

Tender No. BHEL/NR/SCT/ ANPARA-D /STORE SHED/902

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TENDER SPECIFICATION

Tender No. BHEL/NR/SCT/ ANPARA-D /STORE SHED/902

FOR

Construction and development of BHEL closed storage shed (1No.) for 2 x 500 MW units at Anpara –D TPP of UPRVUNL, UP.

PART II – PRICE BID



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

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ISO- 9001, ISO-14001,
OHSAS-18001 & SA-8000
certified company
SubContract and Purchase
Deptt.

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

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THIS TENDER SPECIFICATION ISSUED TO:

M/S-----

RATE SCHEDULE

| Item no | DESCRIPTION OF WORK | QUANTITY AS REQUIRED | UNIT | RATE | AMOUNT |
|-----------|--|----------------------|------|------|--------|
| | (A) CIVIL WORKS | | | | |
| C1 | Cleaning jungle including uprooting of Rank Vegetation, Grass.bushwood, trees and saplings of girth up to 30 cm measured at a height of 1 m above ground level and removal of rubbish up to a distance of 200 m out side the peripheryof the area cleared. | 250.00 | sqm | | |
| C2 | Surface dressing of the ground including removing vegetation and in eualities not exceeding 15 cm deep and and disposal of rubbish, lead up to 50 m and lift up to 1.5 m in all kinds of soil. | 250.00 | sqm | | |
| C3 | Earth work in excavation in all types of ordinary and hard soil my 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. | 150.00 | cu.m | | |
| C4 | Back filling available excavated earth in trenches, plinth,sides of foundations,etc. including re-excavating the disposed soil excavated earlier, breaking clods, laying all depths and heights in layers not exceeding 20 cm in | 50.00 | cu.m | | |

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| | depth, consolidating each layer. | | | | |
| C5 | 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. | | | | |
| a) | upto 1 km | 100.00 | cu.m | | |
| b) | 1km to 2 km | 0.00 | cu.m | | |
| C6 | Preparation and consolidation of subgrade with power road roller of 8 to 12 tonne capacity after , levelling, grading , dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling | 2500.00 | sqm | | |
| C8 | Supply and Laying water bound macadam with specified stone aggregate stone screening and binding material including screening, sorting, spreading to template and consolidation with power road roller of 8 to 10 tonne capacity etc. complete with supply. | 0.00 | | | |
| a) | SubBase with stone aggregate 63 mm to 45 mm size including stone screening 13.2mm size. | 150.00 | cum | | |
| C10 | Providing and tilling of 1" compacted thickness quarry dust as levelling course compacting the same with 8 to 10 tonne road roller complete in all respect as directed by engineer - in- charge. | 150.00 | cum | | |
| C10a | Providing and tilling of 1" compacted thickness murrum as levelling course compacting the | 12.50 | cum | | |

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| | same with 8 to 10 ton road roller complete in all respects as directed by Engineer-in Charge | | | | |
| C11 | 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. | 100.00 | cum | | |
| C12 | 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 | 35.00 | cu.m | | |
| C14 | Plain cement concrete of mix 1:4: 8 (1 cement: 2 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 | 96.25 | cu.m | | |
| C15 | Making plinth protection 50 mm thik of cement concrete 1:3:6(1 cement :3 coarse :6graded stone aggregate 20 mm nominal size) over 75 mm bed of dry brick ballast 40 mm nominal size well rammed and consolidated and grouting with fine sand including finshing the top smooth | 95.00 | sqm | | |
| C16 | Providing and laying and laying damp proof course 40 mm thick with concrete grade 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size and applying a coat of residual petroleum of penetration 80/100 of approved quality using 1.7 kg per | 35.00 | sqm | | |

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| | sq. metre on damp proof coarse after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in KEROSENE OIL. | | | | |
| C17 | Providing and fixing at ground level precast 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) cement concrete reinforced with 1.6 mm MS wire in kerbs,RCC sleepers, edgings,drains,etc. as per approved pattern | 1.75 | cum | | |
| C18 | 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 joint | 61.25 | cu.m | | |
| C19 | 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 | 285.00 | sqm | | |
| C20 | Reinforced cement concrete of mix 1: 1.5:3 (1 cement: 1.5 coarse sand and, 3 : 20 mm down aggregate) for column, footing,Pedestal etc. including cost of materials, lead lifts, labour charges for concreting, shuttering,curing etc. complete. | 96.00 | cu.m | | |
| C21 | Centering and shuttering including providing all shuttering material, shuttering, proping etc. and removal of form work for : lintels, beams, plinthbeam, girders, bressumers and cantelevers. | 352.50 | sqm | | |

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| C22 | 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. | 5.28 | MT | | |
| C23 | 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 | 0.00 | | | |
| a) | Upto 20 mm dia. Bolt | 400.00 | KG | | |
| C24 | 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 | 0.00 | | | |
| a) | Trusses (medium grade pipes),Purlins side ties, bottom ties | 10.50 | MT | | |
| b) | structural steel for columns, crane girders,etc | 5.25 | MT | | |
| c) | Wind ties (Flats) 50x6 mm thick angles box section,soild bars of rails etc. | 0.50 | MT | | |
| C25 | Steel work in built up section / framed work including cutting hoisting , fixing , in position & applying a priming coat of approved steel primer using structural steel for gates, railing , frames grating etc. | 175.00 | Kg | | |
| C26 | 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 | 0.00 | | | |

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| | 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 | 25.00 | sqm | | |
| C27 | Providing and fixing corrugated asbestos cement sheet 6 mm thick roofing and side cladding fixed with polymer coated J or L hooks bolts and nuts 8mm diameter with bitumen and GI limpet washer complete (upto a pitch of 60 degrees). | 902.50 | sqm | | |
| C28 | 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 (upto a pitch of 60 degrees) including steel primer and 2 coats of approved paint at overlaps. as per tech. specification. | 30.00 | sqm | | |
| C29 | Providing and fixing non-asbestos cement ridges and hips including supply and fixing J or L bolts and nuts bitumen & GI washers etc. complete as per Technical Specification including Bitumen coating at all joints . | 50.00 | RM | | |
| C30 | Providing and fixing PVC pipe (2.5 kg/cm ²) of 110 mm dia. as rain water pipe in above item complete in all respect including required shoes, bends, etc | 15.00 | RM | | |
| C33 | Providing and fixing glass trips in joints of terrazo/ cement :concreets, floors 40 mm wide and 4 mm thik | 553.00 | RM | | |

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| C38 | 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. | 50.00 | sqm | | |
| C39 | 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. | 50.00 | sqm | | |
| C44 | Providing and fixing steel glazed windows and ventilators of operable standard rolled steel section joints mitred and welded with 15 x 3 mm lugs, 10 cm long, with steel lugs embedded in cement concrete blocks 15 x 10 x 10 cm of 1:3:6 (1 cement : 3 coarse | 0.75 | sqm | | |
| C46 | Providing and fixing ISI marked flush door shutters non decorative type , core of block baord construction with frame of ist class hard wood and well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters 30 mm thick including ISI marked stainless steel butt hinges, handle,bolts, complete with necessary screws and other accessories | 0.50 | sqm | | |
| C49 | Providing three coats of white wash to give a smooth and avon sade including cost of materials clining and preparation of surface scaffolmding etc. complete. | 412.50 | sqm | | |
| C50 | Finishing walls/ surfaces with water proofing cement paint of approved brand and manufacture and of required shade to give an even shade. | 200.00 | sqm | | |

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| C52 | Painting with synthetic enamel paint of approved brand and manufacture to give an even shade in two or more coats on new work | 12.50 | sqm | | |
| F1 | 1.5 m high fencing with 2 m angle iron 50 x 50x 6 mm posts placed every 3 m centre to centre embedded in cement concrete block, 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 providing | | | | |
| | With G.I. Barbed wire (Payment to be made for per metre of complete fencing) | 150.00 | Mtr. | | |
| F2 | Supplying at site Angle iron post & strut of required size including bottom to be split and bent at right angle in opposite direction for 10 cm length and drilling holes upto 10 mm dia. Etc. complete including a priming coat and two coats of enamel paint | 625.00 | KG | | |
| E1 | Providing and fixing 1 x 40 Watt Batten type fluorescent tube fitting (Crompton / Philips / Bajaj make), fabricated from CRCA sheet steel and finished with stove enamel paint complete with Accessories like fluorescent lamp, copper wound polyester choke, star | 18.00 | Nos. | | |
| E4 | Providing and fixing 1 x 250 W HPSV out door type fittings (Crompton / Philips/BajaJ , complete with lamp, ballast control gear box, fixing clamp etc. | 4.00 | Nos. | | |
| E5 | Providing and fixing of following sweep exhaust fan/ceiling fan/wall mounted fan (Khaitan / Crompton make) single phase alongwith gravity louvers, frame / tripod for holding the motor including making necessary | 0.00 | | | |

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| | opening in wall, supply & fixing of assembly with grouting bolts, making connections, loop earthing etc. | | | | |
| a) | 230 MM Sweep | 0.50 | Nos. | | |
| E8 | Providing & fixing of 240 V, 5 / 15 Amp 6 Pin Power socket outlet point (with 15 A switch). Switch / socket to be fitted in suitable size 20 SWG metal type box with 3mm sunmica sheet | 3.50 | Nos. | | |
| E9 | Providing & fixing of 240 V, 5A 3 Pin Power socket outlet point (with switch). Switch / socket to be fitted in suitable size 20 SWG metal type box with 3mm sunmica sheet along with the piano switches and fan regulator | 3.50 | NOS | | |
| E10 | Providing & fixing 5A piano type switch for Light / Fan Control (Anchor make) | 20.00 | NOS | | |
| E11 | Providing and Fixing of 20/25 mm PVC Conduit (including fittings) for telephone / LAN Connection / Call bell System | 0.00 | Mtr | | |
| E14 | Providing & fixing of 240 V, 20 Amp INDUSTRIAL Power socket outlet point (with 20 A MCB). Switch / socket to be fitted in suitable size 20 SWG metal type box . | 2.00 | NOS | | |
| E15 | Wiring of above power sockets with 4 Sq. mm PVC insulated Copper Conductor wires as per IS, 650 / 1100 V grade including 20 SWG GI earthing wire in PVC medium grade conduit including supply of items. | 0.00 | | | |
| a) | For 15/16/20 AMP Power sockets | 4.00 | points | | |
| E16 | Circuits/ Sub Main wiring in 20/25 mm conduit including supplying of all conduits, clamps, wires, | 0.00 | points | | |

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| | complete | | | | |
| a) | 2x1.5 sq. Mm+ 1x1.5 sqmm earth wire | 50.00 | RM | | |
| b) | 2x2.5 sq. Mm+ 1x2.5 sqmm earth wire | 50.00 | RM | | |
| E20 | Wiring of the following points (including supply of Wires, conduits, clamps, boards, other misc. items) with 2.5 sq.mm colour coated PVC insulated copper conductor wires as per IS-650/1100 volts grade in surface PVC conduits (medium grade) including laying of 20 SWG GI wire, conduit fitting.__(Fixing of piano type control switches (Anchor make) in suitable sized 20 SWG metal box with 3 mm sunmica sheet having provision for fan regulator, 5 Amp switch socket (supplied above) included in scope) | 0.00 | | | |
| a) | Light/Fan Point | 20.00 | points | | |
| b) | Wiring for 5/6 amps socket point | 5.00 | points | | |
| c) | Wiring for exhaust fan. | 1.00 | points | | |
| d) | 1 x 250 W HPSV out door type fitting. One number 10 A DP switch to be used for controlling 2 fittings. D.P Switches to be fixed on outside of the store shed wall | 4.00 | points | | |
| E21 | Providing and fixing of 32 Amp TPN with HRC fuses along with earth wire. The TPN to be provided on one side of the shed with rain protection cover. | 1.00 | Nos. | | |
| E22 | supply and burying of earths electrode 40 mm dia 3 mtrs long including earthing upto swith board with 8 SWG GI wire | 1.00 | Set | | |
| E23 | Installation and commissioning of 3-ph 4W 400 / 100A Electrical Switchboard (appx size 1600 x | 0.25 | Nos | | |

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| | 1000 x 2000 mm) . (Foundation will be paid in civil works) | | | | |
| E24 | Providing , Installation and commissioning of 24 W Lighting Panel with 10 no 20 A MCB and 14 nos 16 A MCB with 125 A SFU incomer in Sheet metal housing with double door arrangement , including all earthing and statutory requirements . | 0.50 | NOS | | |
| E25 | Providing , Installation and commissioning of 18 W Lighting Panel with 18 nos 16 A MCB with 63 A SFU incomer in Sheet metal housing with double door arrangement , including all earthing and statutory requirements . | 0.50 | NOS | | |
| E26 | Taking delivery from stores and laying of following type of PVC Insulated, PVC armoured standard aluminium conductor cable confirming to IS:1554-1976 (part 1), glanding with single compression gland, termination of both end in DB & SFU. The cable has to be laid underground on sand cushion including backfilling, susitable clamp, clamping on surface including all materials etc. complete.(Only cable will be issued by BHEL as free issue item and all other materials are to be provided by the contractor).This includes road crossing for which suitable GI Pipe to be provided by the contractor. | 0.00 | | | |
| a) | 3 1/2 core x 185 / 300 Sq.mm armoured cable | 12.50 | RM | | |
| b) | 3 1/2 Core x 50 / 95 Sq.mm armoured cable | 87.50 | RM | | |
| c) | 2c/3c/4c upto 16 sq.mm armoured cable | 37.50 | RM | | |

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| E27 | Earthing Flat 25 x 6 for Earthing 0.5 mtr. Below ground as trip earth electrode including soldering as required | 15.00 | RM | | |
| | TOTAL | | | | |

Note:-

1. The rate shall be entered in figures as well as in words. In case of difference in rates between words and figures, the lesser of the two will be treated as valid rate.
2. Quantity indicated above is tentative and liable to vary depending upon the site requirement.

(Seal and Signature of Tenderer)