

**ALL INDIA INSTITUTE OF MEDICAL SCIENCES
(AIIMS), ANSARI NAGAR, NEW DELHI**

Tender

For

**Supply, Installation, Testing & Commissioning of 11KV
independent feeder and 11KV electrical sub-station at
Outreach OPD at AIIMS, Badsha, Distt. Jhajjar, Haryana.**

Volume- V

Bill of Quantities (B.O.Q)

OCTOBER' 2012



**HSCC (INDIA) LTD.
(CONSULTANTS & ENGINEERS FOR MEGA HOSPITALS & LABORATORIES)
E-6(A), sector-1, NOIDA(U.P) 201301 (India)**

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Tender No. HSCC/AIIMS/JHAJJAR/11KV/FEEDER&ESS/2012

BILL OF QUANTITIES OF ELECTRICAL WORKS AT OUTREACH OPD -AIIMS - JHAJJAR .

S.No.	Description.	Unit.	Qty	Rate in Figures (in Rs.)	Rate in words (in Rs.)	Amount in Rs.
2	3	5	6	7	8	
	SUBHEAD 1: 11 KV FEEDER					
1.00	Supply, installation, testing and commissioning of following major items required for 11 KV independent feeder inclusive of all charges and sundry items to complete the job and to made the feeder functional in all respect as per the guide lines of UHBVN.					
1.01	PCC Pole 11 meter long	Nos	220			
1.02	V-Shape X- Arm	Nos	170			
1.03	11 KV Pin Insulator	Nos	585			
1.04	11 KV GI Pins	Nos	585			
1.05	11 KV Disc insulator	Nos	250			
1.06	11 KV Disc fitting	Nos	150			
1.07	Stay wire 7/8 SWG	Kg	1500			
1.08	Stay set	Nos	150			
1.09	Top Hamper	Nos	170			
1.10	Insulater ACSR conductor 100 Sq mm	KM	35.10			
1.11	GSL 8 SWG	Kg	1000			
1.12	Earthing Rod	Nos	50			
1.13	G.O. Switch	Nos	2			
1.14	MS Nuts & Bolts	Kg	120			
1.15	MS Channel iron 100x50x6 sq mm	Nos	50			
1.16	MS angle iron 50x50x6 Sq mm	Nos	125			
1.17	MS Flat 50x6 Sq mm	Kg	250			
1.18	XLPE U/G 11 KV Cable 3/C 185 sq mm	Meter	480			
1.19	Indoor cable box 185 sq mm	Nos	6			
1.20	Out door cable box 185 sq mm	Nos	6			
1.21	Danger plate enamalled with clamp	Nos	220			
1.22	Barbed wire	Kg	350			
1.23	11 KV LA set	Nos	2			
1.24	11 KV VCB complete set as required by UHBVN	Nos	1			
1.25	Pipe 6" dia heavy duty for U/G Cable	Meter	280			
1.26	Sundry to complete the job	Lot	1			
	TOTAL FOR SUB HEAD 1: 11KV FEEDER					

		SUBHEAD 2: H.T. SUB STATION					
2.00		SUBSTATION EQUIPMENTS					
2.01		HT Panel :					
		Supply, erection, testing and commissioning of out door type single panel, 630 A ,11 kV, 3 Phase, 50 Hz., metal clad, dead front, 350 MVA rupturing capacity Vacuum Circuit Breaker with powerpack of suitable capacity outdoor mounting with canopy etc. as per the detailed specifications including connections etc. including power pack as required					
	i)	1 No. VCB having following :					
		1 No. 630A, 11kV, 3 Phase, 50Hz., metal clad, dead front, 350 MVA rupturing capacity, Fully Drawout type, microprocessor based Vacuum Circuit Breaker (VCB)					
		1 set of 11kV/110V Potential Transformers with HRC fuses					
		1 Set of Phase indicating lamps with HRC fuses					
		1 No.Digital voltmeter .					
		1 set of indicating lamps to indicate OPEN, CLOSE, TRIP, SPRING CHARGED, TRIP CIRCUIT HEALTHY					
		Push button for ON, OFF,TRIP&TRIP circuit healthy					
		1 set of 50-25/5-5A Current Transformer for metering and protection.					
		1 No.digital Amps ammeter .					
		Digital frequency meter,Digital Tri vector meter.					
		1 Set of undervoltage relay and Overvoltage relay					
		Trip circuit supervision relay,Auxiliary relays with shunt trip coil for VCB					
		1 No. Master Trip relay					
		1 No. Digital Power factor meter					
		8 window annunciator with hooter , accept & reset button etc complete as required					
		HT Panel as mentioned above	Set	1			

	TRANSFORMER :					
2.02	Supply, erection, testing and commissioning of 750/800 KVA, 11/0.433 kV, 3 Phase, 4 wire, 50 Hz., ON-AN Transformer for outdoor duty with on load tap changer (OLTC) range -15%, +5% in steps of 1.25% with RTCC panel , cable box at primary (HT side) and secondary end (LT side) shall be connected through cable, the transformer shall be complete with first filling of oil, with double float buchholz relay protection, high winding temperature/oil temp. sensors, complete with all fittings and accessories, interconnection of control cables and accessories , soak pit for transformer oil complete as per technical specifications including fencing, gate, pebbles, foundation of the transformer etc as per state electricity rule/ requirements.	Each	1			
2.03	H.T. CABLE					
	Supply of following sizes of 11 kV grade multicore aluminium conductor XLPE armoured power cable as per IS : 7098.					
	i) 3 Core, 185 sq mm	Mtrs.	260			
2.04	Laying of one number 3 core XLPE power cable of grade exceeding 1.1 KV but not exceeding 11KV of size exceeding 120 sqmm but not exceeding 240 Sqmm direct into ground including excavation, sand cushioning, protective covering and refilling the trench, supply of route marker complete as required.	Mtrs.	260			
2.05	Supplying and making end termination with heat shrinkable jointing kit complete with all accessories including lugs suitable for following size 3 Core, XLPE aluminium conductor cable of 11kV grade as required.					
	i) Outdoor type 185 sqmm	Each	2			
	ii) Indoor type 185 sq mm	Each	3			
2.06	Manhole for cabel laying	Each	10			
2.07	Cable route markers	Each	26			
2.08	HT Metre board of 11 KV as per the requirement of State Electricity Board.	Each	2			

2.09	Earthing :					
i	Earthing with copper plate 600mmX600mmX3mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. (but without charcoal or coke and salt) complete as required	Set	6			
ii	Supplying and laying 50mmX6mm Copper strip at 0.5m below ground level as strip earth electrode, including soldering etc. as required.	Metre	40			
iii	Providing and fixing 50mmX6mm Copper strip on surface/on existing cable trench/RCC pipe/GI pipe or in recess for earth electrode as required.	Metre	50			
iv	Providing and fixing 25mmX5mm Copper strip on surface/on existing cable trench/RCC pipe/GI pipe or in recess for earth electrode as required.	Metre	50			
v	Supplying and laying 25mmX5mm Copper strip at 0.5m below ground level as strip earth electrode, including soldering etc. as required.	Metre	50			
vi	Providing and laying of following sizes non pressure NP2 class RCC pipe with collar joint with stiff mixture of cement (1 cement : 2 fine sand) including testing the joints etc. as required.					
i	150mm dia	Metre	260			
ii	300mm dia	Metre	20			
vii	Providing and fixing H.T. (11kV) danger notice plate of 250mmX150mm made of mild steel, atleast 2mm thick and vitreous enameled white on both sides and with inscription in signal red colour on front side as required.	Each	2			
viii	Supplying and laying of 12kV grade 1 metre wide anti skid chequered type rubber mat.	Metre	30			

ix	Design, manufacture, supply and installation of Fire Buckets 13 litre capacity 4 Nos. duly filled with sand and GI pipe support stand for these buckets including painting etc. complete as required.	Set	2			
x	Supply and fixing shock treatment chart in English, Hindi and local language mounted on 5mm thick Plywood and 3mm thick plain glass front complete as required.	Set	2			
xi	Supplying and fixing Foam type 9 ltrs capacity fire extinguishers as approved by ISI complete as required.	Set	2			
xii	Supplying and fixing Dry Chemical powder type 10 Kg capacity fire extinguishers as approved by ISI complete as required.	Set	2			
xiii	Supplying and fixing CO2 type 9 Kg capacity fire extinguishers as approved by ISI complete as required.	Set	2			
	TOTAL FOR SUB HEAD 2: H.T. SUB STATION					
	GRAND TOTAL FOR COMPLETE WORK					

END OF
VOLUME-V