

**TENDER SPECIFICATION  
BHEL: PSSR: SCT: 1607**

**FOR**

**Development of Storage Yard & other site enabling  
civil works including mess building**

**At**

**1 x 370MW Yelahanka CCPP, Karnataka**

**VOLUME-II**

**PRICE BID**

**Revision-01**



**BHARAT HEAVY ELECTRICALS LIMITED**

(A Government of India Undertaking)

Power Sector – Southern Region

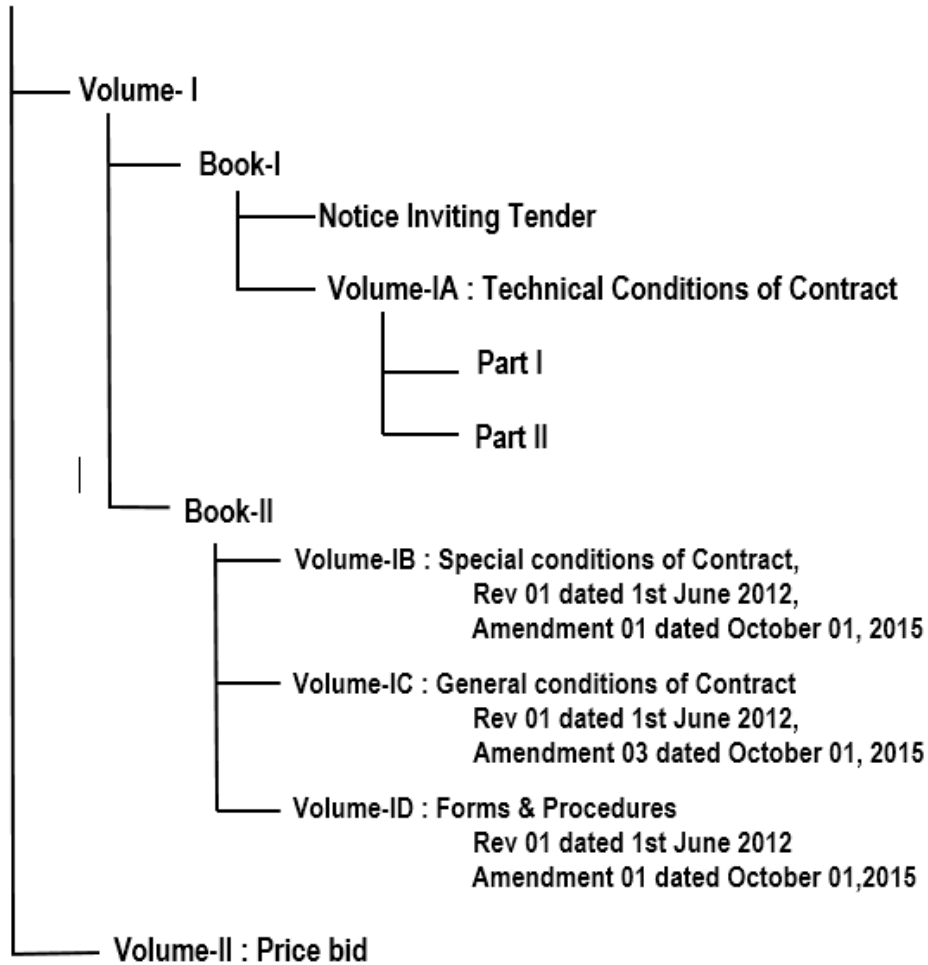
690, Anna Salai, Nandanam, Chennai – 600 035.

# PRICE BID

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## TENDER SPECIFICATION CONSISTS OF

Tender Specification



# PRICE BID

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**BHARAT HEAVY ELECTRICALS LIMITED**  
**(A Government of India Undertaking)**  
**Power Sector, Southern Region**  
**690, Anna Salai, Nandanam, Chennai – 35**

TENDER SPECIFICATION No.: BHEL: PSSR: SCT: 1607

For

Development of Storage Yard & other site enabling civil works including mess building for 1 x 370MW Yelahanka CCPP, Karnataka

One set of Tender documents consisting of

- |                         |            |
|-------------------------|------------|
| 1) TECHNOCOMMERCIAL BID | - 2 copies |
| 2) PRICE BID            | - 2 copies |

Book Sl no .....

Issued to  
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Refer NIT for Last date of submission

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For and on behalf of  
BHARAT HEAVY ELECTRICALS LIMITED

ADDITIONAL GENERAL MANAGER / SCT

Place: Chennai -35  
Date:

**Tender Specification BHEL:PSSR:SCT:1607 REV 01 for Foundation for office, stores,weigh bridge etc.,, Yard Development  
at 1 X 370 MW Yelahanka CCPP**

Ref.No.	Description	Unit	Qty.	Rate		Amount	
				(In Fig)	(In Words)	(In Fig)	(In Words)
1.0	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth upto 30 cm measured at a height of 1m above ground level and removal of rubbish upto a distance of 250 m outside the periphery of the area cleared.	SqM	6,000				
2.0	Felling trees of the girth (measured at a height of 1 m above ground level), including cutting of trunks and branches, removing the roots and stacking of serviceable material and disposal of unserviceable material as instructed by Engineer incharge.	--					
a)	Beyond 30cm girth and upto & including 60cm	Each	30				
b)	Beyond 60cm girth and upto & including 120cm	Each	20				

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				(In Fig)	(In Words)	(In Fig)	(In Words)
c)	Beyond 120cm girth and upto & including 240cm	Each	10				
d)	Above 240 cm girth	Each	10				
3.0	Earthwork excavation in all kinds of soils including ash (except hard rock, soft disintegrated rock) and depositing within an initial lead of 50 m for foundations, sewers etc., Rate to include baling, strutting, shoring, sectioning the sub grade to proper level, grade, watering & consolidating to receive the concrete bed and refilling the foundation, basement & trenches with excavated earth and consolidating, all as per standard specifications.	Cu.M	1,845				

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				(In Fig)	(In Words)	(In Fig)	(In Words)
4.0	Supply and filling good earth/murum approved by engineer in charge in layers not exceeding 300mm in loose thickness, consolidating each deposited layer by ramming and watering, for all leads & lifts as per the instructions of the engineer in-charge all complete. Item is inclusive of all statutory charges like royalty etc. all complete	Cu.M	30				
5.0	Back filling around foundations in plinths, trenches, drains etc to proper grade and level with selected good soil from compulsorily excavated earth within a lead of 50m free from shingle, salts, organic materials, roots, sod or any other foreign substance including re-excavating loose thickness, watering and ramming in layers of 15cm thickness compacted to 75% of relative density for non cohesive soil and 90% of its maximum dry density for cohesive soils by manual/ mechanical means, dressing etc complete.	Cum	1,106				
6.0	Supplying and filling in plinth with river sand under floors, including watering, ramming, consolidating and dressing complete.	Cum	166				

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				(In Fig)	(In Words)	(In Fig)	(In Words)
7.0	Providing and laying PCC of mix 1:4:8 using 40mm size hard broken granite stone jelly including ramming,levelling, curing etc., for flooring, and side drains including providing necessary slopes etc., complete as per standard specifications at heights.	Cu.M	82				
8.0	Providing and laying PCC; 100 mm thick; mix 1:2:4 using 40mm size hard broken granite stone jelly including ramming,levelling, curing etc., for flooring and foundations including providing necessary slopes etc., complete as per standard specifications at heights.	Cu.M	194				
9.0	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement of grade 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	Cu.M	165				
10.0	Centering and shuttering including strutting, propping etc. and removal of formwork for foundation and superstructure works	Sq.M	753				

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				(In Fig)	(In Words)	(In Fig)	(In Words)
11.0	Providing, straightening, cutting, bending, placing in position at any level, binding in position of tor steel reinforcements confirming of grade Fe-415 confirming to IS:1786 including cost of binding wire, labour, transportation to & from stores etc complete AND Fixing of embedments, inserts, pipe sleeves, angle pieces, anchor bolts of various diameters, plates of dimensions as required etc. including scaffolding, setting in position, transportation from BHEL site stores to work spot etc. all complete as per specifications, drawings and as directed by Engineer	MT	11.55				
12.0	Supply, Laying, spreading and compacting stone aggregate 63-45MM SIZE along with required screening of size 13.2mm & binding materials of specified sizes to WBM specifications including spreading in uniform thickness of hand picking, rolling with 3 wheeled road/vibratory roller 8-10 tonne in stages to proper grade and camber applying and brooming requisite type of screening/binding material to fill up interstices of coarse aggregate watering and compacting to the required density all complete for leads & lifts as per the instructions of engineer in charge.	Cu.M	800				

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Ref.No.	Description	Unit	Qty.	Rate		Amount	
				(In Fig)	(In Words)	(In Fig)	(In Words)
13.0	Providing 2.4 m high fencing with precast RCC post of 12.5x12.5 cm cross section of 1:2:4 (1 cement: 2 fine sand: 4 graded stone aggregate 20 mm nominal size) placed every 2.5 m center to center embedded in cement concrete blocks 35x35x45 cm of 1:4:8 (1 cement: 4 fine sand: 8 graded stone aggregate 40 mm nominal size), every 15th post last but one end post and corner post shall be strutted on both sides and end post on one side only and provided with 14 horizontal lines and two diagonals inter woven with horizontal wires of barbed wire 9.38 Kg per 100 m (min) between the two posts and fixed with GI staples, turn buckles etc., complete. Rate to include cost of precast post, earth work, concrete, chain and struts,labour charges etc., complete as per standard specifications. ( Agency must take an approval for the pre cast manufacturing unit from BHEL. )	Rmt.	600				
14.0	Supplying, fabricating steel gate upto 10.0 m wide as shown in the drawing transporting components to erection site and erection of fabricated steel work including all handling, leading, assembling, hoisting,erection in position and site welding/fastening, bolts wherever required as per drawing and specification. Rate to include providing PCC 1:4:8 for supporting the pillars, cost of raw steel, fabrication, erection, all consumables cement, labour charges etc., complete including synthetic enamel painting two coats over one coat of red oxide primer. (For the smaller gate proportionate rate shall be worked out on Sq.M basis)	Sq.M	50				

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				(In Fig)	(In Words)	(In Fig)	(In Words)
15.0	Supply of Pre-cast RCC concrete sleepers of size 150 x 200 x 1500mm as per enclosed drawing concrete mix of 1:2:4 grade (with 20mm down aggregate) inclusive of form work, mixing, casting, curing, reinforcement-4nos 10mm dia & stirrups 11nos-6mm dia and lifting facility and handling (loading, transportation & unloading) of cast blocks to handover to BHEL storage yard. Rate shall be inclusive of cost of material like cement, aggregate, reinforcement steel, loading, transportation & unloading at BHEL Stores, consumable, labour etc.( Agency must take an approval for the pre cast manufacturing unit from BHEL. )	No	600				
16.0	Providing and laying non pressure NP2 class( light duty ) RCC pipes with collars jointed with stiff of mixture of CM 1: 2 including testing of joints etc., complete.	--					
a)	250 mm dia RCC pipe.	Rmt.	20				

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				(In Fig)	(In Words)	(In Fig)	(In Words)
b)	450 mm dia RCC pipe	Rmt.	20				
17.0	Providing brick work in C.M 1 : 6 in foundation and superstructure using clay bricks as per standard specifications. Rate to include cost of scaffolding, labour, curing etc., complete.	Cum	85				
18.0	Providing plastering with CM 1 : 6, 15mm thickness all as per standard specifications, including rendering smooth, rounding of corners etc., complete.	Sq.M	715				
19.0	Supplying and painting distemper two coats over a priming coat using best quality oil bound washable distemper of approved make and colour. Rate to include cost of cleaning and preparation of the surface, applying putty, labour, materials etc., all complete.	Sq.M	215				

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Ref.No.	Description	Unit	Qty.	Rate		Amount	
				(In Fig)	(In Words)	(In Fig)	(In Words)
20.0	Providing ceramic floor tiles matt finish of size 300x300mm (min-8mm) - of 1st quality conforming to IS:15622 of approved make in colours such as White, Ivory, Grey, Fume Red Brown, to be laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand) including pointing the joints with white cement and matching pigment etc all complete.	Sq.M	70				
21.0	Providing supplying and fixing false ceiling of GI grid construction of main ceiling tees of size 25x38x1.8mm cross tees of size 25x25x1.8mm and wall angles of size 25x25x1.8mm forming a grid of 600x600mm panels with various members for fastenings and fittings to minute tolerances, suspended from the steel purlins / trusses with 6mm aluminum painted MS rods, J bolts, nuts, washers and all necessary hardware complete with perforated particle board ceiling tiles 12mm thick complete and as directed by engineer in charge.	Sq.M	64				
22.0	Providing and fixing ISI marked flush door shutters conforming to IS : 2202 (Part I) non-decorative type, core of block board construction with frame of 1st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters : 35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws. Rate to include cost of labour, painting one priming coat and two coats of ready mixed synthetic enamel paint of approved make and colour.	Sq.M	7				

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Ref.No.	Description	Unit	Qty.	Rate		Amount	
				(In Fig)	(In Words)	(In Fig)	(In Words)
23.0	Supplying and fixing of steel windows and ventilators with steel sections as per IS:1038, IS:1361 & IS:7452 latest revision with outer frame angle 30x30x5 mm and flat of size 25x2 mm and covered with fully glass including cost of all materials, fabrication charges, over one coat of red oxide paint, all taxes, lead lift etc complete as directed by engineer in charge	Sq.M	8				
24.0	Providing and fixing wash basin of size 550x400 mm with CI brackets with 15 mm CP brass pillar caps, 52 mm CP brass waste of standard pattern including painting of fittings and brackets, cutting and making good the walls wherever required	Each	2				
25.0	Supplying and fixing in position 15mm nominal size down type brass bib cock of approved make and quality (leader, dripless, or orient) as per standard specifications. Rate to include cost of bib cock, jointing materials, labour for carrying, fixing, and testing etc., complete.	Each	3				
26.0	Supplying at site of work & fixing in position of 100X75mm NAHANI trap with CI gratings as per standard specifications. Rate to include cost of all materials, labour for fixing, testing etc., complete.	Each	2				

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				(In Fig)	(In Words)	(In Fig)	(In Words)
27.0	Providing and fixing Chlorinated PVC pipes having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings including fixing the pipe with clamps all complete	--					
a)	32 mm dia	Rmt.	190				
28.0	Supplying and fixing sintex tank at site of work for storing water.Rate to include cost of tank and other incidental charges etc., complete.	--					
a)	1000 Litres capacity.	Nos	1				

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				(In Fig)	(In Words)	(In Fig)	(In Words)
29.0	Construction of the following	--					
a)	Constructing soak pit 1.20X1.20X1.20m filled with brickbats including S.W. drain pipe 100mm diameter and 1.20m long complete as per the drawing and as instructed by BHEL Engineer incharge	Nos	2				
b)	Construction of a septic tank of size 6.00 x 2.40 x 2.70 metre and a cess pool of 3. 00 metre dia as per drawing no. BHE / SR / CIVIL . Rate to include cost of excavation, PCC, brick work, RCC works, reinforcement, SW pipes, AC pipes, cowl, filling with aggregates, cover slab, testing of the septic tank etc. complete all as per drawing	Nos	1				

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				(In Fig)	(In Words)	(In Fig)	(In Words)
30.0	Supplying raw steel, fabricating steel work and transporting to erection site and erection of fabricated steel work including all handling conveying, loading, assembling, hoisting, erecting in position and site welding and / or bolting wherever required for tubular roof truss,etc., including applying a primer coat of approved steel primer complete as per standard, standard, specifications & instructions of engineer. Rate to include cost of all materials, leads, lifts, all labour charges etc.	MT	0.38				
31.0	Providing corrugated G.S. sheet roofing including vertical / curved surface fixed with polymer coated J or L hooks, bolts and nuts 8 mm diameter with bitumen and G.I. limpet washers or with G.I. limpet washers filled with white lead, including a coat of approved steel primer and two coats of approved paint on overlapping of sheets complete (up to any pitch in horizontal/ vertical or curved surfaces), excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.	--					
a)	0.63 mm thick with zinc coating not less than 275 gm/ m <sup>2</sup>	Sq.M	80				

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				(In Fig)	(In Words)	(In Fig)	(In Words)
--	ELECTRICAL WORKS	--					
32.0	Supplying and wiring with 1/ 18 gauge PVC insulated unsheathed copper conductor cable in rigid PVC conduit pipe for 14 lights and 5 fans and 02 exhaust fans with 5 amps flush type switch in a suitable switch board	Points	21				
33.0	Supplying and wiring with 7 / 22 PVC insulated copper unsheathed stranded conductor cable in rigid PVC conduit pipe 15 amps combined 5 amps (6 pin) flush type two in one switched socket with indicator of reputed make on a suitable surface mounting PVC/ wooden box with continuous run of number 14 GI wire earthing .	Points	10				
34.0	Supplying and wiring 3 / 22 G PVC insulated copper unsheathed conductor cable in rigid PVC conduit pipe for 5 amps 3 pin switched socket of plate switch type with indicator of reputed make on a suitable surface mounting PVC/ wodden box with continuos run of number 14 GI wire for earthing	Points	6				

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				(In Fig)	(In Words)	(In Fig)	(In Words)
35.0	supply of Ultra violet Type Insect catcher	Nos	2				
36.0	Supply and fixing of a single 4 feet 40 w patty type tube light fitting with assembly, patty, electronic choke of reupte make Philips/ Cromton Greaves / Havells on ceiling / wall	Nos	10				
37.0	Supply and fixing of water tight bulk â head fitting with guard and glass suitable for and with 5/7 W CLF lamp	Nos	4				
38.0	Supply and fixing of 1200 mm sweep ceiling fan of reputed make of cromton greaves /usha/ orient / hevells with suitable stepped type anchor classic / supreme / rider make electronics regulator.	Nos	5				

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				(In Fig)	(In Words)	(In Fig)	(In Words)
39.0	Supply and fixing of 600 mm heavy duty single phase exhaust fan of reputed make of cromton greaves / havells /usha / Almonord	Nos	2				
40.0	Supply and fixing of 30 A TPN MCB Metal clad Main Distribution Board with one no 30 TPN MCB as incomming and 18 nos of 16A SP MCB as outgoing with 03 nos of indication lamp for incomming power supply , neutral link , earthng etc .	Nos	1				
41.0	Supply & erection of 3Mtr Long 40mm dia medium class GI Pipe erathing with alternate layer of char coal & salt with brick chamber with both side plastering and cover plate . Double Earthing with 8 SWG GI wire to Main distribution board.	set	1				
--	DEMOLISHING/ DISMANTLING WORKS	--					

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				(In Fig)	(In Words)	(In Fig)	(In Words)
42.0	Demolishing of RCC manually/by mechanical means including stacking of steel and disposal of unserviceable materials within 50m lead as per the instrutions of Engineer in charge	CuM	68				
43.0	Demolishing of brickwork in cement mortar manually/by mechanical means including stacking of steel and disposal of unserviceable materials within 50m lead as per the instrutions of Engineer in charge	CuM	10				
44.0	Dismantling all pipes such as GI/MS/C.I. or asbestos rain water pipe of about 350mm dia with fittings and clamps including stacking the material within 50 metres lead.	Rmt.	70				
45.0	Dismantling of barbed wire or flexible wire rope or fencing of any type including making rolls and stacking AND dismantling the fencing posts/struts and dismantling of concrete manually/by mechanical means including stacking of steel and disposal of unserviceable materials within 50m lead as per the instrutions of Engineer in charge	Mtrs	36				

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Ref.N o.	Description	Unit	Qty.	Rate		Amount	
				(In Fig)	(In Words)	(In Fig)	(In Words)
<b>TOTAL AMOUNT (In Figure)</b>							
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