - 40%	RM	1,060			0.4688106905
1800	MISCELLANEOUS: Miscellaneous works including all labour, material (unless otherwise specified in BOQ/contract specification), equipment etc. at all level unless otherwise specified as per specification, drawings and as directed by engineer - in - charge. Note: Cement shall be issued by BHEL free of cost (unless otherwise specified in BOQ Item Description).					
A1801	Providing and Filling in trenches, plinths, area paving and other underground structures with graded stone aggregate of size range 63 mm to 45 mm in layers not exceeding 230 mm in thickness including breaking of stone boulders to required sizes, filling the interstices with selected sand and compacting to 85 % of original volume of stone stack for all lifts etc. all complete. Payment shall be made for the measurement of the volume of the compacted fill.	CUM	1,230			0.4533310922
B1801	Providing and Filling in trenches, plinths, area paving and other underground structures with graded stone aggregate of size range 63 mm to 45 mm in layers not exceeding 200 mm compacted thickness including breaking of stone boulders to required sizes, filling the interstices with selected moorum and compacting to 85 % of original volume of stone stack for all lifts etc. all complete. Payment shall be made for the measurement of the volume of the compacted fill.	CUM	950			0.3711417966
C1801	Providing and Filling in trenches, plinths, area paving and other underground structures with graded stone aggregate of size range 63 mm to 45 mm in layers not exceeding 400 mm compacted thickness including breaking of stone boulders to required sizes, filling the interstices with selected moorum and compacting to 85 % of original volume of stone stack for all lifts etc. all complete. Payment shall be made for the measurement of the volume of the compacted fill.	CUM	3,100			0.9483096750
1802	Supply and laying approved quality Stone aggregate 40 mm size in transformer yards.	CUM	10			0.0067782829
1804	Providing and fixing weep holes in Retaining wall, drains, etc consisting of 100 mm dia HDPE pipe sleeves with single side covering for the pipe mouth with galvanised welded wire fabric of 20 mm sq. opening all complete.	EACH	200			0.0112080012
1807	Anti termite chemical treatment of soil with Chlorpyriphos/Lindane E.C. 20% with 1% concentration conforming to IS:8944 and as per IS 6313 all complete. (Plinth area of building at ground floor only shall be measured for payment). Drilling 12mm dia hole @300 c/c using material one liter per hole.	SQM	4,800			0.3114057083
1808	Laying of earthing mats/rods including risers, transportation from yard stores, loading, unloading, cutting to length, welding, protective painting of joints etc. all complete. (Excavation & Back filling shall be paid separately under respective item of earth work. Earthing mats/rods shall be supplied by BHEL free of cost)	MT	50			0.1346936653
1809	Construction of below ground earthing system test pits as per drawing / sketches including concreting, reinforcement, formwork, providing & fixing GI strip etc as per drawing and specification (excavation & backfilling only will be paid under applicable BOQ items & cement/steel to be supplied by BHEL free of cost)	EACH	50			0.1307638889
1810	Construction of below ground earthing system test links as per drawing/ sketches including concreting, reinforcement, formwork, providing & fixing GI strip etc as per drawing & specification (excavation & backfilling only will be paid under applicable BOQ items & cement/steel to be supplied by BHEL free of cost)	EACH	50			0.1033484670
1811	Construction of below ground earthing system earth electrodes as per drawing and specification. (Excavation and backfilling only will be paid under applicable BOQ items & steel shall be supplied by BHEL free of cost.)	EACH	50			0.0091035943
1812	Construction of below ground earthing system - Earth connection and riser pig tails as per drawing and specification. (Excavation and backfilling only will be paid under applicable BOQ items& steel shall be supplied by BHEL free of cost.)	EACH	50			0.0064178596
1813	Providing Earthing pit as per drawing with charcoal & salt, GI pipes, GI earth electrodes, GI wire, GI strips, brick chamber with covers including associated earthwork etc. all complete.	EACH	50			0.4226951140
1814	Construction of below ground earthing system test pits as per drawing/ sketches including brickwork, plaster, providing & fixing GI strips/pipes, GI wires, covers etc as per drawing & specification including associated earthwork.	EACH	50			0.2316242728

PART-B						
PROJECT: 1X800 MW HPGCL, DCRTTP, Yamuna Nagar,Haryana,INDIA						
BOQ CUM RATE SCHEDULE (PRICE BID)						
SCOPE OF WORK:- Balance Civil, Structural and Architectural Works for Compressed Air System ,Fire Protection System including Pump Houses , Fuel Oil System including Day Oil Tank and Pump House, Chemical Lab, Ammonia Unloading & Storage, H2 Cylinder Storage Shed, Raw Water System including Pump House ,Fire Protection and Detection System, HVAC System including Air Washer Building, Security cum Main Gate Complex, Parking sheds for four wheelers and two wheelers, Main Plant and Peripheral Roads & Drains (Cast In-Situ, Pre-cast drains), Levelling & Grading, Pipe & Cable rack, paving and Miscellaneous works at 1X800 MW DCRTTP Yamuna Nagar, Haryana.						
ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
1815	Providing and fixing GI rungs in concrete/brick walls having zinc coating of minimum 900 g/sqm etc. all complete.	Kg	150			0.0048133947
1816	Providing and fixing PVC pressure release valve of minimum dia 90mm in water retaining structure including 160 mm dia housing pipe of minimum length 3.75 m with perforation as per IS4558, nylon jali, perforated end plug, collar, graded filter, excavation, fixing in concrete slab/wall etc. all complete.	EACH	50			0.1402627862
1817	Providing and laying dry stone pitching of 225 mm thickness for slope protection in cement mortar 1:6 including hammer dressing, raking of joints, pointing, preparing the bedding surface and voids filling with stone aggregate etc. all complete.	SQM	50			0.0302639284
1818	Fire proofing of steel structures with VERMICULITE cementious coating including supply of all materials for vermiculite materials, reinforcement mesh (3mm thick wire, 50x50 size mesh) , nuts, tie wires, weldings, suface preparation, curing, staging, compatible paintings etc. all complete.	CUM	1			0.0280553476
1819	Supply & fixing expanded metal steel sheet conforming to IS:412. Size of mesh shall be 10mmX40mm with strands of 2.5mm width and 1mm thickness to the structural steel for facilitatng fireproofing works.	SQM	75			0.0084932000
1820	Supply and laying fire clay refractory brick work with fire clay mortar conforming to IS: 6 & 195 including curing etc. all complete on tank pads & in building walls.	CUM	2			0.0244911102
A1821	Sprinkling of water by water tanker fitted with perforated GI pipe (portable tanker minimum 3000 litre capacity) for roads and miscellaneous area within plant boundary, for dust supression and reduction of suspended material at site for day to day work, as directed by BHEL site engineer (water for this purpose shall be arranged by contractor at his own cost and utilisation of machine will be in terms of Tank-hour put in actual use for water sprinkling).	TANK-HR	700			0.0955470472
1822	Providing & filling Bentonite Powder (Sodium base) mixed with water in electronic earthing pit as per drawing & direction below ground level including all materials, transportation, labour, incidental etc all complete as per specification.	CUM	2			0.0082804340
1823	Providing and laying cinder filling in the toilets,roads,etc complete as directed by engineer in charge.	CUM	50			0.0187071306
1824	Disposal of scrap steel, scrap wood, broken packing crates, cable scrap, debris and other civil waste, electrical waste materials etc. from project site to a designated place within 5 KM range, with all manpower T & P etc. including loading and unloading as and when directed by BHEL.					
1824-a	Steel scrap / metal scrap	MT	3			0.0014935475
1824-b	Debris & Other waste materials.	CUM	25			0.0006452739
1827	Anti weed chemical treatment of soil with suitable chemical etc all complete.	SQM	800			0.0007440997
A1837	Providing 50mm thick premix carpet surfacing laid to slope in two layers 30 mm and 20 mm respectively with 12 mm downgraded stone chips mixed with 80/100 grade bitumen @ 52 Kg/Cu.M or equivalent to 8% to 10% by volume including compaction, separation layer of one tack coat @ 1Kg/sqm shall be spray after first layer of 30 mm and sand shall be sprayed on the final surface of 20mm @ 0.5 cum/100 sqm. etc. all complete as per specification and as guided by engineer-in-charge.	SQM	175			0.0316403801
A1838	Providing minimum 75 mm thick anti corrosive layer laid to required slope consisting of clean & well graded coarse sand mixed with A90 grade bitumen for softening point upto 45 degree Celcius or A65 grade bitumen for softening point above 45 degree celcius as per IS: 73 or its equivalent quality 8 to 10% by volume and rolled or compacted all complete.	SQM	175			0.0498335991
A1839	Providing and fixing 20mm square MS bar balustrade with suitable MS flat and CP teakwood handrails etc. all complete as per specification.	RM	75			0.0280781357
2000	FENCING AND GATES: Fencing and gates including all labour, material (unless otherwise specified in BOQ/contract specification), equipment etc at all level as per specification, drawings and as directed by engineer - in - charge.					
2001	Supplying and erecting in position 2.4 m high PVC coated gavanised chain linked fencing of minimum 8 gauge (including PVC coating) of mesh size 75mm x 75mm. The diameter of the hot dip galvanised steel wire for chain link fencing excluding PVC coating shall not be less than 12 gauge. GI barbed wire fencing of height of 600 mm confirming to IS 298 at top of chain link fencing shall be provided with 4 strands of barbed wire hot dip galvanised wire of 12G comprising of 2 ply of wires with barbs of 16G spaced at 100mm. Cost to include for GI hook bolts, rings & washers, hot dip galvanised tension wires, 25X6 mm GI flat stretcher bar at end posts, accessories etc. all complete. (Post shall be separately paid under Item No 2007/213) Payment Breakup: a) On Supply & receipt of material site - 60% b) On complete execution as per item description - 40%	RM	75			0.0483781046

PART-B						
PROJECT: 1X800 MW HPGCL, DCRTPP, Yamuna Nagar,Haryana,INDIA						
BOQ CUM RATE SCHEDULE (PRICE BID)						
SCOPE OF WORK:- Balance Civil, Structural and Architectural Works for Compressed Air System ,Fire Protection System including Pump Houses , Fuel Oil System including Day Oil Tank and Pump House, Chemical Lab, Ammonia Unloading & Storage, H2 Cylinder Storage Shed, Raw Water System including Pump House ,Fire Protection and Detection System, HVAC System including Air Washer Building, Security cum Main Gate Complex, Parking sheds for four wheelers and two wheelers, Main Plant and Peripheral Roads & Drains (Cast In-Situ, Pre-cast drains), Levelling & Grading, Pipe & Cable rack, paving and Miscellaneous works at 1X800 MW DCRTPP Yamuna Nagar, Haryana.						
ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
2007	Supply and fixing of hot dip galvanised mild steel posts for fencing. Rate of zinc coating shall not be less than 710 g/m2 on steel posts. Payment Breakup: a) On Supply & receipt of material site - 60% b) On complete execution as per item description - 40%	MT	1			0.0280223282
2009	Supply, fabrication and installing in position and testing galvanised MS Gates out of channels, joists, angles, flats, plates, pipes, welded steel wire mesh & sheets including stiffners, bracings, fabricated hinges, MS Aldrops with locking arrangement, tempered steel pivot, guide track of MS Tee, bronze aluminium ball bearing arrangements, castor wheels, paintings etc. all complete.	MT	4			0.1261695386
A2010	Supply, fabrication and installing in position and testing cantilever type motorized sliding MS gates (operated by push button and card reader or key switches) out of channels, joists, angles, flats, plates, pipes, welded steel wire mesh & sheets including stiffners, bracings, fabricated hinges, MS Aldrops with locking arrangement, tempered steel pivot, guide track of MS Tee, bronze aluminium ball bearing arrangements, castor wheels, paintings, motorized arrangement, push buttons, card readers, key switches etc. all complete. Payment Breakup: a) On Supply & receipt of material site - 60% b) On complete execution as per item description - 40%	MT	1			0.0346395949
2100	WATER SUPPLY: Water supply work including men, material (unless otherwise specified in BOQ/contract specification), equipment etc. at all level as per specification, drawings and as directed by engineer - in - charge. Note: Cement shall be issued by BHEL free of cost (unless otherwise specified in BOQ Item Description).					
2101	Providing and fixing in position tested heavy duty type chromium plated (CP) brass long neck/body bib cocks including sockets, union, nuts etc all complete - 15mm nominal bore.	EACH	85			0.0221369649
A2101	Providing and fixing hot and cold water mixer including necessary fittings etc all complete as per specification.	EACH	15			0.0140390678
2102	Providing and fixing in position heavy duty brass stop cock of approved quality including all specials etc all complete - 15mm nominal bore.	EACH	85			0.0196860867
2103	Providing and fixing in position heavy duty brass full way valve with wheel of approved quality including all specials etc all complete for following sizes:					
2103-a	25mm nominal bore.	EACH	50			0.0130217441
2103-b	50mm nominal bore.	EACH	50			0.0188001430
2104	Providing and fixing GI pipes class B medium class conforming to IS:1239 pipes shall be concealed and painted with anticorrsvie paint, complete for internal works with GI sockets, unions, elbows, tees, nipples etc and clamps including cutting and making good the walls etc all complete for following sizes:					
2104-a	15 mm nominal bore.	RM	450			0.0491803370
2104-b	20 mm nominal bore.	RM	800			0.0965469311
2104-c	25 mm nominal bore.	RM	750			0.1088245755
2104-d	50 mm nominal bore.	RM	350			0.0693407872
2105	Providing and fixing GI pipes class B complete for external work with GI sockets, unions, elbows, tees, nipples etc including trenching & refilling, anti-corrosive paint etc all complete for following sizes:					
2105-a	15 mm nominal bore.	RM	450			0.0379839624
2105-b	20 mm nominal bore.	RM	450			0.0432159132

PART-B						
PROJECT: 1X800 MW HPGCL, DCRTPP, Yamuna Nagar,Haryana,INDIA						
BOQ CUM RATE SCHEDULE (PRICE BID)						
SCOPE OF WORK:- Balance Civil, Structural and Architectural Works for Compressed Air System ,Fire Protection System including Pump Houses , Fuel Oil System including Day Oil Tank and Pump House, Chemical Lab, Ammonia Unloading & Storage, H2 Cylinder Storage Shed, Raw Water System including Pump House ,Fire Protection and Detection System, HVAC System including Air Washer Building, Security cum Main Gate Complex, Parking sheds for four wheelers and two wheelers, Main Plant and Peripheral Roads & Drains (Cast In-Situ, Pre-cast drains), Levelling & Grading, Pipe & Cable rack, paving and Miscellaneous works at 1X800 MW DCRTPP Yamuna Nagar, Haryana.						
ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
2105-c	25 mm nominal bore.	RM	700			0.0841530211
2105-d	50 mm nominal bore.	RM	350			0.0606324959
A2106	Providing and fixing 900mmx600mmx6mm thk mirror from reputed mirror manufacturer, edge mounted with teak beading and minimum 12 mm thick plywood backing. Mirror shall be mounted with glass adjustable revolving CP brackets with CP screws etc. all complete as per specification.	EACH	52			0.0254177465
A2108	Providing and fixing 20 mm diameter stainless steel towel rails (600mm X 20mm) with C.P. mounting brackets all complete.	EACH	50			0.0120137735
2110	Providing and fixing C.P. Soap holder mounted with C.P. screws etc all complete.	EACH	75			0.0146320222
2111	Providing and fixing stainless steel / C.P. liquid soap dispenser. Dispenser shall be round and easily revolving with removable threaded nozzle and mounted on C.P. brackets etc all complete.	EACH	77			0.0126229532
A2112	Providing and fixing chromium plated wall mounted paper holder with paper roll having cover cum cutter fitted with CP screws etc. all complete as per specification.	EACH	52			0.0097180346
2113	Providing and fixing chromium plated brass shower rose 100mm dia with 15 or 20 mm inlet dia shower arm all complete.	EACH	52			0.0097821202
2114	Providing & fixing in position P.V.C. water tank of Syntex or approved equivalent including making all necessary inlet & outlet pipes, fixture, ball cocks, valves etc all complete for following capacities. GI pipes shall be paid separately under ST No. 2105.					
2114-a	500 litres capacity	EACH	9			0.0178514159
2114-b	1000 litres capacity	EACH	7			0.0277704970
2114-c	2000 litres capacity	EACH	2			0.0158679253
2114-d	5000 litres capacity	EACH	1			0.0198351391
A2115	Providing & fixing in position loft type HDPE water tank conforming to IS:12701 of approved quality including making all necessary inlet & outlet pipes, fixture, ball cocks, valves etc all complete as per specification for following capacities. GI pipes shall be paid separately under ST No. 2105.					
A2115-a	500 litres capacity	EACH	2			0.0039669813
A2116	Providing and fixing grab bar, barrier-free access and appropriate fittings and fixtures for toilets for handicapped etc. all complete.	EACH	8			0.0038424303
A2117	Providing and fixing drinking fountain of approved make as per indian standard and all complete as per specification.	EACH	7			0.0347908447
A2118	Providing and fixing robehook of approved make as per indian standard and all complete as per specification.	EACH	70			0.0041857013

PART-B						
PROJECT: 1X800 MW HPGCL, DCRTTP, Yamuna Nagar,Haryana,INDIA						
BOQ CUM RATE SCHEDULE (PRICE BID)						
SCOPE OF WORK:- Balance Civil, Structural and Architectural Works for Compressed Air System ,Fire Protection System including Pump Houses , Fuel Oil System including Day Oil Tank and Pump House, Chemical Lab, Ammonia Unloading & Storage, H2 Cylinder Storage Shed, Raw Water System including Pump House ,Fire Protection and Detection System, HVAC System including Air Washer Building, Security cum Main Gate Complex, Parking sheds for four wheelers and two wheelers, Main Plant and Peripheral Roads & Drains (Cast In-Situ, Pre-cast drains), Levelling & Grading, Pipe & Cable rack, paving and Miscellaneous works at 1X800 MW DCRTTP Yamuna Nagar, Haryana.						
ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
A2120	Providing and fixing electrically operated hand dryer with photo voltaic control of approved make as per indian standard and all complete as per specification.	EACH	15			0.0180132299
2200	SANITARY: Sanitary work including all labour, material (unless otherwise specified in BOQ/contract specification), equipment etc. at all level as per specification, drawings and as directed by engineer - in - charge. Note: Cement shall be issued by BHEL free of cost (unless otherwise specified in BOQ Item Description).					
A2201	Supply and fixing glazed vitreous china Wash Basin 630 mm x 450 mm mounted over granite beveled edges, fitted with photovoltaic control system for water controls, bottle trap with two taps and all requisite items of approved make conforming to IS:2556 part 4 of oval shape with R.S. or C.I. brackets painted white, 15mm chromium plated brass hot & cold faucets with nylon washers, chromium plated brass chain with rubber plug, 32mm chromium plated brass bottle trap and waste of standard pattern, 32mm dia chromium plated brass trap unions, plastic connection pipe with chromium plated nuts, fittings, cutting and making good the walls where required etc all complete.					
A2201-a	White	EACH	37			0.1341825618
A2201-b	Colored	EACH	35			0.1289559593
A2202	Providing and fixing approved vitreous china laboratory basin/sink of size 600x400x200mm conforming to IS:2556 (part-5) with R.S. or C.I. brackets, chromium plated brass chain with rubber plug 32mm, 32mm CP brass waste coupling and 32mm CP brass bottle trap with necessaary union complete including painting the fittings, cutting and making good the wall where required etc. all complete.	EACH	9			0.0216560905
A2203	Providing and fixing stainless steel kitchen sink of size 610x510x200mm with drain board of atleast 450 mm length with trap conforming to IS: 13983 including all fittings etc. all complete as per specification.	EACH	4			0.0086464381
2204	Providing and fixing colour glazed vitreous china European type water closet conforming to IS:2556 with siphon, open front solid plastic seat and plastic cover, low level 12.5 litre PVC flushing cistern (same colour as WC) with valveless fittings, 2 way bibcock with health faucet necessary C.P connections etc all complete.					
2204-a	Floor mounted	EACH	22			0.0563697349
2204-b	Wall mounted	EACH	20			0.0833624152
2205	Providing and fixing colour glazed vitreous indian type Orissa pattern (580x440mm) water closet conforming to IS:2556 part 3 with all fittings including foot rests, low level 12.5 litre PVC flushing cistern with valveless fittings, 2 way bibcock with health faucet necessary C.P connections etc all complete.	EACH	35			0.0694710046
2206	Providing and fixing white flat back glazed vitreous china urinals of size 370x315x620 mm with photo voltaic control flushing system as per IS:2556 (part 6, section 1) with flush pipes, lead pipes, gratings, traps and necessary C.P. fittings etc. all complete.	EACH	70			0.4164516527
2207	Supply, laying and jointing UPVC pipes of class 3 as per IS:4985 including bends, branches and all other necessary fittings, M.S holder bats/clamps, cutting and making good the walls and floors, jointing, testing etc all complete for following.					
2207-a	75mm dia pipes	RM	25			0.0026276019
2207-b	110mm dia pipes	RM	150			0.0251831229
2207-c	160mm dia pipes	RM	50			0.0115800510
2207-d	200mm dia pipes	RM	50			0.0169864001
2208	Providing, laying light duty non pressure NP3 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc all complete for following. Note: Cement for mortar only shall be issued by BHEL free of cost. Payment Breakup: a) On Supply & receipt of material site - 50% b) On complete execution as per item description - 50%					

PART-B						
PROJECT: 1X800 MW HPGCL, DCRTPP, Yamuna Nagar,Haryana,INDIA						
BOQ CUM RATE SCHEDULE (PRICE BID)						
SCOPE OF WORK:- Balance Civil, Structural and Architectural Works for Compressed Air System ,Fire Protection System including Pump Houses , Fuel Oil System including Day Oil Tank and Pump House, Chemical Lab, Ammonia Unloading & Storage, H2 Cylinder Storage Shed, Raw Water System including Pump House ,Fire Protection and Detection System, HVAC System including Air Washer Building, Security cum Main Gate Complex, Parking sheds for four wheelers and two wheelers, Main Plant and Peripheral Roads & Drains (Cast In-Situ, Pre-cast drains), Levelling & Grading, Pipe & Cable rack, paving and Miscellaneous works at 1X800 MW DCRTPP Yamuna Nagar, Haryana.						
ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
2208-a	200mm dia	RM	75			0.0232647410
2208-Aa	250 mm dia	RM	200			0.0785490205
2208-b	300mm dia	RM	350			0.1742472129
2208-c	450mm dia	RM	463			0.2935996360
2208-d	600mm dia	RM	40			0.0313265957
2208-e	900mm dia	RM	25			0.0264620442
2209	Providing, laying light duty non pressure NP2 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc complete for following. Note: Cement for mortar only shall be issued by BHEL free of cost. Payment Breakup: a) On Supply & receipt of material site - 50% b) On complete execution as per item description - 50%					
2209-a	150mm dia	RM	75			0.0177363130
2209-Aa	200 mm dia	RM	175			0.0455761043
2209-b	250mm dia	RM	350			0.1063713719
2209-c	300mm dia	RM	50			0.0171840516
2209-d	450mm dia	RM	25			0.0120799929
2209-e	500mm dia	RM	25			0.0142483459
2211	Providing and fixing C.I Manhole heavy duty cover of size 600mmx450mm including frame from reputed manufacture etc. all complete.	EACH	37			0.1524481157
2212	Providing and fixing circular heavy duty C.I. manhole cover of 600 mm dia with frame etc. all complete.	EACH	37			0.1575414779
2213	Providing and fixing square mouth S.W Gully trap grade 'A' complete with CI grating, brick masonry chamber(Clay Brickwork in 1:6 mortar, 12mm plaster in 1:6 mortar & 1:2:4 Cement Concrete) and water tight CI cover with 300x300mm (inside). The weight of cover to be not less than 4.53 Kg and frame to be not less than 2.72 Kg etc all complete for following sizes: Note: Cement for concrete, mortar, plaster and brick work-mortar shall be issued by BHEL free of cost.					
2213-a	100x100mm P or S Type.	EACH	35			0.0189059447
2213-b	150x100mm P or S Type.	EACH	25			0.0148936198

PART-B						
PROJECT: 1X800 MW HPGCL, DCRTPP, Yamuna Nagar,Haryana,INDIA						
BOQ CUM RATE SCHEDULE (PRICE BID)						
SCOPE OF WORK:- Balance Civil, Structural and Architectural Works for Compressed Air System ,Fire Protection System including Pump Houses , Fuel Oil System including Day Oil Tank and Pump House, Chemical Lab, Ammonia Unloading & Storage, H2 Cylinder Storage Shed, Raw Water System including Pump House ,Fire Protection and Detection System, HVAC System including Air Washer Building, Security cum Main Gate Complex, Parking sheds for four wheelers and two wheelers, Main Plant and Peripheral Roads & Drains (Cast In-Situ, Pre-cast drains), Levelling & Grading, Pipe & Cable rack, paving and Miscellaneous works at 1X800 MW DCRTPP Yamuna Nagar, Haryana.						
ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
2213-c	150x150mm P or S Type.	EACH	20			0.0137053856
2214	Providing and fixing C.I. floor traps size 100 mm Inlet and 100 mm Outlet Sand Cast Iron S&S as per IS: 1729 with C.P jalli all complete.	EACH	35			0.0190036078
2215	Providing and fixing 100mm heavy duty UPVC floor traps with 100 mm inlet and 100 mm outlet & C.P jalli all complete.	EACH	39			0.0188085141
2216	Providing and installing approved brand single tap water cooler of 80 L cooling capacity all complete.	EACH	4			0.0556986500
2217	Providing and installing approved brand single tap water cooler of 150 L cooling capacity all complete.	EACH	4			0.0777379519
2218	Providing and fixing white vitreous urinal partitions of size 675x325x85mm all complete.	EACH	74			0.0633400885
2219	Providing and fixing eye and face drinking water fountain (combined unit with receptacle conforming to IS: 10592) all complete as per specification.	EACH	10			0.0497012068
2220	Providing and fixing heavy duty cast iron pipes for above and below ground sanitary works with water tight lead joint, fixing clamps, excavation, filling, disposal etc. all complete for the following.					
2220-a	75mm dia pipes	RM	30			0.0099965139
2220-b	100mm dia pipes	RM	30			0.0129403582
2220-c	150mm dia	RM	30			0.0201185946
2220-d	200mm dia pipes	RM	10			0.0100476707
2220-e	250mm dia pipes	RM	10			0.0162399751
A2220	Providing and fixing heavy duty Glazed stoneware pipes with spigot and socket ends conforming to IS: 651 Grade "A" or "AA" for above and below ground sanitary works with water tight lead joint, fixing clamps, excavation, filling, disposal etc. all complete for the following.					
A2220-a	75mm dia pipes	RM	25			0.0019340778
A2220-b	100mm dia pipes	RM	100			0.0103150816
A2220-c	150mm dia	RM	50			0.0080897585
2222	Providing and fixing HDPE pipes in concrete/ brick work of following sizes including cutting, fixing and levelling in position etc. all complete.					

PART-B						
PROJECT: 1X800 MW HPGCL, DCRTPP, Yamuna Nagar,Haryana,INDIA						
BOQ CUM RATE SCHEDULE (PRICE BID)						
SCOPE OF WORK:- Balance Civil, Structural and Architectural Works for Compressed Air System ,Fire Protection System including Pump Houses , Fuel Oil System including Day Oil Tank and Pump House, Chemical Lab, Ammonia Unloading & Storage, H2 Cylinder Storage Shed, Raw Water System including Pump House ,Fire Protection and Detection System, HVAC System including Air Washer Building, Security cum Main Gate Complex, Parking sheds for four wheelers and two wheelers, Main Plant and Peripheral Roads & Drains (Cast In-Situ, Pre-cast drains), Levelling & Grading, Pipe & Cable rack, paving and Miscellaneous works at 1X800 MW DCRTPP Yamuna Nagar, Haryana.						
ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
2222-a	Upto 75 mm dia	RM	25			0.0031682368
2222-b	100 mm dia	RM	75			0.0115626111
2222-c	150 mm dia	RM	25			0.0079874448
2222-d	200 mm dia	RM	250			0.1177770245
2223	Providing and fixing vertical wall mounted water geysers/heaters(minimum 5 star rating) of required capacity including all connections & fittings(angular stop cock and brass connection pipes, etc.) all complete as per specification.					
2223-b	25 Litres	EACH	3			0.0124143727

PART-B						
PROJECT: 1X800 MW HPGCL, DCRTTP, Yamuna Nagar,Haryana,INDIA						
BOQ CUM RATE SCHEDULE (PRICE BID)						
SCOPE OF WORK:- Balance Civil, Structural and Architectural Works for Compressed Air System ,Fire Protection System including Pump Houses , Fuel Oil System including Day Oil Tank and Pump House, Chemical Lab, Ammonia Unloading & Storage, H2 Cylinder Storage Shed, Raw Water System including Pump House ,Fire Protection and Detection System, HVAC System including Air Washer Building, Security cum Main Gate Complex, Parking sheds for four wheelers and two wheelers, Main Plant and Peripheral Roads & Drains (Cast In-Situ, Pre-cast drains), Levelling & Grading, Pipe & Cable rack, paving and Miscellaneous works at 1X800 MW DCRTTP Yamuna Nagar, Haryana.						
ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
2300	STRUCTURAL WORKS: Structural steel works including all labour, material (unless otherwise specified in BOQ/contract specification), equipments unless otherwise specified, transportation, handling etc. at all level as per specification, drawings and as directed by engineer - in - charge.					
A2301	Fabrication,erection and alignment of structural steel with mild steel rolled section / built up section / combination of both conforming to IS:2062, pipes conforming to IS:1161/ IS:1239, tubular sections confirming to IS 4923, chequered plate conforming to IS: 3052, mild steel rounds, monorails, stays, safety chains, ladders, MS grating etc. in columns, beams, gantry girders, bunkers, silos, hoppers, roof trusses, portals, laced purlins, space frames, hangers, struts, monorails, galleries, stiffeners, wall beams, sheeting runners, brackets, stub columns, bracings, cleats, trestles, base plates, splice plates, chequered plate flooring, decking and seal plates, steel frame grid over false ceiling, walkway platforms, ladders, stairs, stringers, treads, landings, hand-rails etc including two coats of red oxide zinc-chromate primer conforming to IS:2074 (one coat at shop and one coat after erection, DFT of each coat shall be 25 micron) , collection of steel from stores, fabrication, straightening, cutting, bending, rolling, grinding, machining, drilling, welding, electrodes and other consumables, alignment, erection bolts & nuts (weight of erection bolts, nuts and welds not payable), assembly, edge preparation, preheating (min preheat and interpass temperature of 20° C for welding over 20 mm and upto 40 mm & 66° C for welding over 40 mm and upto 63 mm & 110° C for thickness over 63 mm) & use of low hydrogen electrodes, post heating, testing of welders, inspection of welds, visual inspection, non destructive and special testing, rectification and correction of defective welding works, production test plate, inspection and testing, erection scheme, protection against damage in transit, stability of structures, installation of temporary structures, setting column bases, surface preparation by means of manual or mechanical power tools as per IS:1477 part 1, touch-up painting, rectification, dismantling and removal of all temporary structures (weight of temporary structures not payable), return of surplus / waste steel materials to store etc all complete. Note: Structural Steel shall be supplied by BHEL free of cost. Payment Breakup:- 1) On Completion of Fabrication - 60% 2) On Completion of erection-25% 3) Balance on completion of alignment,welding etc.-15%					
A2301-a	Grade of Steel : E250 / E350	MT	1,125			8.5565938457
A2302	Extra over ST NO. A2301 for blast cleaning of steel structures to near white metal surface (Sa 2 1/2) conforming to IS:1477 (Part I & II, latest revision) all complete as per specification.	MT	1,125			1.4471575760
A2305	Providing and applying prime coat of inorganic zinc silicate paint minimum 75 micron total dry film thickness (DFT) on steel surfaces already having primer coats of approved make and shade to achieve an even shade including protection and cleaning, scaffolding etc. all complete.	MT	1,125			0.7452396550
B2305	Providing and applying intermediate coat of HB Micaceous iron oxide (MIO) epoxy paint of minimum 125 micron DFT on steel surfaces already having primer coats of approved make and shade to achieve an even shade including protection and cleaning, scaffolding etc. all complete.	MT	150			0.0852072641
C2305	Providing and applying top coat of Aromatic Polyurethane acid resistant paint of minimum 50 micron total dry film thickness (DFT) on steel surfaces already having primer coats of approved make and shade to achieve an even shade including protection and cleaning, scaffolding etc. all complete.	MT	150			0.1250087431
D2305	Providing and applying top coat of HB epoxy polyamide (pigmented) paint of minimum 75 micron total dry film thickness (DFT) on steel surfaces already having primer coats of approved make and shade to achieve an even shade including protection and cleaning, scaffolding etc. all complete.	MT	375			0.3940530903
E2305	Providing and applying top coat of Aliphatic polyurethane (UV resistant) paint of minimum 50 micron total dry film thickness (DFT) on steel surfaces already having primer coats of approved make and shade to achieve an even shade including protection and cleaning, scaffolding etc. all complete.	MT	550			0.4641205373
2307	Supplying, fabrication, erection and alignment of factory made electroforged galvanised grating units with mild steel having minimum galvanisation conforming to IS:2062 in flooring, platforms, drain and trench covers, walk-ways, passages, staircases with edge binding strips and anti-skid nosing in treads etc. including fixing clamps, fittings, fixtures, all taxes, duties, packing, grinding, drilling, welding, edge preparation, etc. all complete. Payment Breakup: a) On Supply & receipt of material at site - 60% b) On completion of alignment, fixing, etc. complete as per description/specification - 40%					
2307-a	Minimum galvanisation of 610 g/sqm	MT	70			2.0898271524
2311	Providing and fixing in position of permanent mild steel bolts (class 4.6 as per IS : 1367 and grade `C' as per IS: 1363) and nuts, washers etc. up to and inclusive of 39 mm diameter and upto 300mm long for structural steel work etc all complete. Payment Breakup: a) On Supply & receipt of material at site - 60% b) On completion of alignment, fixing, etc. complete as per description/specification - 40%	KG	100			0.0032786891
2312	Providing and fixing in positing of high strength structural bolts (of property class 8.8 and product grade `C' as per IS: 1367) and conforming to IS: 3757 and high strength structural hardened and tempered nuts (of property class `8' as per IS:1367) conforming to IS:6623 with hardened and tempered washers as per IS:6649 etc. up to and inclusive of 39 mm diameter and upto 300 mm long for structural steel work etc all complete. Payment Breakup: a) On Supply & receipt of material at site - 60% b) On completion of alignment, fixing, etc. complete as per description/specification - 40%	KG	5,500			0.1880014301

PART-B						
PROJECT: 1X800 MW HPGCL, DCRTPP, Yamuna Nagar,Haryana,INDIA						
BOQ CUM RATE SCHEDULE (PRICE BID)						
SCOPE OF WORK:- Balance Civil, Structural and Architectural Works for Compressed Air System ,Fire Protection System including Pump Houses , Fuel Oil System including Day Oil Tank and Pump House, Chemical Lab, Ammonia Unloading & Storage, H2 Cylinder Storage Shed, Raw Water System including Pump House ,Fire Protection and Detection System, HVAC System including Air Washer Building, Security cum Main Gate Complex, Parking sheds for four wheelers and two wheelers, Main Plant and Peripheral Roads & Drains (Cast In-Situ, Pre-cast drains), Levelling & Grading, Pipe & Cable rack, paving and Miscellaneous works at 1X800 MW DCRTPP Yamuna Nagar, Haryana.						
ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
2313	Dismantling of steel structure, lowering of material and carriage of the dismantled material up to field fabrication shop / projects storage including temporary dismantling, cutting, re-welding, supporting, and restoring to correct position all temporarily dismantled members, re-alignment of all adjacent connected members to their correct positions (weight of such adjacent members and temporarily dismantled members not payable), scaffolding, staging, tools & tackles, gas cutting, welding, consumables etc all complete.	MT	6			0.0150861556
2314	Addition to, alterations in and/or modifiction of "Erection Marks" including cutting of parts, gauging of welds, cutting, grinding, fabrication, welding, drilling holes, straightening, removal of bends, raising to the required level, painting, transportation, return of unutilised steel pieces to the project store, temporarily dismantling, cutting, re-welding, supporting and restoring to correct position of all the temporarily dismantled members, realignment of adjacent connected members (weight of such temporarily dismantled and adjacent members not payable) etc all complete for the following:					
2314-a	In erected position	MT	6			0.0347317818
2314-b	In fabrication yard	MT	6			0.0289738456

PART-B						
PROJECT: 1X800 MW HPGCL, DCRTTP, Yamuna Nagar,Haryana,INDIA						
BOQ CUM RATE SCHEDULE (PRICE BID)						
SCOPE OF WORK:- Balance Civil, Structural and Architectural Works for Compressed Air System ,Fire Protection System including Pump Houses , Fuel Oil System including Day Oil Tank and Pump House, Chemical Lab, Ammonia Unloading & Storage, H2 Cylinder Storage Shed, Raw Water System including Pump House ,Fire Protection and Detection System, HVAC System including Air Washer Building, Security cum Main Gate Complex, Parking sheds for four wheelers and two wheelers, Main Plant and Peripheral Roads & Drains (Cast In-Situ, Pre-cast drains), Levelling & Grading, Pipe & Cable rack, paving and Miscellaneous works at 1X800 MW DCRTTP Yamuna Nagar, Haryana.						
ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
2315	Re-erection of dismantled fabricated structural steel members including carriage of modified "Erection Marks" from the field fabrication shop to erection site, lifting to required posiion, aligning in position, tack welding, final welding and touch up painting including temporary dismantling and re-erection of temporarily dismantled members, cutting, rewelding, supporting and restoring to the correct position of all temporarily dismnatled members, re-alignment of adjacent connected members(weight of such temporarily dismantled members and adjacent members not payable), scaffolding, staging, tools & tackles, gas cutting, welding, consumables etc all complete.	MT	6			0.0221025503
2318	Providing and fixing in position PTFE type sliding bearings of reputed manufacturer, individual bearing suitable for required vertical loads as per the construction drawings and for maximum displacement of ±50 mm including all taxes, duties, transportation, installation, drilling, bolting, erecting, aligning etc all complete for following vertical loads.					
2318-a	20 Tons	EACH	2			0.0053203126
2318-b	25 Tons	EACH	2			0.0062318347
2320	Supply, fabrication and fixing of stainless steel pipe hand railing conforming to SS 409 of 32 mm/40 mm dia including transportation, loading/unloading etc. all complete.. Payment Breakup: 1. On Supply & Reciept at site - 60% 2. On completion of erection, alignment, welding, etc. complete as per description/specification - 40%	MT	1			0.0700976761
A2321	Supply, fabrication and fixing of galvanised MS pipe (Medium Class) hand railing of 32 mm/40 mm/50 mm dia having rate of galvanisation 750gm/sqm including transportation, loading/unloading etc. all complete. Payment Breakup: 1. On Supply & Reciept at site - 60% 2. On completion of erection, alignment, welding, etc. complete as per description/specification - 40%	MT	30			0.9748170628
2323	Conducting radiography test on welds wherever specified including equipments, measuring devices, gauges, test report etc. all complete.	RM	6			0.0145755172
2324	Conducting ultasonic test on welds wherever specified including equipments, measuring devices, gauges, test report etc. all complete.	RM	6			0.0016337638
2325	Conducting ultasonic test on steel plates as per ASTM-A435 or equivalent wherever specified including equipments, measuring devices, gauges, test report etc. all complete.	SQM	6			0.0007910710
2326	Conducting magnetic particle test on welds wherever specified including equipments, measuring devices, gauges, test report etc. all complete.	RM	6			0.0010728987
2327	Conducting dye penetration test on welds wherever specified by the engineer including provision of necessary equipments, measuring devices, gauges etc. all complete (over and above the work already specified in the specifications.)	RM	6			0.0011594003
2328	Supply, fixing lightning arrester and air terminal over roof of power house building, pump house and other structures inluding all materials, labour, electrodes etc complete (all materials to be supplied by the contractor).	EACH	2			0.0024987797
A2329	Design, supply, fabrication, erection of stoplog gates, Sluice gates etc. in Pump Houses & other structures with embedments required, lifting beams, special tools & plants, spare parts for three years, machining, casting, all materials such as structural steel, cast steel, stainless steel, brass used for seals, rubber seals, gears, ball and roller bearing, branch bushings, greasing, bolts, nuts, lugs, threaded fastners etc., cleaning, sand blasting, epoxy painting with suitable primer, erection along with a second stage concreting to true plumb and levels, submission of drawings / fabrication drawings for engineers approval etc all complete. The leakage through rubber seal shall not be more than 5 lit/min/metre length of seal under maximum head.(only weight of structural steel including embedments shall be considered for payment purpose) (Stainless Steel (SS) component shall be measured separately for payment) Payment Breakup: 1. On Supply & Reciept at site - 60% 2. On completion of erection, alignment, welding, etc. complete as per description/specification - 40%	MT	40			1.5164658089
2330	SS component mentioned under ST No. A2329 & A2331	MT	20			1.6025023322

PART-B						
PROJECT: 1X800 MW HPGCL, DCRTPP, Yamuna Nagar,Haryana,INDIA						
BOQ CUM RATE SCHEDULE (PRICE BID)						
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ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
A2331	Supplying, fabricating, erecting in position and testing / examining bolted and / or welded structural steel work for stationary screens made out of rolled sections and / or plates including MS frame, stainless steel mesh, cutting, straightening if required, edge preparation, bolting / welding of joints, cleaning, sand blasting, hot double dip galvanised with minimum coating of zinc as 750 gms./sqm. followed by application of an etching primer and dipping in black bitumen as per BS 3416 etc. all complete. (Stainless Steel (SS) component shall be measured separately for payment) Payment Breakup: 1. On Supply & Reciept at site - 60% 2. On completion of erection, alignment, welding, etc. complete as per description/specification - 40%	MT	15			0.5272864600

PART-B						
PROJECT: 1X800 MW HPGCL, DCRTTP, Yamuna Nagar,Haryana,INDIA						
BOQ CUM RATE SCHEDULE (PRICE BID)						
SCOPE OF WORK:- Balance Civil, Structural and Architectural Works for Compressed Air System ,Fire Protection System including Pump Houses , Fuel Oil System including Day Oil Tank and Pump House, Chemical Lab, Ammonia Unloading & Storage, H2 Cylinder Storage Shed, Raw Water System including Pump House ,Fire Protection and Detection System, HVAC System including Air Washer Building, Security cum Main Gate Complex, Parking sheds for four wheelers and two wheelers, Main Plant and Peripheral Roads & Drains (Cast In-Situ, Pre-cast drains), Levelling & Grading, Pipe & Cable rack, paving and Miscellaneous works at 1X800 MW DCRTTP Yamuna Nagar, Haryana.						
ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
2400	ROAD WORKS: Road works including all labour, material (unless otherwise specified in BOQ/contract specification), equipment etc. as per specification, drawings and as directed by engineer - in - charge. Note: Cement shall be issued by BHEL free of cost (unless otherwise specified in BOQ Item Description).					
2401	Preparation of sub grade by excavating earth to required depth for all types of soil/ rock, dressing to camber and consolidating the base including making good the undulation etc and disposal of surplus earth within a lead upto 1 km etc. all complete.	CUM	6,110			0.0866702099
A2404	Providing & laying granular sub base (GSB) course in layers of required thickness with crushed stone aggregates (Grading-I complying MORTH specification for road and bridge works), stone screening & blinding material including screening, sorting, spreading to template & compacting to achieve 95% standrad proctor density all complete as per specification, drawings and as per direction of Engineer-in-charge.	CUM	1,585			0.7815655881
A2405	Providing & laying granular base course in layers of required thickness with stone aggregate (Grading -II complying MORTH specification for road and bridge works), stone screening and blinding material including screening sorting, spreading to template and & compacting to achieve 95% standrad proctor density including carriage, spreading and consolidation of blinding material moorum etc all complete.	CUM	1,984			0.9975162180
A2413	Supplying and laying 450mmx250mmx500mm deep precast concrete kerb stone of grade M25 with 20 mm nominal size stone aggregate and of shape as per detailed drawing including fixing with cement mortar (1:6) in 13mm thick joints, finishing of joints with neat cement paste, making drainage opening where required etc all complete.	RM	3,700			0.4852459917
2415	Supply and laying 150mm dia R.C.C NP-2 type Hume pipe in raised shoulders as rain water drains as per detailed drawing including fixing with cement mortar (1:3) in 13mm thick joints, finishing of joints with neat cement paste etc all complete. Payment Break-up - a) On receipt of materials at site - 50%; b) On completion of erection & fixing - 50%.	RM	495			0.1179010683
A2415	Providing, laying light duty non pressure NP3 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc all complete for following. Payment Break-up - a) On receipt of materials at site - 50%; b) On completion of erection & fixing - 50%.					
A2415-a	200mm dia	RM	30			0.0093058964
A2415-Aa	250 mm dia	RM	50			0.0207437158
A2415-b	300mm dia	RM	30			0.0149354754
A2415-c	450mm dia	RM	30			0.0190443007
A2415-d	600mm dia	RM	30			0.0234949468
A2415-e	900mm dia	RM	30			0.0317544531
A2418	Concrete of grade M20 (1 part cement, 1.5 part sand, 3 parts of 40 mm graded aggregate by volume) as levelling course below shoulders. (Cement will be supplied by BHEL free of cost as per TCC)	CUM	550			0.4193582920
2419	Providing and laying cement concrete of grade M30 using 20 mm nominal size stone aggregate with approved admixture (if required), provision for necessary joints including compaction, finishing to lines and grades, curing and providing & fixing formwork etc. all complete. (Excluding the cost of reinforcement and dowel bar) (Cement will be supplied by BHEL free of cost as per TCC)	CUM	3,800			3.2623189409
2421	Providing & laying dry lean cement concrete of grade M15 with 20 mm nominal size graded stone aggregate over a prepared sub-grade including compaction, finishing, curing etc all complete. (Cement will be supplied by BHEL free of cost as per TCC)	CUM	1,500			1.1628882522
A2422	Providing and laying Impermeable plastic sheeting 125 microns thick laid flat without creases as per IRC 15 etc all complete as per specification, drawing and as directed by Engineer. Payment Break-up: a) On receipt of material at site - 60% b) On complete execution as per item description - 40%	SQM	10,000			0.0382766250

PART-B						
PROJECT: 1X800 MW HPGCL, DCRTPP, Yamuna Nagar,Haryana,INDIA						
BOQ CUM RATE SCHEDULE (PRICE BID)						
SCOPE OF WORK:- Balance Civil, Structural and Architectural Works for Compressed Air System ,Fire Protection System including Pump Houses , Fuel Oil System including Day Oil Tank and Pump House, Chemical Lab, Ammonia Unloading & Storage, H2 Cylinder Storage Shed, Raw Water System including Pump House ,Fire Protection and Detection System, HVAC System including Air Washer Building, Security cum Main Gate Complex, Parking sheds for four wheelers and two wheelers, Main Plant and Peripheral Roads & Drains (Cast In-Situ, Pre-cast drains), Levelling & Grading, Pipe & Cable rack, paving and Miscellaneous works at 1X800 MW DCRTPP Yamuna Nagar, Haryana.						
ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
A2423	Providing and fixing in position MS dowel bar reinforcement including surface painted with bitumen and greasing, dowel end caps with cotton fills etc all complete as per specification, drawing and as directed by Engineer. (Supply of R/F steel in Contractor's scope) Payment Break-up: a) On receipt of material at site - 60% b) On complete execution as per item description - 40%	MT	30			0.5883433252
A2424	Providing, straightening, cutting, bending, placing in position at any level, binding in position of steel reinforcements of TMT steel of grade Fe-500D / Fe-550D confirming to IS:1786 including cost of binding wire, labour, scaffolding, transportation to & from stores etc all complete as per specification, drawing and as directed by Engineer. (Supply of R/F steel in Contractor's scope) Payment Break-up: a) On receipt of material at site - 60% b) On complete execution as per item description - 40%	MT	75			1.4708583129
A2425	Providing, straightening cutting, bending, placing in position at any level, binding in position of steel reinforcement of mild steel reinforcements including cost of binding wire, labour, scaffolding transportation to & from stores etc all complete as per specifications, drawings and as directed by Engineer. (Supply of R/F steel in Contractor's scope) Payment Break-up: a) On receipt of material at site - 60% b) On complete execution as per item description - 40%	MT	3			0.0588343325
A2426	Providing & installation of bitumen impregnated fibre board of 25mm thickness confirming to IS 1838 as joint filler including nailing, coating of both faces with coal tar pitch/bitumin etc. all complete as per specification, drawing and as directed by engineer. Payment Break-up: a) On receipt of material at site - 60% b) On complete execution as per item description - 40%	RM	3,800			0.1867411643
A2427	Providing and filling in position hot applied bitumen sealing compound (Grade A) of specified thick confirming to IS 1834 including cleaning, mixing, heating, pouring/injecting sealing compound in gaps in joints, sealant primer etc all complete as per specification, drawing and as directed by Engineer.	RM	3,800			0.0680386128
A2429	Providing & laying 60 mm thick precast interlocking concrete pavers (M30) of approved colour and pattern as per specification and recommendation of manufacturer.	SQM	4,300			0.9538892598
A2430	Providing and laying 100 mm thick sand layer below concrete pavers including compaction etc all complete as per specification, drawing and as directed by Engineer.	SQM	4,300			0.1406836676
A2431	Providing and fixing sign boards conforming to relevant Indian standards along the road (in both English and local Indian language), including cantilever type MS support, painting etc. all complete as per specification, drawings and as per direction of engineer-in-charge.	EACH	50			0.0456318857
A2432	Dismantling of existing road consisting of premix carpet, kerb stone/ brick on edge, bitumen macadem course, WBM, preparing subgrade to receive new WBM including camber consolidation including disposal of debris within a lead of 1 km etc all complete.	SQM	100			0.0031468440
2600	LEVELING & GRADING: Levelling & grading works including all labour, material (unless otherwise specified in BOQ/contract specification), equipment etc. as per specification, drawings and as directed by engineer - in - charge.					
A2602	Earth work in stripping of top soil upto a maximum depth of 0.50m below ground level so as to exclude all debris, grass, vegetation, bushes trees (up to girth 300 mm) including roots and organic materials etc for leveling and grading including dressing to specified levels & grades and compacting the graded/stripped surface by manual/mechanical means, disposal of stripped materials within a lead upto 1km etc all complete as per specification, drawing and as directed by the engineer-in-charge.	SQM	11,471			0.0878427620
2610	Extra over ST No. 2601 and 2602 for carriage of unserviceable material/earth for every 500m or part there of beyond an initial lead of 1km.	CUM	9,028			0.0188925741
	Total				₹ -	100.0000000000

PREAMBLE FOR BOQ CUM RATE SCHEDULE	
1	Preamble for the Schedule of Quantities/BOQ Cum Rate Schedule:
1.1	Details of the items in the BOQ Cum Rate Schedule shall be read in conjunction with the Corresponding Consultants/ Customer specifications, drawings and other documents and shall have precedence over any contrary statement mentioned anywhere in this document.
1.2	The work shall be carried out as per construction drawings, specifications, the description of the items in this schedule and/or Engineer's instructions, Drawings enclosed with these documents are only indicative giving some idea of the type of work involved. The layout, sizes and details of the building, structures and foundations shown in tender drawings may vary at a large extent during actual construction. Final drawings will be issued progressively during the execution of the work.
1.3	Items of work provided in this schedule but not covered in the specifications shall be executed strictly as per instructions of the Engineer.
1.4	Unless specifically mentioned otherwise in the contract, the contractor shall quote his rates for the finished items and shall provide for the complete cost towards fuel, tools, tackle, equipment, constructional plant , temporary works, labour materials, levies , taxes , transport, layout, repairs, rectification, maintenance till handing over, supervision, shops, establishments, services, temporary roads, revenue expenses, contingencies, overheads, profits and all incidental items not specifically mentioned but reasonably implied and necessary to complete the works according to the contract.
1.5	The rate shall also be inclusive of carrying out topography survey of site to establish levels and coordinates at suitable intervals, form existing grid levels and coordinates furnished by the owner, establish bench marks, setting out the location and levels of the proposed structures, constructions and making references, pillars and other identification marks etc. No separate payment will be made towards the same.
1.6	The quantities of the various items mentioned in the BOQ cum Rate Schedule are approximate and may vary up to any extent or be deleted altogether. The overall variation in contract value on execution shall be dealt as per GCC. Contractor has to obtain prior approval of BHEL/ Customer before procurement of bought out items/ building materials.
1.7	BHEL Engineer's decision shall be final and binding on the contractors regarding clarification of items in BOQ cum Rate schedule with respect to the other sections of the contract.
1.8	In case of any discrepancy between item description, relevant specification, clarification shall be sought at tender stage itself. Otherwise it shall be assumed that the contractor has quoted for the more stringent requirement.

PROJECT: 1X800 MW HPGCL, DCRTPP, Yamuna Nagar,Haryana,INDIA							
Summary (Un-Priced Rate Schedule)							
Sl. No.	Item Description	Quantity	Units	Quoted Currency in INR / Other Currency	BASIC TOTAL AMOUNT In Figures To be entered by the Bidder Rs. P	TOTAL AMOUNT (For taxes refer Chapter-VIII of TCC) Rs. P	TOTAL AMOUNT In Words
1	2	3	4	5	6	7	8
1	TOTAL PRICE FOR ENTIRE SCOPE OF WORK AS PER TENDER NO. BHEL/CPC/YNR/C_BOP_Road_Drain/27/036 for BALANCE CIVIL, STRUCTURAL AND ARCHITECTURAL WORKS FOR COMPRESSED AIR SYSTEM ,FIRE PROTECTION SYSTEM INCLUDING PUMP HOUSES , FUEL OIL SYSTEM INCLUDING DAY OIL TANK AND PUMP HOUSE, CHEMICAL LAB, AMMONIA UNLOADING & STORAGE, H2 CYLINDER STORAGE SHED, RAW WATER SYSTEM INCLUDING PUMP HOUSE ,FIRE PROTECTION AND DETECTION SYSTEM, HVAC SYSTEM INCLUDING AIR WASHER BUILDING, SECURITY CUM MAIN GATE COMPLEX, PARKING SHEDS FOR FOUR WHEELERS AND TWO WHEELERS, MAIN PLANT AND PERIPHERAL ROADS & DRAINS (CAST IN-SITU, PRE-CAST DRAINS), LEVELLING & GRADING, PIPE & CABLE RACK, PAVING AND MISCELLANEOUS WORKS AT 1X800 MW DCRTPP YAMUNA NAGAR, HARYANA.	1.00	Total Price	INR		-	
Total in Figures					0.00		
Quoted Rate in Words							