

Item No.	Qty.	Description	Price in Taka	
			Unit Price	Total Price
		<u>TECHNICAL SPECIFICATION</u> <u>150 KVA SUBSTATION</u>		
		<u>11 KV H.T.SWITCHGEAR (LBS)</u> Sheet steel clad, (14 SWG) free standing, floor mounting indoor type, 11 KV, 50 Hz, HT Switchgear with 630 A, three phase hard drawn electrolytic copper busbars and all internal wiring equipped with: 1 No. 630 A, 11 KV, 20KA breaking capacity TP Load Break switch with automatic tripping mechanism whenever any of the fuses blow. 3 Nos. Cast resin insulated, 11 KV dry type CT with Ratio: 30/5A, with suitable accuracy class and burden. 3 Nos. Ammeter, 0 - 30 A. 2 Nos. Cast resin insulated, double pole, Potential Transformer, ratio: 11/11 KV, Class 0.5, 50 VA, 1 No. TP MCB for PT Secondary Protection 1 No. Voltmeter, range 0 - 15 KV with selector Switch. 3 Nos. 63 A HRC Fuses. 2 Nos. Indicating Lamps ON/OFF		

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01001	1 No.	<p><u>TRANSFORMER</u></p> <p>3 Phase oil immersed, naturally air cooled Transformer acc. to VDE/IEC/ DIN standard with 3 HT Bushing and 4 LT Bushings arranged on tank top, conservator, oil level indicator, drain and filling valves, lifting lugs, with first filling of oil in Transformer</p> <p><u>Technical Data :</u></p> <p>Rated Capacity : 150 KVA Rated Frequency : 50 Hz Rated Voltage, -Primary : 11000 V -Secondary : 415 V Vector Group : DYN 11 Off-load tap changer : $\pm 2.5\%$, -5%, -7.5% Ambient Temperature : 40°C Temperature rise : - in Oil : 60°C (Max) - in Coil : 65°C (Max) Star point brought out & loadable upto : 100% Max. service altitude : 1000 Meters Installation : Indoor/outdoor No - load loss : 380 Watt Load loss : 2300 Watt Impedence : 3.6%</p> <p>Accessories: - Silicagel breather - Thermometer</p> <p>Origin: Core : POSCO, KOREA. Copper Strip : RR IMPERIAL, Bangladesh. Insulation Materials : Wiedmann, Switzerland. Transformer Oil : Sabita, India. Super Enamelled Copper Wire : RR IMPERIAL, Bangladesh.</p>		

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02001	1 No.	<p><u>LT SWITCHGEAR PANEL</u></p> <p>Sheet steel clad, free standing, floor mounting type, 415V,50 Hz, indoor type Low Tension Switchgear with hard drawn copper busbars, TPN&E equipped with:</p> <p><u>Incoming :</u></p> <p>1 No. 250 A, 36 KA, TP MCCB with adjustable thermal overload and adjustable magnetic short-circuit releases.</p> <p>3 Nos. Current Transformer, ratio: 300/5A with suitable accuracy and burden</p> <p>1 No. Digital Multimeter. 3 Nos. Indicating Lamp 1 Set of Control Fuse</p> <p><u>Outgoing:</u></p> <p>1 No. 160 A, 25 KA, TP MCCB with Fixed thermal overload and Fixed magnetic short-circuit releases For PFI.</p> <p>1 No. 250 A, 36 KA, TP MCCB with adjustable thermal overload and adjustable magnetic short-circuit releases.</p> <p>1 No. 100 A, 10 KA, TP MCCB with thermal overload and magnetic short-circuit releases.</p> <p>Origin : All MCCB's FROM SIEMENS</p>		

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03001	1 No.	<p><u>90 KVAR AUTOMATIC PFI PLANT</u></p> <p>Sheet steel clad, dust and vermin proof, free standing, floor mounting, 415V, 50 Hz, 90 KVAR Indoor type Automatic Power Factor Improvement Plant, comprising:</p> <p>1 Nos. 40 KVAR Bank of TP dry type Power Capacitors with built-in discharge resister.</p> <p>1 No. 25 KVAR Bank of TP dry type Power Capacitors with built-in discharge resister.</p> <p>1 No. 10 KVAR Bank of TP dry type Power Capacitors with built-in discharge resister.</p> <p>1 No. 7.5 KVAR Bank of TP dry type Power Capacitors with built-in discharge resister.</p> <p>1 No. 5 KVAR Bank of TP dry type Power Capacitors with built-in discharge resister.</p> <p>1 No. 2.5 KVAR Bank of TP dry type Power Capacitors with built-in discharge resister.</p> <p>1 No. Automatic Power Factor Correction Relay. 6 Nos. TP Air Contactors of adequate rating '6 Nos. TP MCB of adequate rating 6 Nos. Indicating Lamps 1 Set of Control fuses</p> <p>Origin : Capacitor Bank - Schneider Electric Relay - MIKRO MCB - ABB Magnetic Contactor - ABB</p>	C	

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05001	1 Set.	<p><u>DROPOUT FUSE</u></p> <p><u>Technical Specification</u> :</p> <p>Rated Voltage (Nominal) : 11 kV Rated Maximum Voltage : 15 kV Rated Frequency : 50 Hz B I L : 75 kV Rated Current RMS : 100 A Interrupting Current RMS : 10 kA Withstand Test Voltage Dry , 1 Min. : 35 kV Wet , 10 sec. : 30 kV</p>		
06001	1 Set.	<p><u>LIGHTNING ARRESTOR</u></p> <p><u>Technical Specification</u> :</p> <p>Rated Voltage (RMS) : 9 kV Rated System voltage : 12 kV Frecuency : 50 Hz Minimum Spark Over (RMS): 14 kV Maximum Spark Over (RMS : 40 kV Maximum Impulse Spark (Cr: 45 kV Withstand Voltage Wet , 10 sec. : 24 kV Dry , 1 min. : 28 kV Discharge 33 kV (Crest) : 5 kA Impulse Current Withstand : 55 kA</p>		

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		<u>INSTALLATION PART</u>		
01000	1 Job	<u>SUBSTATION EQUIPMENTS</u>		
01001	1 No.	<u>150 KVA TRANSFORMER</u> Installation, testing and commissioning of 150 KVA Transformer including supply of consumables like - Angle frame - Cable support - U-channels		
01002	1 No.	<u>LT SWITCHGEAR</u> Installation, testing and commissioning of 415 V LT panel including supply of consumables like - Angle frame - Cable support - Controll cable - U-channels		
01003	1 No.	<u>PFI PLANT</u> Installation, testing and commissioning of PFI Plant including supply of consumables like - Angle frame - Controll cable - U-channels		

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02001	4 Set	<u>EARTHING SYSTEM FOR SUBSTATION</u>		
	2 Sets	<u>EARTHING BLOCK</u> Supply, installation, testing and commissioning of 4 Nos. copper earthing block with required Nos. of ¼" hole for ECC connection. Size - 254mm x 40mm x 10mm. One for transformer neutral and another for all substation equipments ECC connections.		
	4 Sets	<u>EARTH ELECTRODE</u> Supply and installation of 60ft length 1.5" dia GI Pipe buried upto the depth of 80'-0" in the damp soil including 4 SWG copper wire from bottom of GI Pipe upto ground level.		
	150rft	<u>EARTHING LEAD</u> Supply and Installation of earthing lead, 4 SWG copper wire through 1" dia PVC pipe (if required) from earthing block to earth electrode.		
	100 rft	<u>EARTH CONTINUITY CONDUCTOR</u> Installation of 4SWG copper earth continuity conductor running from the bodies of substation equipment to the earthing block.		

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<u>PRICE PROPOSAL</u>				
<u>150 KVA SUBSTATION</u>				
<u>PART A</u>				
2,001	1 No.	TRANSFORMER (150KVA)	520,000	520,000
3,001	1 No.	LT SWITCHGEAR PANEL (250A)	155,000	155,000
4,001	1 No.	90 KVAR AUTOMATIC PFI PLANT	135,000	135,000
5,001	1 Set	DROPOUT FUSE	12,000	12,000
6,001	1 Set	LIGHTNING ARRESTOR	8,000	8,000
08001	4 Sets.	HEAT SHRINK KIT	2,500	10,000
SUB TOTAL			<u>TAKA</u>	<u>840,000</u>
<u>PART -B</u>				
01001	1 Set	INSTALLATION OF SUBSTATION EQUIPMENT	30,000	30,000
7,001	4 Nos.	EARTHING FOR SUB-STATION	25,000	100,000
05001	1 Job	TRANSPORTATION & ELB	60,000	60,000
SUB TOTAL			<u>TAKA</u>	<u>190,000</u>
TOTAL			<u>TAKA</u>	<u>1,030,000</u>

TOTAL TAKA TEN LAC THIRTY THOUSAND ONLY

Note :

- 01) Any type of civil works cables (HT & LT) , Road cutting & GOVT formalitite are beyond the scope of this quotation.
- 02) If Earthing result is not satisfactory (Less than 1.0 Ohm in each Electrode) with 4 Nos. earthing then for extra earthing cost will be as per above rate .