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**BHARAT HEAVY ELECTRICALS LIMITED**  
RAMACHANDRAPURAM :: HYDERABAD-32  
TOWNSHIP ADMINISTRATION

**TENDER DOCUMENTS ( PRICE BID )**

**Name of the work : Maintenance of HT/LT overhead lines, misc. painting and cable laying works in Township.**

**Tender Notice : HY/TA/E/OT-02/2013-14, Dt. 13.08.2013; Item No. 05**

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1. Schedule - A : Schedule of rates and approximate quantities

ADDRESS :

PHONE NO. : \_\_\_\_\_

E-mail : \_\_\_\_\_

**SCHEDULE - 'A'**

**Maintenance of HT/LT overhead lines, misc. painting and cable laying works in Township.**

Sl. No.	Description	Unit	Qty	Rate	Amount
(1)	(2)	(3)	(4)	(5)	(6)
	<b>HT/LT OVER HEAD LINES WORK</b>				
1	Transportation & Erection of Heavy Duty RCC pole of length above 8.0m and upto 11.0m in brick ballast and ramming the foundation, finishing with 150mm thick cement concrete (1:3:6) layer on top including excavation and refilling etc as required; complete all as directed by Engineer-in-charge.	Each	25	2,749.00	68,725.00
2	Dismantling of pole / street light standard / strut embedded in cement concrete foundation etc. as required; complete all as directed by Engineer-in-Charge.	Each	20	859.00	17,180.00
3	Supplying and erection of stay set complete (galvanised) with 19/20 mm dia X 1.8 metres long stay rod, anchor plate of size 45 cm X 45 cm X 7.5 mm, thimble, stay clamps, turn buckle ( 20 mm X 60 cm ), 7/ 3.15 mm dia G.I. stay wire and strain insulator etc in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size ) foundation including excavation and refilling etc. as required; complete all as directed by Engineer-in-charge.	Each	10	3,086.00	30,860.00
4	Supply & erection of MS plain ended swaged tubular pole [specifications as per IS 2713 -1980, 410 SP25] of 8.50m length, in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size ) foundation including excavation and refilling etc. as required. The pole shall have single arm arrangement, junction box etc. and painted with primary coat of red oxide and black bituminous paint upto ground level with base plate; complete all as directed by Engineer-in-charge.	No.	10	8,100.00	81,000.00
5	Supply & erection of MS plain ended swaged tubular pole [specifications as per IS 2713 -1980, 410 SP44 ] of 10.0m length, in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size ) foundation including excavation and refilling etc. as required. The pole shall have 1.0m dia ring arm arrangement, junction box for provision of load master and fuse cut out etc. and painted with primary coat of red oxide and black bituminous paint upto ground level with base plate; complete all as directed by Engineer-in-charge.	No.	4	14,040.00	56,160.00
6	Supply & fixing of <b>stay wire stranded</b> galvanised of size 7/10 SWG as directed by engineer incharge	Mtr.	25	105.00	2,625.00
7	Supply & stringing fixing in position, <b>binding of GI guarding</b> for road crossing with necessary craddle guard etc., as directed by engineer incharge.	Mtr.	25	98.00	2,450.00

Sl. No.	Description	Unit	Qty	Rate	Amount
(1)	(2)	(3)	(4)	(5)	(6)
8	Supplying and erection of 75 mm X 90 mm shackle insulator for a working pressure of 1100V, with G.I. Bolt, nuts and straps etc. as required; complete all as directed by Engineer-in-charge.	Each	50	129.00	6,450.00
9	Supplying and erection of 11 KV disc insulator for 11 KV over head lines with galvanised insulator fittings, ball and socket type and complete with galvanised strain clamps, bolts, nuts, washers etc. as required; complete all as directed by engineer incharge	Each	10	390.00	3,900.00
10	Supply & erection of single run of ACSR conductor, 7/2.11mm diameter including binding wire on to the existing insulators; complete all as directed by Engineer-in-charge.	Mtr.	50	23.00	1,150.00
11	Supply & erection of single run of ACSR conductor, 7/2.59mm diameter including binding wire on to the existing insulators; complete all as directed by Engineer-in-charge.	Mtr.	50	31.00	1,550.00
12	Supply & erection of single run of ACSR conductor, 7/3.60mm diameter including binding wire on to the existing insulators; complete all as directed by Engineer-in-charge.	Mtr.	50	50.00	2,500.00
13	Supply & fixing of following sizes of copper flat / strips on surface or in recess for connections as required; complete all as directed by Engineer-in-charge.				-
(a)	25mm x 5mm copper strip. ( 1.12 kg/m )	Metre	10	766.00	7,660.00
(b)	50mm x 5mm copper strip. ( 2.24 kg/m )	Metre	10	1,439.00	14,390.00
14	Supply & fixing of HT side porcelain bushes for 250 kVA transformer should have test certificate as directed by engineer incharge.	Each	3	204.00	612.00
15	Supply & fixing of LT side porcelain bushes for 250 kVA transformer should have test certificate as directed by engineer incharge.	Each	3	182.00	546.00
16	Maintenance of signage board at main check post which includes servicing, cleaning, checking, rectification and replacement of cables / wires / LED drivers / boards etc., (required materials will be supplied by dept.). Providing of necessary safety equipment and taking safety precautions for the above operation is a must and sole responsibility of the contractor. The above operation to be completed as directed by engineering incharge.	operation	2	18,000.00	36,000.00
17	Supply & fixing of timer switch type TSQ-100 of L&T make; complete all as directed by Engineer-in-charge.	Each	6	3,652.00	21,912.00
18	Coping of poles in proper sloping above the foundation with cement concrete 1:3:6 ( 1 cement : 3 coarse sand : 6 stone aggregate 20mm ) of specified size and shape including form work, plastering if required, curing etc. as required; complete all as directed by Engineer-in-charge.	Cu.M	5	4,025.00	20,125.00
19	Supply, fabrication & fixing of MS channel horizontal / V-shape cross arms / ring arms etc. of different sizes including drilling holes for insulator pins, bolts, nuts and washers etc. and painting with primer and finish paint as required; complete all as directed by Engineer-in-charge.	Kg.	40	204.00	8,160.00
20	Supply, fabrication & fixing of MS flat iron clamps including drilling holes for fixing of cross arms etc. as required; complete all as directed by Engineer-in-charge.	Kg.	50	95.00	4,750.00
21	Restranging of loose hanging guardings wherever necessary as required; complete all as directed by Engineer-in-charge.	Mtr.	50	8.00	400.00

Sl. No.	Description	Unit	Qty	Rate	Amount
(1)	(2)	(3)	(4)	(5)	(6)
22	Supply, fabrication and mounting of 1.6 mm thick MS sheet enclosure for power control cubicle panel / boxes with hinges & mechanical locking arrangements etc., including cutting, bending, drilling, welding & reveting etc., complete and painting with powder coating including cost and conveyance of all materials and labour charges; complete all as directed by Engineer-in-charge.	Kg.	120	184.00	22,080.00
	<b>MISC. PAINTING WORKS</b>				-
23	Applying two coats of snowcem or equivalent cement paint of approved brand to old surface including cost & conveyance of all materials etc. (BHEL/P13/15) as directed by Engineer-in-charge.	Sq.M	10	62.00	620.00
24	Cleaning and applying of two coats of Red-oxide primer paint on the existing MS cross arms, MS channels, clamps and MS flat etc. including cost & conveyance of all materials etc. as directed by Engineer-in-charge.	Sq.M	100	61.00	6,100.00
25	Cleaning and applying of two coats of Al. base paint for final painting on the existing MS cross arms, MS channels, clamps and MS flat etc. including cost & conveyance of all materials etc. as directed by Engineer-in-charge.	Sq.M	200	72.00	14,400.00
26	Cleaning and applying of two coats of postal Red paint on the poles etc. including cost & conveyance of all materials etc. as directed by Engineer-in-charge.	Sq.M	30	72.00	2,160.00
27	Cleaning and applying of two coats of Dark admiral grey paint for MD boards, panel boards, transformers etc. including cost & conveyance of all materials etc. as directed by Engineer-in-charge.	Sq.M	50	72.00	3,600.00
28	Painting of BHEL serial no. on Electrical poles with black paint on white painted surface etc. including cost & conveyance of all materials etc. as directed by Engineer-in-charge.	Sq.M	100	61.00	6,100.00
	<b>CABLE TRENCHES &amp; MISC. ITEMS</b>				-
29	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size direct in ground including excavation (0.6 x 0.9m), sand cushioning, protective covering and refilling the trench etc as required; complete all as directed by Engineer-in-charge. ( cable will be supplied by BHEL )				-
(a)	Upto 35 sq. mm	Metre	300	167.00	50,100.00
(b)	Above 35 sq. mm and upto 95 sq. mm	Metre	300	173.00	51,900.00
30	Laying of one number <b>additional</b> PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size direct in ground in the same trench in one tier horizontal formation including sand cushioning, protective covering and refilling the trench etc as required; complete all as directed by Engineer-in-charge. ( cable will be supplied by BHEL )				-
(a)	Upto 35 sq. mm	Metre	100	115.00	11,500.00
(b)	Above 35 sq. mm and upto 95 sq. mm	Metre	100	121.00	12,100.00

Sl. No.	Description	Unit	Qty	Rate	Amount
(1)	(2)	(3)	(4)	(5)	(6)
31	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of size upto 120 sq.mm direct in ground including excavation (0.6 x 0.9 m), sand cushioning, protective covering (using shahabad stones) and refilling the trench etc as required; complete all as directed by Engineer-in-charge. ( cable will be supplied by BHEL )	Metre	300	213.00	63,900.00
32	Earth work excavation for laying of additional cable, replacing of damaged cables and diverting the existing cable trenches in different routes as directed by engineer in charge.	Cu.M	200	65.00	13,000.00
33	Providing earthing conforming to IS:3043 with 40 mm dia G.I. earth pipe and all accessories including excavation of pit, filling with homogenous layers of coke/charcoal & salt and providing masonry enclosure with hinged cover plate having locking arrangement and watering pipe etc.; including cost and conveyance of all materials; complete as directed by Engineer-in-charge.	Set	2	3,385.00	6,770.00
34	Supply and laying of local sand including cost of conveyance to site and spreading for sub stations.	Metric Ton	5	458.00	2,290.00
35	Supplying and embedding following dia G.I. pipe (medium class) in pole collar/ foundation (during casting) for cable entry including bending the pipe to the required shape complete as required; complete all as directed by Engineer-in-charge.				-
(a)	50 mm dia G.I. pipe	Metre	50	330.00	16,500.00
(b)	100 mm dia G.I. pipe	Metre	50	746.00	37,300.00
36	Providing, laying and fixing following dia RCC pipe NP2 class (light duty) in ground complete with RCC collars, jointing with cement mortar 1:2 (1 cement : 2 fine sand) including trenching (75 cm deep) and refilling etc as required; complete all as directed by Engineer-in-charge.				-
(a)	150 mm dia	Metre	25	328.00	8,200.00
(b)	250 mm dia	Metre	25	394.00	9,850.00
37	Supplying and making outdoor cable end termination with heat shrinkable jointing kit complete with all accessories including lugs suitable for 3 core - 120 sq. mm. XLPE aluminium conductor cable of 11 KV grade as required; complete all as directed by Engineer-in-charge.	Each	2	8,187.00	16,374.00
38	Supply and fixing of heavy duty flange type brass cable glands with brass washers complete for the following sizes of cables :				-
(a)	2/3/4 core 2.5 - 6.0 sq.mm	No.	6	41.00	246.00
(b)	2/3/4 core 10 sq. mm	No.	6	72.00	432.00
(c)	4 core 16 sq. mm / 3.5 core 25 sq. mm	No.	6	87.00	522.00
(d)	3.5 core 35 sq.mm / 3.0 core 50 sq.mm	No.	6	91.00	546.00
(e)	3.5 core 50 sq.mm	No.	6	101.00	606.00
(f)	3.5 core 70 sq.mm	No.	6	126.00	756.00
(g)	3.5 core 95 sq.mm	No.	6	155.00	930.00
39	Supply & fixing of crimping type copper lugs conforming to I.S. specifications for following sizes of cables including connections; complete all as directed by Engineer-in-charge.				-

Sl. No.	Description	Unit	Qty	Rate	Amount
(1)	(2)	(3)	(4)	(5)	(6)
(a)	120 sq.mm	Each	10	85.00	850.00
(b)	150 sq. mm	Each	10	101.00	1,010.00
40	Felling trees of girth including cutting of trees and branches, removing the roots and stacking of serviceable material at BHEL nursery stockguard including tractor loading and un loading, transportation at BHEL Nursery etc., completed and disposal of unserviceable material.as directed by engineer in-charge.				-
(a)	Beyond 30 cms girth upto and including 60 cms girth.	Each	600	81.70	49,020.00
(b)	Beyond 60 cms girth upto and including 120 cms girth.	Each	200	359.80	71,960.00
41	Cutting of tree branches ( 100 to 200 cm girth ) along the overhead electrical lines, removing other kind of branches from the cut branch and stocking as directed by engineer in charge within a lead of 3 kms (separate payment will be made for transporting the tree branches from site to BHEL nursery stockyard.	Each	150	34.20	5,130.00
42	<b>Engaging a tractor</b> with hydraulic lift trailer for transporting of the tree trunks / branches / roots from township at various places to nursery including loading, unloading with required no. of persons i.e. minimum 5 persons to be deployed along with the tractor etc., complete as directed by the Engineer-in-charge (the tractor shall have a valid fitness certificate) all as directed by the Engineer-in-charge.	Day	10	1,400.00	14,000.00
43	<b>Engaging a tractor</b> (along with driver) with trolley / water tanker for transporting of cables and electrical material from factory main store to Township Electrical store including loading & unloading and Watering of all substations and earth pits with one unskilled person to be deployed along with the tractor etc. complete as directed by Engineer-in-charge. (The tractor shall have a valid fitness certificate) ( water supplied by Department )	Day	12	815.00	9,780.00
44	Supply of <b>Glassiel chemical</b> for eradication of grass at all electrical substations in township; all complete as directed by Engineer-in-charge.	Litre	20	385.00	7,700.00
45	<b>Engaging a JCB</b> for levelling of ground, clearing of thick bushes, removal of roots after cutting of trees, etc. as required; all complete as directed by Engineer-in-charge. The hiring cost shall be inclusive of all, such as operator, helper, fuel, transportation etc.	Hour	30	750.00	22,500.00
46	<b>Engaging a Crane</b> for loading & unloading of transformers on to the plinth of substations across the township, lifting of RCC poles for erection at site and other miscellaneous lifting & loading-unloading jobs etc. as required; all complete as directed by Engineer-in-charge. The hiring cost shall be inclusive of all, such as operator, helper, fuel, transportation etc.	Hour	30	1,000.00	30,000.00
	<b>TOTAL ... ..</b>	<b>( Rs: nine lakhs fifty nine thousand nine hundred &amp; thirty seven only )</b>			<b>9,59,937.00</b>

Sl. No.	Description	Unit	Qty	Rate	Amount
(1)	(2)	(3)	(4)	(5)	(6)

Note:- The tenderers are required to quote their tender value on %age basis at excess or less or on par with estimated value.

Tender ( % )	in figures	in words
Excess		
Less		
Estimate rate only		

**Conditions :**

1	A <b>penalty</b> of 0.5% of the gross value of work will be levied for every week's delay of work subject to a maximum penalty of 10% of the gross value of work.
2	The tender % age quoted by the contractor shall be inclusive of all taxes and duties other than service tax as applicable from time to time.
3	The rate quoted by the contractor shall be inclusive of all taxes (except service tax) and duties levied by Central/State Govt. organizations as well as local authorities, as applicable from time to time.
4	<b>Service tax will be extra if applicable for this contract.</b> Service Tax if paid by the contractor with respect to this work will be reimbursed by BHEL on production of documentary evidence for having paid the service tax by the contractor.