

ANNEXURE-1

66 kV XLPE Cables

1.0 SCOPE

ETC contractor's scope under this item (Item # 7.0 of the Main BOQ) is the Erection, Testing & Commissioning of the 66kV Cables [details given below under clause 2.0] & cable Termination/ Jointing Kits. 66kV cables shall be laid and terminated by skilled and fully qualified man power. The cables shall be directly buried in ground.

Testing of the cables, cable terminations along with other associated accessories is under the scope of bidder as per the requirement given under clause 3.0. All the necessary equipment required for the testing shall be arranged by the bidder.

2.0 CABLE DETAILS

S. No.	PARTICULARS	UNIT	DATA
1.	Type of Cables		Cross Linked Polyethylene (XLPE)
2.	Number of cores		One (1000 Sq. mm)
3	Conductor Material		Copper
4	Normal System Voltage	kV	66
5	Max. System voltage	kV	72.5
6	Fault Current	kA	31.5 for one second
8.	Overall diameter of cable		
7	LAYING CONDITIONS -		
	a) Cable shall be directly buried in soil in flat formation with a spacing between cables centre	mm	500 mm centre to centre
	b) Maximum Ground Temperature	Deg C	40
	c) Thermal Resistivity of soil	Deg C cm/watt	150
	d) Depth of buried cable	Meter	1 mete
	e) Earthing of screen		Bonded to earth at both ends
	f) Type of Atmosphere		Heavily Polluted

3.0 SITE TESTING

The testing of the cables & terminations shall be carried by the contractor as per Clause 15 of IEC 60840. The contractor shall carry out at least the following tests at site:

- (i) DC voltage test of the over sheath (Clause 15.1)
- (ii) AC voltage test of the insulation by applying a voltage U_0 to be applied for 24 hours (Clause 15.2)

All testing equipment required for this purpose shall be arranged by the ETC contractor.

4.0 BILL OF QUANTITY

S. No.	Description	Quantity	Rate	Amount
1.	Erection, Testing & Commissioning of 66 kV cable	Six lengths [each length of about 75M].		
2.	Erection, Testing & Commissioning of Outdoor Cable Sealing Ends including terminal connectors, support steel structure complete in all respect for the above cable.	12 Nos.		
3.	Erection, Testing & Commissioning of 3.3 kV, 300sq.mm, 31.5kA un-armoured copper conductor PVC insulated sheath bonding cable (as per IS: 1554 Part2) for earthing of 66kV Cable through link boxes (with or without SVL).	180 Meters (12 pieces each of 15Meters) Each piece will have one link box.		
4.	Civil works required for cable laying. The work shall be carried out as per BHEL/ APGENCO approved drawings. Preliminary drawing is enclosed (Sketch-1)	1 Lot		
	TOTAL AMOUNT			

Note: Bidder has to quote for items No. 1 to 4. Cable lengths may vary as per actual site conditions. Payment shall be made as per actual laid lengths and quantity of accessories installed. Total amount of this annexure is to be filled against item no.7 of main BOQ. This annexure should also be kept in price bid envelope.