

TENDER SPECIFICATION

BHEL PSSR SCT 1839

FOR

Development of Additional Storage Yard along with Internal Roads & drains, Pre-cast concrete sleepers, fencing, gate and construction of foundation for Storage Shed – 4 nos. and office shed -1 nos.

AT

5 x 800 MW Yadadri Thermal power station Veerlapalem village, Nalgonda District, Telangana State

PRICE BID VOLUME –II

TECHNOCOMMERCIAL BID - Consists of Book- I & Book- II

Book- I Consists of

- Notice Inviting Tender
- Volume-IA: Technical Conditions of Contract

Book-II consists of

- Volume-IB : Special conditions of Contract,
Rev 01 dated 1st June 2012
Amendment 01 dated 1st October, 2015
- Volume-IC : General conditions of Contract
Rev 01 dated 1st June 2012,
Amendment 03 dated 1st October, 2015
- Volume-ID : Forms & Procedures
Rev 01 dated 1st June 2012
Amendment 01 dt 1st October, 2015



BHARAT HEAVY ELECTRICALS LIMITED

(A Government of India Undertaking)

Power Sector – Southern Region

690, Anna Salai, Nandanam, Chennai – 600 035

PRICE BID

BHARAT HEAVY ELECTRICALS LIMITED

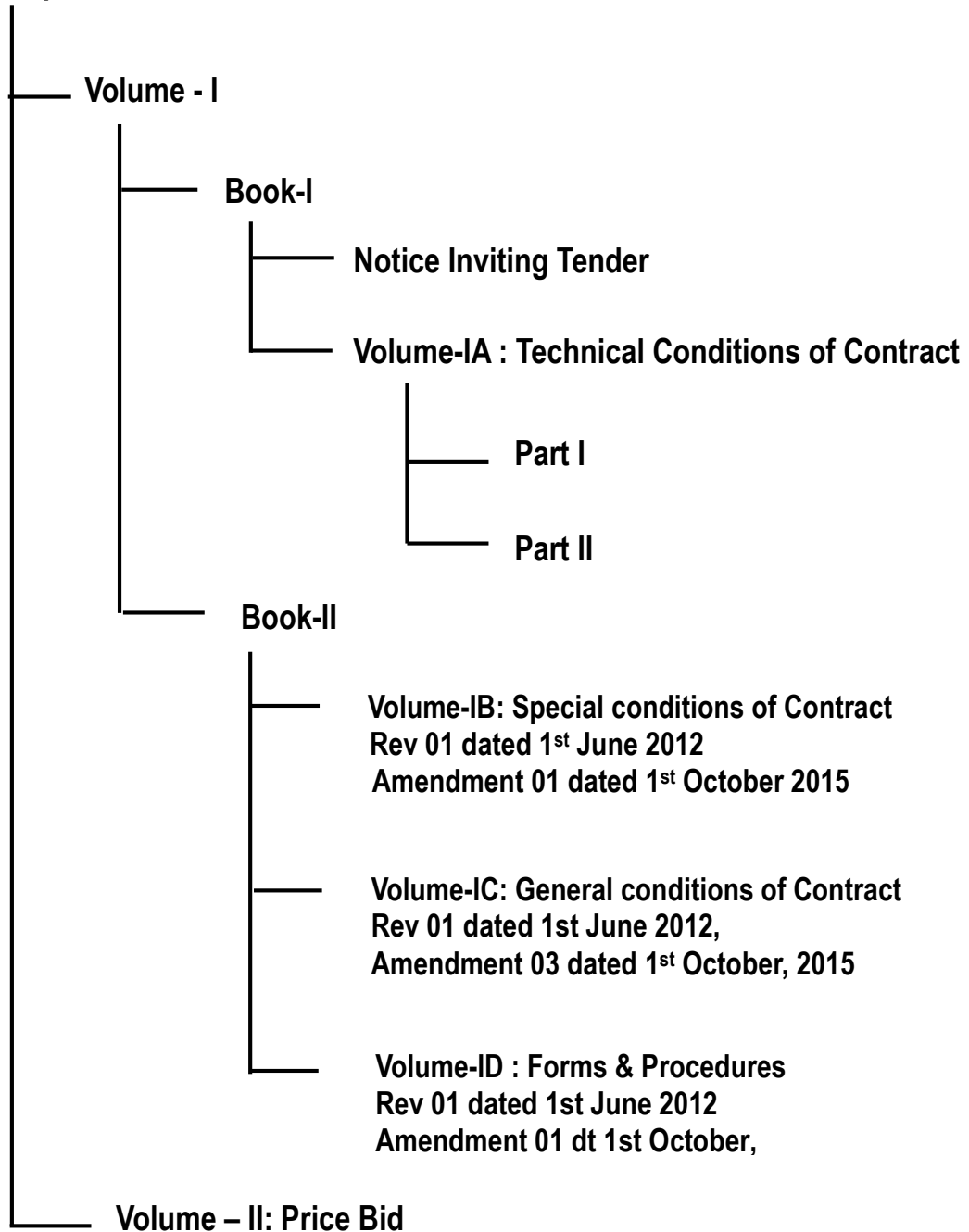
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TENDER SPECIFICATION CONSISTS OF

Tender Specification



PRICE BID

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PART A

Instruction to Bidders:

1. The quantity indicated in the BOQ / Price bid Part-C is approximate only and is liable for variation. Payment will be as per actual quantity executed as certified by BHEL Engineer.
2. The 'Total amount' mentioned in Part-B of the Price Bid corresponds to the entire Bill of Quantities (BOQ) given in Part -C of the Price Bid.
3. Bidders shall quote 'Total Amount' in the format for Price Bid available in the e-procurement portal. Bidders may also quote 'Total Amount' in the format given in Part -B of this document (Optional). Bidders shall only quote 'Total Amount' in the format given in PART -B of the price bid. Any other entry elsewhere in the price bid shall be treated as Null and Void. Quoting of rates in any other form / formats will not be entertained.
4. BHEL has pre-fixed the weightages for the amount of individual items of Bill of Quantity with respect to the 'Total Amount' in Part-C.
5. Based on the pre-fixed weightages, the amount for the individual items of the Bill of Quantity shall be arrived at. This amount shall be rounded off to the nearest rupee.
6. Based on the quantities of individual item and the amount arrived in SI No: 4 above, unit rate of individual items shall be derived. This unit rate shall be rounded off to four decimal places.
7. Bidders to note that this is an item rate contract. Payment shall be made for the actual quantities of work executed at the unit rate arrived at as per SI No.6 above.

Part B: Format to quote Total Amount

**Tender Specification BHEL:PSSR:SCT:1839 for Yard Development
at 5 X 800 MW Yadadri TPS**

Total Amount for the entire Bill of Quantities(BOQ) given in Part C

In Figures

In words

Note :

Bidders to quote Total Amount in this format given above, which shall be taken into account for evaluation and awarding and hence, shall be complete in all respect for the full scope defined in specification and in accordance with all terms & conditions of tender.

Date

SIGNATURE OF BIDDER WITH SEAL

Part C : Bill of Quantities

**Tender Specification BHEL:PSSR:SCT:1839 for Yard Development
at 5 X 800 MW Yadadri TPS**

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
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 500 m outside the periphery of the area cleared.	SQM	50,000	.0065028
2.0	Felling trees beyond 30 cm girth upto and including 60 cm 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 directed by BHEL engineer in charge.	NOS	10	.0000458
3.0	Earth work in excavation in all types of soil including ash which can be excavated by any means including setting out, levelling, dewatering shoring & strutting (wherever required), dressing the sides & bottom, all lifts, ramming/compacting the excavated bottom, stacking, disposal of surplus excavated materials within a lead upto 500 m, spreading/levelling of disposed materials etc all complete.	CUM	12,353	.0428377
4.0	Earth work in excavation in soft rock (rock without any recovery of excavated materials in the form of hard stone/boulder) including weathered rock which can be excavated by means of crow bar, pick axe, pneumatic rock breaker attachment with excavator machine etc but does not require chiselling or blasting including setting out, levelling, dewatering (wherever required), shoring & strutting (wherever required), dressing the sides & bottom, all lifts, Earth work In excavation, backfilling and disposal including necessary ramming/compacting the excavated bottom, stacking, disposal of surplus excavated materials within a lead upto 500 m, spreading / levelling of disposed materials etc all complete as per the instructions of BHEL Engineer in charge.	CUM	3,000	.0201635
5.0	Earth work in excavation in hard rock requiring blasting (but excluding controlled blasting) including wedging, line drilling, pre shearing etc as required, setting out, levelling, dewatering (wherever required), dressing the sides & bottom, all lifts, necessary licenses/statutory clearances for blasting, supply, storage & handling of blasting materials, stacking/disposal of surplus excavated material within a lead upto 500m, spreading / levelling of disposed materials etc all complete for following depths below ground level as per the instructions of BHEL Engineer in charge.	CUM	500	.0058119

Part C : Bill of Quantities**Tender Specification BHEL:PSSR:SCT:1839 for Yard Development
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Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
6.0	Supplying and filling with selected good earth of approved quality in layers not exceeding 300 mm loose thickness using borrowed soil (borrowed soil to be arranged by the bidder) and compacted so as to achieve at least 95 % maximum dry density as per IS2720 (Part-VII) including royalty/seignorage fee (if any), sorting, spreading, breaking clods, watering, ramming/compaction by manual/mechanical means, dressing, finishing to required lines, grades and slopes, tesing etc all complete as per the instructions of BHEL Engineer in charge.	CUM	10,000	.0617658
7.0	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 1 Km 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 as per the instructions of BHEL Engineer in charge.	CUM	1,000	.0041888
8.0	Supplying and filling in plinth with river sand under floors, including watering, ramming, consolidating and dressing complete as per the instructions of BHEL Engineer in charge.	CUM	584	.0217502
9.0	Providing and laying PCC of mix 1:4:8 using 20mm size hard broken granite stone jelly including formwork, ramming, levelling, curing etc., for foundation, flooring, side drains etc. including providing necessary slopes etc., complete as per standard specifications at heights.	CUM	470	.0518897
10.0	Plain Cement Concrete of grade M10/1:3:6 using 20mm aggregate as levelling course, under water retaining structures, equipment foundations, under foundations/floors etc. all complete as per the instructions of BHEL Engineer in charge.	CUM	60	.0071614
11.0	Providing and laying PCC of mix 1:2:4, 100 mm thick for grade slab, flooring etc. using 20 mm size hard broken granite stone jelly ramming, levelling, curing etc. for flooring including providing necessary slopes etc, complete as per standard specifications at heights and as per the instructions of BHEL Engineer in charge.	CUM	969	.1254408

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Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
12.0	Providing and laying damp-proof course 40 mm thick with cement concrete 1:2:4 (1cement : 2 coarse sand : 4 graded stone aggregate 12.5 mm nominal size) as per relevant IS standard specification and as per the instructions of BHEL Engineer in charge.	SQM	60	.0003981
13.0	Providing and laying Nominal Mix cement concrete conforming to IS:456 & IS 10262-2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in foundations/substructure, grade slab, paving, drains, under floors etc at all level below finished floor level, any shape, position or thickness etc complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following,	0.0		
a)	Equivalent to M-25 grade	CUM	460	.0701513
b)	Equivalent to M-30 grade	CUM	320	.0492265
14.0	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement of grade 1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size) as per the drawings and as per the instructions of BHEL Engineer in charge.	CUM	40	.0058873
15.0	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) as per the drawings and as per the instructions of BHEL Engineer in charge..	CUM	40	.0055654
16.0	Fairface form work with good quality water proof ply wood of required thickness and smooth surface below finished ground floor level for foundations, footings, base of columns, walls, columns, pilasters, beams, mass concrete, trenches etc. as per the instructions of BHEL Engineer in charge.	SQM	2,880	.0156439

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Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
17.0	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 all as per specifications, drawings and as directed by Engineer in charge. Reinforcement Steel will be provided by BHEL as a free issue. Steel provided may be in rusted condition and needs to be cleaned by the contractor. Contractor to include cost of cleaning within the quoted rates.	MT	51	.015719
18.0	Supply 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,etc. all complete as per the drawings and as per the instructions of BHEL Engineer in charge.	KGS	1,500	.0017094
19.0	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 as per the drawings and as per the instructions of BHEL Engineer in charge.	CUM	546	.0552098
20.0	Providing plastering with CM 1 : 6, 15mm thickness all as per standard specifications, including rendering smooth, rounding of corners etc., complete as per the drawings and as per the instructions of BHEL Engineer in charge.	SQM	1,430	.0082873
21.0	Supplying and painting distemper two coats over and including water thinnable priming coat with cement primer 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 as per the relevant IS standards and as per the instructions of BHEL Engineer in charge.	SQM	1,430	.0032111
22.0	Providing & laying water bound macadam base course in layers of required thickness with stone aggregate 63mm to 40mm size(IRC 19 - grading -1), stone screening and blinding material including screening sorting, spreading to template and consolidation with road roller including carriage, spreading and consolidation of blinding material moorum etc compacting to the required density all complete for leads & lifts as per the instructions of engineer in_charge. all complete as per the drawings and as per the instructions of BHEL Engineer in charge.	CUM	4,000	.1428799

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Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
23.0	Supply of Pre-cast RCC concrete sleepers of size 150 x 200 x 1500mm as per enclosed drawing (with 20mm down aggregate) inclusive of form work, mixing, casting, curing, reinforcement-4nos 10mm dia & stirrups 11nos-8mm 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, loading, transportation & unloading at BHEL Stores, consumable, labour etc. Reinforcement Steel will be provided by BHEL as a free issue. Vendor to include cost of cleaning the rust from steel.	NOS	13,000	.128077
24.0	Shifting angles post from BHEL yadadri stores, 2.5 m (above GL) high fencing with angle iron post (65x65x6) placed every 2 m center to center embedded in rock by drilling hole of minimum diameter 100 mm to a minimum depth of 450 mm. The drilled hole to be grouted with a cement slurry mix of 1:1 after placement of the angle. 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 G.I. chain link fencing of required width in mesh size 50x50 mm made of G.I wire of dia 4mm between the two posts and fixed with GI staples, turn buckles etc., complete. Rate to include cost of earth work, drilling, grouting, concrete, chain and struts,labour charges etc., complete as per standard specifications, drawings and as per the instructions of BHEL Engineer in charge.Painting of post(yellow colour) to be included under the scope of the contractor within the quoted rate.	RM	1,700	.0505632
25.0	Shifting angles post from BHEL yadadri stores, 1.5 m (above GL) high fencing with angle iron post (65x65x6) placed every 2 m center to center embedded in rock by drilling hole of minimum diameter 100 mm to a minimum depth of 450 mm. The drilled hole to be grouted with a cement slurry mix of 1:1 after placement of the angle. 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 5 nos horizontal lines and two diagonals interwoven with horizontal wires,of barbed wire of Min 9.8kg per 100 RM (minimum) between the two posts fitted and fixed with G.I. staples, turn buckles etc. complete. Rate to include cost of earth work, drilling, grouting, concrete, barbed wire and struts,labour charges etc., complete as per standard specifications, drawings and as per the instructions of BHEL Engineer in charge.. Painting of post(yellow colour) to be included under the scope of the contractor within the quoted rate.	RM	3,100	.0463367

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Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
26.0	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). Steel for fabricaiton of gate needs to be provided by the contractor.	SQM	40	.0026352
27.0	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. 250 mm dia RCC pipe.	RM	200	.0016605
28.0	same as above item.27 but for 450 mm dia RCC pipe	RM	10	.0001505
29.0	Constructing soak pit 1.20X1.20X1.20m filled with brickbats including S.W. drain pipe 100mm diameter and 1.20m long complete as per standard design and as per the instructions of BHEL Engineer in charge..	NOS	1	.0000497
30.0	Constructing brick masonry chamber for underground C.I. inspection chamber and bends with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg), R.C.C. top slab with 1:2:4 mix (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand), finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design. Inside dimensions 500x700 mm and 45 cm deep for pipe line with one or two inlets. With common burnt clay F.P.S. (non modular) bricks of class designation 7.5.	NOS	6	.0006936

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Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
31.0	Supply & installation BIO DIGESTER of approved make around 3000litres capacity including tank and plumbing works etc,. Cost to include excavation in all type of soils/soft rock/hard rock and back filling,PCC,SW pipes, AC pipes,etc., complete as required as per standard specifications, and as per the instructions of BHEL Engineer in charge. Quote is lumpsum.	NOS	1	.0023488
32.0	Supply and connecting ISI mark 80 NB GI pipes from Underground Sintex water storage tanks to BHEL mess with all fixtures , consumables , connection hardware, couplings , union ,bends, elbows etc for leakproof erection all complete as per standard specifications and as per the instructions of BHEL Engineer in charge.	RM	720	.0112744
33.0	Supply,erection ,commissioning , trail run and handover of 10 HP heavy duty water supply 3 phase axially split case motor pump of standard make with ISI mark such as Crompton Greves / Kirloskar including foundation for pump and necessary fittings, consumables , T & Ps and hardware fixtures etc all complete as per standard specifications, manufactures specification and drawings and as per the instructions of BHEL Engineer in charge.	NOS	2	.0021923
34.0	Supply & fixing of brass ball valve for 80 NB pipe and automatic limit switch for pump control with all wiring cabling etc all complete as per standard specifications, as per the instructions of BHEL Engineer in charge.	NOS	4	.0012527
35.0	Supply and installation of poratable waterless urinals (excluding lifting at higher elevations like boiler/ power house structures etc. lifting & placing in BHEL scope) at shown location at site as per the instructions of BHEL Engineer in charge.	nos	50	.0313179
TOTAL Weightage				0.9999998