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TENDER SPECIFICATIONS

TENDER NO. BHEL:NR(SCT):OBRA(RM):ENABL:497

FOR

“WORKS FOR DEVELOPMENT AND CONSTRUCTION OF BHEL STORE SHEDS FOR R&M WORKS AT OBRA TPS, 5X200 MW UNITS(UPRVUNL)”.

PART II – PRICE BID



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



ISO 9001-2000, ISO
14001 and OHSAS
18001 certified
company
SubContract and
Purchase Deptt.

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

PURCHASER OF THIS TENDER DOCUMENT IS ADVISED TO CHECK AND ENSURE COMPLETION OF ALL PAGES OF TENDER DOCUMENT AND REPORT ANY DISCREPANCY TIMELY FOR CORRECTIVE ACTION, IF ANY, TO THE ISSUING AUTHORITY BEFORE THE BIDS ARE SUBMITTED. ORIGINAL COPY OF TENDER DOCUMENT COMPLETE IN ALL RESPECTS MUST BE SUBMITTED BACK AS PART OF THE BID WITHOUT WHICH THE SAME IS LIABLE TO BE REJECTED BY BHEL.

THIS TENDER SPECIFICATION ISSUED TO:

M/S-----

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

PROCEDURE FOR SUBMISSION OF SEALED TENDERS:

The tenderers must submit their tenders as required in **two parts** in separate sealed covers **prominently superscribed as Part-I Technical bid and Part-II ,Price bid** also indicating on each of the cover tender specification no., date and time as mentioned in tender notice.

TECHNICAL BID (COVER-I)

Except **Price bid Part-II**, complete set of tender document consisting of General conditions of Contract, “Technical specification & Special terms and condition” (Part-I) issued by BHEL shall be enclosed in **Part I Technical Bid only**. All schedules, data sheets and details called for in the specification shall also be submitted along with technical bid. All details / Data / Schedules including offer letter duly signed and stamped are to be **submitted in duplicate**.

PRICE BID (COVER-II)

Tenderers may please note that price bid is **to be submitted only in original copy** of Tender i.e. Price bid (Part-II) issued by BHEL and no duplicate copy of same is required.

These Two separate covers i.e. cover I & II shall together be enclosed in a **third envelope (Cover-III)** and this sealed cover shall be superscribed with tender specification No., due date, time and submitted to officer inviting tender as indicated in tender notice on or before due date as indicated.

TENTATIVE BOQ FOR 2 NO. CLOSED STORES AT OBRA TPS (5X200 MW) FOR R&M WORKS

S.NO.	DESCRIPTION OF ITEM	QTY	UNIT	RATE (RS.)	AMOUNT (RS.)
	CIVIL WORK				
	EARTHWORK				
1	Surface dressing of the ground including removing vegetation and in-equalities not exceeding 15 cm deep and disposal of rubbish, lead upto 50m and lift upto 1.5m, in all kinds of soil.	1000	sqm		
2	Earth work in excavation in all types of ordinary and hard soil by mechanical means (Hydraulic excavator)/manual means including stacking the excavated soil, dressing of sides and ramming of bottom, dewatering of accumulated water from any source and keeping the surface dry for subsequent works such as concreting form work etc. and disposal of surplus excavated soil as directed, disposed soil to be neatly levelled and dressed lead upto 50 meters and lift upto 1.5meter complete.	160	Cu.M		
3	Back filling available excavated earth in trenches, plinth, slides of foundations etc., including re-excavating the deposited soil excavated earlier, breaking clods, laying at all depths and heights in layers not exceeding 20 cm indepth, consolidating each deposited layer by ramming and watering complete lead upto 50 Metre and lift upto 1.5 Meter.	80	Cu.M		
4	Disposal of surplus excavated earth and debris including re-excavating the deposited soil earlier, transportation, loading, unloading, laying at all depths and heights, leveling and dressing both the area (viz. From where earth is transported and where it is deposited) to required levels and slopes, complete with all lifts as directed - upto 1 km.	50	Cu.M		
5	Supplying the good earth from outside the site including the cost of filling the same within the site in layer not exceeding 20cm in depth & consolidating each deposited layer by ramming and watering including all leads & lifts etc. complete.	250	Cu.M		
6	Providing approved quality Yellow/silver sand and filling the same where required under floors etc., watering, ramming, consolidating, grading and finishing to final levels and slopes for all lifts and leads involved, complete as directed (Payment to be made for solid measure of the consolidated filling).	72	Cu.M		
	PCC				
7	Plain cement concrete of mix 1:4:8 (1 cement : 4 coarse sand and 8, 40 mm down graded stone aggregate) for column footing, levelling, floors etc., including cost of all materials, lead, lift, labour charges, consolidation, shuttering, curing etc. complete	110	Cu. M		
8	Making plinth protection 50 mm thick of cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75 mm bed of dry brick ballast 40 mm nominal size well rammed and consolidated and grouted with fine sand including finishing the top smooth .	160	sqm		
	BRICKWORK				

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S.NO.	DESCRIPTION OF ITEM	QTY	UNIT	RATE (RS.)	AMOUNT (RS.)
9	Brick work with class designation 75 in cement mortar 1:6 (1 cement : 6 coarse sand) in foundation, plinth and super structure in thickness of 230 mm including cost of all materials, lead lifts, labour charges, mixing mortar, laying bricks, racking joints, curing etc. all complete as per drawing and specification and direction of Engineer In-charge.	110	Cu. M		
10	Brick work with brick of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) in super structure in thickness of 115 mm including cost of all materials, lead lifts, labour charges, mixing mortar, laying bricks, racking joints, curing etc. all complete as per drawing and specification. 2 nos. MS rods of 6 mm dia are to be provided after every 3rd layer for which no additional payment will be made.	20	Sq. M		
	RCC				
11	Reinforced cement concrete of mix 1:1.5:3 (1 cement, 1.5 coarse sand and ,3 :20 mm down graded aggregate) for column footing, sunshades, shelves, lintels, PLINTH BEAMS etc. including cost of materials, lead lift, labour charges for concreting, shuttering,curing,etc, complete	75	Cu. M.		
11A	Providing and placing precast RCC 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) in sleepers, laid to required shape including minimum reinforcement, hooks,anchors as reqd consolidation, finishing and tamping complete.	2	cum		
12	Centring and shuttering including providing all shuttering material, strutting, propping etc. and removal of form work for : Lintels, beams, plinth beams, girders, bressumers and cantilevers.	350	sqm		
13	Providing and placing mild steel/ tor steel reinforcement for RCC work including cost of all materials, labour for cutting, bending, binding and placing in position complete as per drawing and instruction of Engineer.	5	MT		
14	Fabricating and fixing in position, M.S.Holding down bolts with sleeves and washers, nuts and lock nuts etc. including threading of required length and type as per instructions of Engineer I/C				
a)	Upto 20 mm dia. bolt	1000	kg		
	ROOFING				
15	Supply fabrication and erection of structural steel beams,channels,plates,steel tubular trusses, purlines,gates, wind ties, base plates, gusset plates, bolts, nuts etc. complete as per drawings, specifications & instructions of engineer including cost of all materials leads, lifts labour charges etc. and one coat of primer and two coats of approved enamel paint for finished products at site complete as per technical specification and direction of engineer.				
a)	Trusses (medium grade pipes),Purlins side ties, bottom ties	21	MT		

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S.NO.	DESCRIPTION OF ITEM	QTY	UNIT	RATE (RS.)	AMOUNT (RS.)
b)	structural steel for columns, PLATES,etc	8	MT		
c)	Wind ties (Flats) 50 x 6 mm thick, angles,box sections,etc	0.5	MT		
16	Supplying , fitting & fixing steel rolling shutter , profile type in 18 B.G of approved type of steel lathe section 75 mm wide fitted with coil wire spring to necessitate the fitting of required nos of C.J pulley's on heavy type solid drawn gearless steel tube complete with locking arrangements bothside and outside specially built up side guide channels including,providing a hood for the rolling shutter painting with two coats of approved brand of aluminium paint over a coat of red lead primer complete.				
a)	Manually Operated	40	sqm		
b)	Mechanically and manually Operated	40	sqm		
17	Providing asbestos cement 6 mm thick corrugated sheets roofing and fixing with polymer coated J, or L hooks, bolts and nuts 8mm dia. G.I. plain and bitumen washers complete in all respect excluding the cost of purlins, rafters and trusses.	2100	Sq.M		
18	Providing and fixing corrugated Translucent Plastic sheet roofing fixed with GI J or L hooks bolts and nuts 8mm diameter with bitumen and GI limpet washer complete in all respect (upto a pitch of 60 degrees).	120	Sq.M		
19	Providing and fixing ridges and hips in asbestos cement sheet roofing complete with all accessories: Close fitting adjustable ridges	80	RM		
	FINISHING				
20	50 mm thk. Ironc Topping Cement Concrete flooring consisting(1-admixture:2-stone aggregate 6mm nominal size) by volume with metallic hardening compound of approved quality is mixed in the ratio(4:1) (4 cement : 1 metallic floor) hardening compound of approved quality by weight including cement slurry rounding off edges and strips etc. but excluding the cost of nose of steps etc. complete.	960	Sq. M		
21	Plastering work with cement mortar 1:6 (1 cement : 6 fine sand) 12 mm thick after scrapping and cleaning the masoary joints including scaffolding, cost of materials, labour, mixing , leads & lifts, curing etc. complete.	200	Sq. M		
22	Plastering work with cement mortar 1:6 (1 cement : 6 fine sand) 15 mm thick after scrapping and cleaning the masoary joints including scaffolding, cost of materials, labour, mixing , leads & lifts, curing etc. complete.	200	Sq. M		
23	Providing three coats of white wash to give a smooth and even shade including cost of materials, cleaning and preparation of surface, scaffolding etc. complete.	400	sqm		

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S.NO.	DESCRIPTION OF ITEM	QTY	UNIT	RATE (RS.)	AMOUNT (RS.)
24	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade in two or more coats on new work	200	sqm		
TOTAL-- CIVIL					
ELECTRICAL WORK					
25	Supply & Laying of 1.1 kv grade 3.5 X 50 sqmm Al Cond pvc insulated armoured Cable in wall /tress as per standard/site condition incl termination on both side as the main cable As the outgoing cable from Common main panel to stores DBs	70	RM		
25 A	Supplying and fixing, three pole and neutral, 1.6 mm thick sheet steel factory fabricated with hinged door and lockable arrangement MCB distribution board 415 Volts,on surface/recess, complete with neutral link, earth bar and earth stud, internal interconnections including painting,earthing etc Comprising of following rating MCBs complete with connections.Testing and commissioning etc. as required: Incomer 63A TPN MCB & , 3 no of 32A SP MCB (for internal electrification) , 2 no. of 20 a SP MCB (for external lighting)out going & 4pole 63Amps RCCB of 300mA sensitivity as protection circuit breaker on incoming circuit including interconnection arrangement,adopter box etc As the Main Distribution Board stores	1	Set		
25 B	Supplying and fixing, three pole and neutral, 1.6 mm thick sheet steel factory fabricated with hinged door and lockable arrangement MCB distribution board 415 Volts,on surface/recess, complete with neutral link, earth bar and earth stud, internal interconnections including painting,earthing etc Comprising of following rating MCBs complete with connections.Testing and commissioning etc. as required: Incomer 32A TPN MCB & , 3 no of 20A SP MCB (for internal electrification) , 2 no. of 16 a SP MCB (for external lighting)out going & 4pole 63Amps RCCB of 300mA sensitivity as protection circuit breaker on incoming circuit including interconnection arrangement,adopter box etc	1	Set		
26	supply &Wiring for light with 4 Sqmm size PVC insulated copper wire multi-core cables in surface / recessed MS conduit complete with MS boxes (weather proof box for outer lighting), control switch of Modular type etc. complete as required.Including Submain wiring for store light points/Exhaust fan/ street light fitting for all stores . suitable submain wiring from single DB to wiring for all stores is inclusive in the item	20	No.		

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S.NO.	DESCRIPTION OF ITEM	QTY	UNIT	RATE (RS.)	AMOUNT (RS.)
27	Supplying & Wiring for 3 pin 5/6 Amps socket point with 1.5Sqmm size PVC insulated copper conductor single core cable in PVC conduit complete with recessed MS box, with Multipin 5/6A switch cum socket outlet of Modular type, earthing the third pin with 1x1.5 Sqmm size PVC insulated copper multi-core wire complete as required. Including Submain wiring. On board /within one meter from lights switch Board	5	No.		
28	supply &Wiring for 3 pin 20A Amps 3 phase plug point with 3 core 4.0Sqmm size PVC insulated copper conductorsingle core cables in MS conduit completewith MS boxes, control switch along with 20A metal clad socket &top earthing the third pin with 1x2.5 Sqmm size PVC insulated copper multi-core wire cable complete as required.	5	No.		
29	Providing and fixing of pedestal Fan of austhetic model of 450/400mm sweep single phase 230Volt 900RPM with build in regulator& switch.	1	No.		
30	Providing and fixing of Heavy duty Air circulator of 450mm sweep single phase 230Volt 900RPM with build in regulator & switch. With 5 mtr cable & plug top for connecting to wall socket.	2	No.		
31	Providing and fixing of Heavy duty 18" Exhaust fan , single phase, 230V, 900 RPM with louvers.	2	No.		
32	Supply and erection of pipe earth Electrode in earth pit with reqd salt, charcoal & other works as per IS 3043/ as per sire condition .	2	No.		
33	Providing and laying of earth Flat of 30X6 mm GI Flat for earthing	20	No.		
34	Providing and laying of earth wire of 8 SWG GI for earthing	20	mtr		
35	Supplying, installation, connecting, testing and commissioning of following fixtures / luminaires including making hanging/fixing arrangements in false ceiling / ceiling with lamps copper ballast, capacitor etc. as required at site.				
a)	1X150 W metel halidine fitting Philips HPK 225/HPL 250 WB with 1no of HPL-N 250 W bulb or equivalent medium bay luminaire with cast aluminium housing to be fixed in side columnl/ceiling with necessary fixing arrangement complete with all acessories	10	no.		
b)	1x40/36 w Flu tube light fixture with bulb of Philips model no.TMS 021/136HF or equivalent.indoor fitting including bulb ,choke etc	3	no		
c)	Providing and fixing of 250W sodium vapour Street light fitting with UV stabilised acrylic cover including bulb incl Pipe/angle support, fixtures etc of Philips SRX 086/250 with 250 W sodium vapour lamp or equivalent make with necessary fixing arrangements.	8	No.		

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S.NO.	DESCRIPTION OF ITEM	QTY	UNIT	RATE (RS.)	AMOUNT (RS.)
c)	Providing and fixing of 250W sodium vapour Street light fitting with UV stabilised acrylic cover including bulb incl Pipe/angle support, fixtures etc of Philips SRX 086/250 with 250 W sodium vapour lamp or equivalent make with necessary fixing arrange	8	No.		
	TOTAL--ELECTRICAL				
	TOTAL PRICE (CIVIL AND ELECTRICAL WORKS)				
	NOTES:				
1	In case of omission in quoting any rate, the evaluation will be done considering the highest quoted rate obtained against that item but the work, if awarded, will be on the lowest quoted rate obtained against that item.				
2	The bidders shall enter both 'Unit Rate' & 'Amount'. In case of any mismatch between 'Total Amount based on Unit Rate' & 'Total Amount as quoted', the higher of the two shall be considered for evaluation and the lower of the two shall be considered for award.				
3	In case of difference in rates between words and figures, the lesser of the two will be treated as valid rate.				
4	Sub-total on each page shall be indicated and brought forward to next page and duly signed. The contractor shall ensure that grand total on this page is arithmetically checked and corrected and certified accordingly while signing below by the bidders. Despite this, if any calculation error is noticed in totalling after tender opening, the higher of the two (i.e between total value worked out by BHEL and the total value indicated by bidder in their offer) shall be considered for evaluation and the lower of the two shall be considered for award.				
5	The quantities indicated against each item above are tentative and are liable to vary depending upon the site requirement. The contractor has to supply / install/provide actual quantities as per advice of BHEL Engineer and accordingly the final contract price shall be adjusted on the basis of quantities actually erected/provided at site & payment will also be regulated accordingly for the same. The contractor confirms that unit rate quoted above takes care of such variations				
6	Evaluation of the bids shall be done based on total price against this BOQ.				