

Annexure-A

1. Supply, installation, testing and commissioning of 11KV VCB 630Amp, 25-KA protection panel as per WAPDA specifications P44:2018 (Amend up to date)

Item Description	Make	Qty.
Breaker Compartment		
3-pole 630Amps, 12KV, fully enclosed Motor/Manual Vacuum Circuit Breaker DRAWOUT Type. 95KV BIL, BC-25KA Include Motor Mechanism @ 240VAC Shunt Opening Coil @ 110VDC Shunt Closing Coil @ 110VDC	ABB or equivalent	01No.
Supply of Metal Clad, sheet steel fabricated free standing totally enclosed switchboard 2.3mm, internally partitioned, Floor Standing, Dust and Vermin proof, internally wired, IP-3x, RAL-7032 All Cable Entry from Bottom with Cable Termination Provision.	TE-PAK or equivalent.	01 No.
Relays		
Three Phase, Four Element O/C, E/F Relay Aux Voltage :110VDC	ABB or equivalent	01 No.
Capacitor Trip Unit	E-Labs or equivalent	01 No.
Block For CT, PT Circuit, DC Power Supplies and trip Outputs	NTDC Approved	01 No.
Instrumentation		

Indication light for VCB ON (RED) and Green (OFF)	GGT or equivalent	02 Nos.
Indication light for PT Supply MCB OFF (Blue)	GGT or equivalent	01 No.
Indication light for VCB Tripping (White)	GGT or equivalent	01 No.
Indication light for AC Alarm/Hooter Supply failure (Purple)	GGT or equivalent	01 No.

Push Button for VCB ON (RED), OFF (GREEN) and RESET (YELLOW)	GGT or equivalent	03 Nos.
3 Phase 4 Wire energy meter (accuracy Class 0.5)	Bluestar/NTDC approved	02 Nos.
Analog Ampere meter size 96×96mm	Lumel or equivalent	01 No.
Analog Voltmeter with 7-position selector switch	GGT or equivalent	01 No.
Analog Power Factor meter	Lumel or equivalent.	01 No.
Three temperature Sensor with One Display unit along with Alarm function and selectable temperature range	E-logics or equivalent.	01 No.
Current/Voltage Transformers		
Current Transformer 11KV for protection (200/5A) Burden:15VA,5P20	NTDC Approved	03 Nos.
Current Transformer 11KV for Metering (200/5A) Burden:10VA,5P20	NTDC Approved	03 Nos.
Potential transformer 11KV/ $\sqrt{3}$, 110V $\sqrt{3}$, class 0.5, 100VA for measurement and protection 12/36/95KV	NTDC Approved	03 Nos.
Panel Accessories		
MCB for Control Circuit with NC contact (NC will be used for Hooter option)	ABB or equivalent	01 No.
3- pole MCB VAC 10A B,C 10KA model 5203 with (02 NO+02NC=02) Aux. contact (for PTs)	ABB or equivalent	02 Nos.
2- pole MCB VAC 10A B,C 10KA model 5202 with (01 NO+01NC=03) Aux. contact (for VCB Motor)	ABB or equivalent	03 Nos.
2- pole MCB VAC 10A B,C 10KA model PR-c10 with (01 NO+01NC=03) Aux. contact	ABB or equivalent	03 Nos.
All HT VCB panels will be couple through Copper Bus-Bar duct type rating 300 Amps of 99.9 % Pure copper suitable for 11 KV.		

Panels will be purchased from approved manufacturer of NTDC/WAPDA department.

Bidder must be registered with PEC under category EE-04 (Low Voltage), EE-05 (High Voltage), EE-06 (Lighting).