7.12.8 Bill of Quantities (BOQ)

The scopes of works include Design, Manufacture, Supply, Installation/ Erection, Construction, Testing and commissioning and so on of the following six (06) 33 kV switching stations. In the Bill of Quantities, the quantities given are only estimated. The actual quantity will be supplied by the contractor to complete the work. If the quantity is less than the estimated quantity, this will be deducted from the bill or be delivered to WZPDCL's store. The Bill of Quantities of the 33 kV switching stations is given below:

7.12.8.1 BOQ for Bhola 33kV GIS Substation of WZPDCL.

Item Sl. No	Description of Item	Unit of Measurement	Quantity
1	2	3	5
	Supply of Plant and Mandatory Spare Parts (USD)		
1	Supply of Station Service Transformer 33/0.415 KV, 200 kVA (As per Scope of Works, Technical Specification and GTP)	Nos.	2
2	Supply of 33 kV, GIS Indoor Switchgear with 3000A bus having breaker and cubicles for Incoming feeder with Line PT (2500A), Bus Coupler with Riser (2500A), Outgoing feeder (1250A), 1 no. Spare feeder (1250A) and cubicles for 33 kV Bus PT, Station Auxiliary Transformer panel with 33 kV Protection Control and Metering (PCM) in same 33 kV GIS Panel with Indoor Surge Arresters and other related accessories (As per Scope of Works, Technical Specification and GTP)		
	a) Incoming feeder with Line PT (2500A)	Unit	2
	b) Outgoing feeder (1250A)	Unit	11
	c) Spare feeder (1250A)	Unit	1
	d) Bus Coupler with Riser (2500A)	Unit	1
	e) 33 kV Bus PT Panel or Bus PT included in any panel of respective Bus. **If PT panel is offered, the item price should be populated accordingly. If no PT panel is offered, the price should default to BDT 0.001.	Sets	2
	f) Station Auxiliary Transformer panel (LBS or VCB)	Sets	2
3	Supply of 36 kV Vacuum (2500A, 31.5 kA, for 3 Sec.) outdoor circuit breaker along with supporting steel structure and suitable bimetallic connectors. (As per Scope of Works, Technical Specification and GTP)	Set	2
4	Supply of 33 kV single phase Lightning Arrester (ZnO-type) along with surge monitor/ counter, supporting structure and bi-metallic connectors and accessories (As per Scope of Works, Technical Specification and GTP)	Set (01 Set= 03 Nos.)	16
5	Supply of 33 kV Isolator (2500A, 31.5 kA for 3 sec) without Earthing blade gang operated vertical mounted vertical break with supporting steel structure with necessary connectors & accessories (As per Scope of Works, Technical Specification and GTP)	Set	2
6	Supply of 33 kV Isolator (2500A, 31.5 kA for 3 sec) with Earthing blade gang operated vertical mounted vertical break with supporting steel structure with necessary connectors & accessories (As per Scope of Works, Technical Specification and GTP)	Set	2
7	Supply of 33 kV Single phase Current Transformer ratio 2400-1600/1/1/1A class 5p20 for protection and 0.2S for measuring (1 core for protection, 2 core for measuring) along with supporting steel structure and suitable bi-metallic connectors & accessories as required (for Outgoing) (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 Nos.)	2
8	Supply of 33 kV, Single Phase Potential Transformer ratio 33/√3/0.11/√3/0.11/√3 kV Class 0.2 measuring & 3P for protection signaling instrument etc. along with supporting materials for installation on gantry structure with necessary connectors including fused isolator and other accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 nos.)	2
9	Supply of Suitable Bus Bar Droppers, Conductors, connectors and outdoor marshalling kiosk, hardware, clamps, nut-bolts etc. suitable for connecting the individual items. (As per Scope of Works, Technical Specification and GTP)	Lot	1
10	Supply of 33 kV Control Metering and Relay Panel (Outgoing / Incoming) with 3 O/C + 1 E/F + 3 Directional O/C + 1 Directional E/F. (As per Scope of Works, Technical Specification and GTP)	Set	2
11	Supply of 33 kV 1Cx800 Sq. mm XLPE Copper Cable for connection between 33 kV outdoor bus to 33 kV incoming GIS breaker as per field requirement.	Meter	2324
12	Supply of 33kV 1Cx500 Sq. mm XLPE Copper Cable for 33 kV Outgoing GIS breaker to 33 kV outgoing feeder pole as per field requirement.	Meter	3478
13	Supply of 33 kV 3x1Cx95 Sq.mm XLPE Copper Cable for Station Transformer (As per Scope of Works,Technical Specification and GTP)	Meter	50
14	Supply of 0.415 kV 4Cx150 sq-mm PVC Copper Cable for connection between station transformer to AC distribution panel along with LV MCCB and all necessary accessories (As per Scope of works,Technical Specification and GTP)	Meter	50

Item Sl. No	Description of Item	Unit of Measurement	Quntity
15	a) Supply of 33 kV indoor GIS termination kits for 800 Sq. mm XLPE cable and accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 Nos.)	6
	b) Supply of 33 kV outdoor termination kits for 800 Sq. mm XLPE cable and accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 Nos.)	6
16	a) Supply of 33 kV indoor GIS termination kits for 500 Sq. mm XLPE cable and accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 Nos.)	12
	b) Supply of 33 kV outdoor termination kits for 500 Sq. mm XLPE cable and accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 Nos.)	12
17	Supply of All Materials for Grounding System. Earthing mesh with Earthing Electrode (Copper, annealed soft-drawn/ Copper, Commercial hard-drawn). The Substation Earthing Resistance shall be Maximum 0.5 ohm (As per Scope of Works,Technical Specification and GTP)	Lot	1
18	Supply of Hot dip galvanized steel structure for 33 kV Outdoor VCB, CT, LA, PI, 3000A Copper Bar, DS/ES & Cable hanger for 33 kV Incoming & outgoing feeders with all necessary accessories for installation of equipment. (As per Scope of Works,Technical Specification and GTP)	Lot	1
19	Supply of All necessary Control Cable and LV Power Cables (As per Scope of Works,Technical Specification and GTP)	Lot	1
20	Supply of Battery 200AH, NiCd 92 Cells, 110 V. (As per Scope of Works, Technical Specification and GTP)	Set	2
21	Supply of Battery Charger, constant voltage type (adjustable) with current limiting for boost and float charge, input- 400 volts, output DC 110 - 150 volts.	Nos	2
22	Supply of DC Distribution Panel with interlocking along with all necessary accessories. (As per Scope of Works, Technical Specification and GTP)	No	1
23	Supply of AC Distribution Panel with interlocking along with all necessary accessories. (As per Scope of Works, Technical Specification and GTP)	No	1
24	Supply of Fire Extinguisher equipment (As per Scope of Works, Technical Specification and GTP) a) CO2 b) Foam Type c) Dry Chemical Type	Each (2 Nos.)	6
25	Supply of Split type Air Conditioner of capacity 48000 BTU/ Hr including MCB and all other accessories as required. (As per Scope of Works, Technical Specification and GTP)	Nos	6
26	Supply of Outdoor and Indoor Lighting System (As per Scope of Works,Technical Specification and GTP)	Lot	1
27	Supply of Desktop Computer with UPS, Laser Printer, Scanner and accessories (As per Scope of Works, Technical Specification and GTP)	Set	1
28	Supply & Installation of IPTV Camera including all accessories (Such as IP Camera, NVR, POE Switch, Hard Disk, Power Cable, Ethernet Cable). (As per Scope of Works, Technical Specification and GTP)	Lot	1
29	Supply of Fire Detection Facilities for control room building including all accessories/ components required.(As per Scope of Works and Technical Specification)	Lot	1
30	Supply of Substation Automation system for 33 kV System. (As per Scope of Works, Technical Specification and GTP)	Lot	1
31	**Supply of Madatory Spare Parts: (USD)**		
	Supply of Closing and Tripping Coil for 33 kV GIS Switchgear	Set (1 set =2 Nos.)	4
	Supply of Motor Control Unit (MCU) for 33 kV GIS Switchgear	Nos	2
	Supply of Universal Motor for Spring Charge for 33 kV GIS Switchgear	Nos	2
	Supply of Gas pressure manometer for 33 kV GIS Switchgear	Nos	2
	Supply of High Purity SF6 Gas in 40L/50KG Gas Cylinder	Nos	1
	Supply of Tool Kit for 33 kV GIS Switchgear	Set	1
	Supply of 33 kV indoor GIS termination kits for 800 Sq. mm XLPE cable and accessories.	Set (1 set =3 Nos.)	1
	Supply of 33 kV outdoor termination kits for 800 Sq. mm XLPE cable and accessories.	Set (1 set =3 Nos.)	1
	Supply of 33 kV indoor GIS termination kits for 500 Sq. mm XLPE cable and accessories.	Set (1 set =3 Nos.)	1
	Supply of 33 kV outdoor termination kits for 500 Sq. mm XLPE cable and accessories.	Set (1 set =3 Nos.)	1
32	**Civil Works: (taka)**		
	a) Earth filling with compaction as necessary, soil test, Landscaping, Leveling, Dressing	Cum	1500

Item Sl. No	Description of Item	Unit of Measurement	Quantity
	b) Design & Construction of new 2-storied Control Building with Office room (Foundation will be 3-storied) including O/H tank, Water Supply, Sanitary system, Internal electrification, Emergency Lighting, False Ceiling etc. complete in all respects	Sq. m	600
	c) Foundation for Station transformers	Nos	2
	d) Foundation for Supporting structures	Lot	1
	e) Construction of Retaining wall	Rm	40
	f) Construction of boundary wall with barbed wire	Rm	40
	g) Construction of surface drain	Rm	90
	h) Construction of guard post building	Sq. m	0
	i) Construction of Main gate and electronic Sign Board	Lot	0
	j) Fencing with barbed wire with gate	m	0
	k) Construction of Approach & Internal Road	Rm	10
	l) Construction of RCC Power Cable Trenches with Cable Tray	Rm	110
	m) Operation Key Board, Table, chair, Steel Almirah, File Cabinet, Ceiling Fans etc.	Lot	1
	n) Tree plantation, Gardening and Beautification.	Lot	1
33	**Installation and other services (taka)**		
	Design, Supply, Construction, Installation, Testing & Commissioning of 33 kV Switching Station (GIS) at Jhalokathi 132/33 kV Grid Substation on Turnkey Basis under Grid Power Evacuation System Development for WZPDCL" project	Lot	1

7.12.8.2 BOQ FOR CHARFASHION 33KV GIS SUBSTATION UNDER BHOLA ESU OF WZPDCL.

Item Sl. No	Description of Item	Unit of Measurement	Quntity
1	2	3	5
	Supply of Plant and Mandatory Spare Parts (USD)		
1	Supply of Station Service Transformer 33/0.415 KV, 200 kVA (As per Scope of Works, Technical Specification and GTP)	Nos.	2
2	Supply of 33 kV, GIS Indoor Switchgear with 3000A bus having breaker and cubicles for Incoming feeder with Line PT (2500A), Bus Coupler with Riser (2500A), Outgoing feeder (1250A), 1 no. Spare feeder (1250A) and cubicles for 33 kV Bus PT, Station Auxiliary Transformer panel with 33 kV Protection Control and Metering (PCM) in same 33 kV GIS Panel with Indoor Surge Arresters and other related accessories (As per Scope of Works, Technical Specification and GTP)		
	a) Incoming feeder with Line PT (2500A)	Unit	2
	b) Outgoing feeder (1250A)	Unit	9
	c) Spare feeder (1250A)	Unit	1
	d) Bus Coupler with Riser (2500A)	Unit	1
	e) 33 kV Bus PT Panel or Bus PT included in any panel of respective Bus. **If PT panel is offered, the item price should be populated accordingly. If no PT panel is offered, the price should default to BDT 0.001.	Sets	2
	f) Station Auxiliary Transformer panel (LBS or VCB)	Sets	2
3	Supply of 36 kV Vacuum (2500A, 31.5 kA, for 3 Sec) outdoor circuit breaker along with supporting steel structure and suitable bimetallic connectors. (As per Scope of Works, Technical Specification and GTP)	Set	2
4	Supply of 33 kV single phase Lightning Arrester (ZnO-type) along with surge monitor/ counter, supporting structure and bi-metallic connectors and accessories (As per Scope of Works, Technical Specification and GTP)	Set (01 Set= 03 Nos.)	14
5	Supply of 33 kV Isolator (2500A, 31.5 kA for 3 sec) without Earthing blade gang operated vertical mounted vertical break with supporting steel structure with necessary connectors & accessories (As per Scope of Works, Technical Specification and GTP)	Set	2
6	Supply of 33 kV Isolator (2500A, 31.5 kA for 3 sec) with Earthing blade gang operated vertical mounted vertical break with supporting steel structure with necessary connectors & accessories (As per Scope of Works, Technical Specification and GTP)	Set	2
7	Supply of 33 kV Single phase Current Transformer ratio 2400-1600/1/1/1A class 5p20 for protection and 0.2S for measuring (1 core for protection, 2 core for measuring) along with supporting steel structure and suitable bi-metallic connectors & accessories as required (for Outgoing) (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 Nos.)	2
8	Supply of 33 kV, Single Phase Potential Transformer ratio 33/√3/0.11/√3/0.11/√3 kV Class 0.2 measuring & 3P for protection signaling instrument etc. along with supporting materials for installation on gantry structure with necessary connectors including fused isolator and other accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 nos.)	2
9	Supply of Suitable Bus Bar Droppers, Conductors, connectors and outdoor marshalling kiosk, hardware, clamps, nut-bolts etc. suitable for connecting the individual items. (As per Scope of Works, Technical Specification and GTP)	Lot	1
10	Supply of 33 kV Control Metering and Relay Panel (Outgoing / Incoming) with 3 O/C + 1 E/F + 3 Directional O/C + 1 Directional E/F. (As per Scope of Works, Technical Specification and GTP)	Set	2
11	Supply of 33 kV 1Cx800 Sq. mm XLPE Copper Cable for connection between 33 kV outdoor bus to 33 kV incoming GIS breaker as per field requirement.	Meter	1809
12	Supply of 33kV 1Cx500 Sq. mm XLPE Copper Cable for 33 kV Outgoing GIS breaker to 33 kV outgoing feeder pole as per field requirement.	Meter	2435
13	Supply of 33 kV 3x1Cx95 Sq.mm XLPE Copper Cable for Station Transformer (As per Scope of Works,Technical Specification and GTP)	Meter	50
14	Supply of 0.415 kV 4Cx150 sq-mm PVC Copper Cable for connection between station transformer to AC distribution panel along with LV MCCB and all necessary accessories (As per Scope of works,Technical Specification and GTP)	Meter	50
15	a) Supply of 33 kV indoor GIS termination kits for 800 Sq. mm XLPE cable and accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 Nos.)	6
	b) Supply of 33 kV outdoor termination kits for 800 Sq. mm XLPE cable and accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 Nos.)	6
16	a) Supply of 33 kV indoor GIS termination kits for 500 Sq. mm XLPE cable and accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 Nos.)	10
	b) Supply of 33 kV outdoor termination kits for 500 Sq. mm XLPE cable and accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 Nos.)	10

Item Sl. No	Description of Item	Unit of Measurement	Quantity
17	Supply of All Materials for Grounding System. Earthing mesh with Earthing Electrode (Copper, annealed soft-drawn/ Copper, Commercial hard-drawn). The Substation Earthing Resistance shall be Maximum 0.5 ohm (As per Scope of Works,Technical Specification and GTP)	Lot	1
18	Supply of Hot dip galvanized steel structure for 33 kV Outdoor VCB, CT, LA, PI, 3000A Copper Bar, DS/ES & Cable hanger for 33 kV Incoming & outgoing feeders with all necessary accessories for installation of equipment. (As per Scope of Works,Technical Specification and GTP)	Lot	1
19	Supply of All necessary Control Cable and LV Power Cables (As per Scope of Works,Technical Specification and GTP)	Lot	1
20	Supply of Battery 200AH, NiCd 92 Cells, 110 V. (As per Scope of Works, Technical Specification and GTP)	Set	2
21	Supply of Battery Charger, constant voltage type (adjustable) with current limiting for boost and float charge, input- 400 volts, output DC 110 - 150 volts.	Nos	2
22	Supply of DC Distribution Panel with interlocking along with all necessary accessories. (As per Scope of Works, Technical Specification and GTP)	No	1
23	Supply of AC Distribution Panel with interlocking along with all necessary accessories. (As per Scope of Works, Technical Specification and GTP)	No	1
24	Supply of Fire Extinguisher equipment (As per Scope of Works, Technical Specification and GTP) a) CO2 b) Foam Type c) Dry Chemical Type	Each (2 Nos.)	6
25	Supply of Split type Air Conditioner of capacity 48000 BTU/ Hr including MCB and all other accessories as required. (As per Scope of Works, Technical Specification and GTP)	Nos	6
26	Supply of Outdoor and Indoor Lighting System (As per Scope of Works,Technical Specification and GTP)	Lot	1
27	Supply of Desktop Computer with UPS, Laser Printer, Scanner and accessories (As per Scope of Works, Technical Specification and GTP)	Set	1
28	Supply & Installation of IPTV Camera including all accessories (Such as IP Camera, NVR, POE Switch, Hard Disk, Power Cable, Ethernet Cable). (As per Scope of Works, Technical Specification and GTP)	Lot	1
29	Supply of Fire Detection Facilities for control room building including all accessories/ components required.(As per Scope of Works and Technical Specification)	Lot	1
30	Supply of Substation Automation system for 33 kV System. (As per Scope of Works, Technical Specification and GTP)	Lot	1
31	**Supply of Madatory Spare Parts: (USD)**		
	Supply of Closing and Tripping Coil for 33 kV GIS Switchgear	Set (1 set =2 Nos.)	4
	Supply of Motor Control Unit (MCU) for 33 kV GIS Switchgear	Nos	2
	Supply of Universal Motor for Spring Charge for 33 kV GIS Switchgear	Nos	2
	Supply of Gas pressure manometer for 33 kV GIS Switchgear	Nos	2
	Supply of High Purity SF6 Gas in 40L/50KG Gas Cylinder	Nos	1
	Supply of Tool Kit for 33 kV GIS Switchgear	Set	1
	Supply of 33 kV indoor GIS termination kits for 800 Sq. mm XLPE cable and accessories.	Set (1 set =3 Nos.)	1
	Supply of 33 kV outdoor termination kits for 800 Sq. mm XLPE cable and accessories.	Set (1 set =3 Nos.)	1
	Supply of 33 kV indoor GIS termination kits for 500 Sq. mm XLPE cable and accessories.	Set (1 set =3 Nos.)	1
	Supply of 33 kV outdoor termination kits for 500 Sq. mm XLPE cable and accessories.	Set (1 set =3 Nos.)	1
32	**Civil Works: (taka)**		
	a) Earth filling with compaction as necessary, soil test, Landscaping, Leveling, Dressing	Cum	2700
	b) Design & Construction of new 2-storied Control Building with Office room (Foundation will be 3-storied) including O/H tank, Water Supply, Sanitary system, Internal electrification, Emergency Lighting, False Ceiling etc. complete in all respects	Sq. m	600
	c) Foundation for Station transformers	Nos	2
	d) Foundation for Supporting structures	Lot	1
	e) Construction of Retaining wall	Rm	96
	f) Construction of boundary wall with barbed wire	Rm	100
	g) Construction of surface drain	Rm	90
	h) Construction of guard post building	Sq. m	10
	i) Construction of Main gate and electronic Sign Board	Lot	1
	j) Fencing with barbed wire with gate	m	110
	k) Construction of Approach & Internal Road	Rm	50
	l) Construction of RCC Power Cable Trenches with Cable Tray	Rm	90
	m) Operation Key Board, Table, chair, Steel Almirah, File Cabinet, Ceiling Fans etc.	Lot	1

Item Sl. No	Description of Item	Unit of Measurement	Quntity
	n) Tree plantation, Gardening and Beautification.	Lot	1
33	**Installation and other services (taka)**		
	Design, Supply, Construction, Installation, Testing & Commissioning of 33 kV Switching Station (GIS) at Jhalokathi 132/33 kV Grid Substation on Turnkey Basis under Grid Power Evacuation System Development for WZPDCL" project	Lot	1

7.12.8.3 BOQ FOR MAHESHPUR 33KV GIS SUBSTATION UNDER Maheshpu JHRNAIDAH-02 OF WZPDCL

Item Sl. No	Description of Item	Unit of Measurement	Quantity
1	2	3	5
	Supply of Plant and Mandatory Spare Parts (USD)		
1	Supply of Station Service Transformer 33/0.415 KV, 200 kVA (As per Scope of Works, Technical Specification and GTP)	Nos.	2
2	Supply of 33 kV, GIS Indoor Switchgear with 3000A bus having breaker and cubicles for Incoming feeder with Line PT (2500A), Bus Coupler with Riser (2500A), Outgoing feeder (1250A), 1 no. Spare feeder (1250A) and cubicles for 33 kV Bus PT, Station Auxiliary Transformer panel with 33 kV Protection Control and Metering (PCM) in same 33 kV GIS Panel with Indoor Surge Arresters and other related accessories (As per Scope of Works, Technical Specification and GTP)		
	a) Incoming feeder with Line PT (2500A)	Unit	2
	b) Outgoing feeder (1250A)	Unit	7
	c) Spare feeder (1250A)	Unit	1
	d) Bus Coupler with Riser (2500A)	Unit	1
	e) 33 kV Bus PT Panel or Bus PT included in any panel of respective Bus. **If PT panel is offered, the item price should be populated accordingly. If no PT panel is offered, the price should default to BDT 0.001.	Sets	2
	f) Station Auxiliary Transformer panel (LBS or VCB)	Sets	2
3	Supply of 36 kV Vacuum (2500A, 31.5 kA, for 3 Sec.) outdoor circuit breaker along with supporting steel structure and suitable bimetallic connectors. (As per Scope of Works, Technical Specification and GTP)	Set	2
4	Supply of 33 kV single phase Lightning Arrester (ZnO-type) along with surge monitor/ counter, supporting structure and bi-metallic connectors and accessories (As per Scope of Works, Technical Specification and GTP)	Set (01 Set= 03 Nos.)	12
5	Supply of 33 kV Isolator (2500A, 31.5 kA for 3 sec) without Earthing blade gang operated vertical mounted vertical break with supporting steel structure with necessary connectors & accessories (As per Scope of Works, Technical Specification and GTP)	Set	2
6	Supply of 33 kV Isolator (2500A, 31.5 kA for 3 sec) with Earthing blade gang operated vertical mounted vertical break with supporting steel structure with necessary connectors & accessories (As per Scope of Works, Technical Specification and GTP)	Set	2
7	Supply of 33 kV Single phase Current Transformer ratio 2400-1600/1/1/1A class 5p20 for protection and 0.2S for measuring (1 core for protection, 2 core for measuring) along with supporting steel structure and suitable bi-metallic connectors & accessories as required (for Outgoing) (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 Nos.)	2
8	Supply of 33 kV, Single Phase Potential Transformer ratio 33/√3/0.11/√3/0.11/√3 kV Class 0.2 measuring & 3P for protection signaling instrument etc. along with supporting materials for installation on gantry structure with necessary connectors including fused isolator and other accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 nos.)	2
9	Supply of Suitable Bus Bar Droppers, Conductors, connectors and outdoor marshalling kiosk, hardware, clamps, nut-bolts etc. suitable for connecting the individual items. (As per Scope of Works, Technical Specification and GTP)	Lot	1
10	Supply of 33 kV Control Metering and Relay Panel (Outgoing / Incoming) with 3 O/C + 1 E/F + 3 Directional O/C + 1 Directional E/F. (As per Scope of Works, Technical Specification and GTP)	Set	2
11	Supply of 33 kV 1Cx800 Sq. mm XLPE Copper Cable for connection between 33 kV outdoor bus to 33 kV incoming GIS breaker as per field requirement.	Meter	1063
12	Supply of 33kV 1Cx500 Sq. mm XLPE Copper Cable for 33 kV Outgoing GIS breaker to 33 kV outgoing feeder pole as per field requirement.	Meter	1561
13	Supply of 33 kV 3x1Cx95 Sq.mm XLPE Copper Cable for Station Transformer (As per Scope of Works,Technical Specification and GTP)	Meter	50
14	Supply of 0.415 kV 4Cx150 sq-mm PVC Copper Cable for connection between station transformer to AC distribution panel along with LV MCCB and all necessary accessories (As per Scope of works,Technical Specification and GTP)	Meter	50
15	a) Supply of 33 kV indoor GIS termination kits for 800 Sq. mm XLPE cable and accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 Nos.)	4
	b) Supply of 33 kV outdoor termination kits for 800 Sq. mm XLPE cable and accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 Nos.)	4
16	a) Supply of 33 kV indoor GIS termination kits for 500 Sq. mm XLPE cable and accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 Nos.)	8
	b) Supply of 33 kV outdoor termination kits for 500 Sq. mm XLPE cable and accessories. (As per	Set	8

Item Sl. No	Description of Item	Unit of Measurement	Quntity
	Scope of Works, Technical Specification and GTP)	(1 set =3 Nos.)	
17	Supply of All Materials for Grounding System. Earthing mesh with Earthing Electrode (Copper, annealed soft-drawn/ Copper, Commercial hard-drawn). The Substation Earthing Resistance shall be Maximum 0.5 ohm (As per Scope of Works,Technical Specification and GTP)	Lot	1
18	Supply of Hot dip galvanized steel structure for 33 kV Outdoor VCB, CT, LA, PI, 3000A Copper Bar, DS/ES & Cable hanger for 33 kV Incoming & outgoing feeders with all necessary accessories for installation of equipment. (As per Scope of Works,Technical Specification and GTP)	Lot	1
19	Supply of All necessary Control Cable and LV Power Cables (As per Scope of Works,Technical Specification and GTP)	Lot	1
20	Supply of Battery 200AH, NiCd 92 Cells, 110 V. (As per Scope of Works, Technical Specification and GTP)	Set	2
21	Supply of Battery Charger, constant voltage type (adjustable) with current limiting for boost and float charge, input- 400 volts, output DC 110 - 150 volts.	Nos	2
22	Supply of DC Distribution Panel with interlocking along with all necessary accessories. (As per Scope of Works, Technical Specification and GTP)	No	1
23	Supply of AC Distribution Panel with interlocking along with all necessary accessories. (As per Scope of Works, Technical Specification and GTP)	No	1
24	Supply of Fire Extinguisher equipment (As per Scope of Works, Technical Specification and GTP) a) CO2 b) Foam Type c) Dry Chemical Type	Each (2 Nos.)	6
25	Supply of Split type Air Conditioner of capacity 48000 BTU/ Hr including MCB and all other accessories as required. (As per Scope of Works, Technical Specification and GTP)	Nos	6
26	Supply of Outdoor and Indoor Lighting System (As per Scope of Works,Technical Specification and GTP)	Lot	1
27	Supply of Desktop Computer with UPS, Laser Printer, Scanner and accessories (As per Scope of Works, Technical Specification and GTP)	Set	1
28	Supply & Installation of IPTV Camera including all accessories (Such as IP Camera, NVR, POE Switch, Hard Disk, Power Cable, Ethernet Cable). (As per Scope of Works, Technical Specification and GTP)	Lot	1
29	Supply of Fire Detection Facilities for control room building including all accessories/ components required.(As per Scope of Works and Technical Specification)	Lot	1
30	Supply of Substation Automation system for 33 kV System. (As per Scope of Works, Technical Specification and GTP)	Lot	1
31	**Supply of Madatory Spare Parts: (USD)**		
	Supply of Closing and Tripping Coil for 33 kV GIS Switchgear	Set (1 set =2 Nos.)	4
	Supply of Motor Control Unit (MCU) for 33 kV GIS Switchgear	Nos	2
	Supply of Universal Motor for Spring Charge for 33 kV GIS Switchgear	Nos	2
	Supply of Gas pressure manometer for 33 kV GIS Switchgear	Nos	2
	Supply of High Purity SF6 Gas in 40L/50KG Gas Cylinder	Nos	1
	Supply of Tool Kit for 33 kV GIS Switchgear	Set	1
	Supply of 33 kV indoor GIS termination kits for 800 Sq. mm XLPE cable and accessories.	Set (1 set =3 Nos.)	1
	Supply of 33 kV outdoor termination kits for 800 Sq. mm XLPE cable and accessories.	Set (1 set =3 Nos.)	1
	Supply of 33 kV indoor GIS termination kits for 500 Sq. mm XLPE cable and accessories.	Set (1 set =3 Nos.)	1
	Supply of 33 kV outdoor termination kits for 500 Sq. mm XLPE cable and accessories.	Set (1 set =3 Nos.)	1
32	**Civil Works: (taka)**		
	a) Earth filling with compaction as necessary, soil test, Landscaping, Leveling, Dressing	Cum	675
	b) Design & Construction of new 2-storied Control Building with Office room (Foundation will be 3-storied) including O/H tank, Water Supply, Sanitary system, Internal electrification, Emergency Lighting, False Ceiling etc. complete in all respects	Sq. m	600
	c) Foundation for Station transformers	Nos	2
	d) Foundation for Supporting structures	Lot	1
	e) Construction of Retaining wall	Rm	
	f) Construction of boundary wall with barbed wire	Rm	
	g) Construction of surface drain	Rm	90
	h) Construction of guard post building	Sq. m	
	i) Construction of Main gate and electronic Sign Board	Lot	
	j) Fencing with barbed wire with gate	m	0
	k) Construction of Approach & Internal Road	Rm	15

Item Sl. No	Description of Item	Unit of Measurement	Quntity
	l) Construction of RCC Power Cable Trenches with Cable Tray	Rm	75
	m) Operation Key Board, Table, chair, Steel Almirah, File Cabinet, Ceiling Fans etc.	Lot	1
	n) Tree plantation, Gardening and Beautification.	Lot	1
33	**Installation and other services (taka)**		
	Design, Supply, Construction, Installation, Testing & Commissioning of 33 kV Switching Station (GIS) at Jhalokathi 132/33 kV Grid Substation on Turnkey Basis under Grid Power Evacuation System Development for WZPDCL" project	Lot	1

7.12.8.4 BOQ FOR MEHERPUR 33KV GIS SUBSTATION OF WZPDCL

Item Sl. No	Description of Item	Unit of Measurement	Quantity
1	2	3	5
	Supply of Plant and Mandatory Spare Parts (USD)		
1	Supply of Station Service Transformer 33/0.415 KV, 200 kVA (As per Scope of Works, Technical Specification and GTP)	Nos.	2
2	Supply of 33 kV, GIS Indoor Switchgear with 3000A bus having breaker and cubicles for Incoming feeder with Line PT (2500A), Bus Coupler with Riser (2500A), Outgoing feeder (1250A), 1 no. Spare feeder (1250A) and cubicles for 33 kV Bus PT, Station Auxiliary Transformer panel with 33 kV Protection Control and Metering (PCM) in same 33 kV GIS Panel with Indoor Surge Arresters and other related accessories (As per Scope of Works, Technical Specification and GTP)		
	a) Incoming feeder with Line PT (2500A)	Unit	2
	b) Outgoing feeder (1250A)	Unit	7
	c) Spare feeder (1250A)	Unit	1
	d) Bus Coupler with Riser (2500A)	Unit	1
	e) 33 kV Bus PT Panel or Bus PT included in any panel of respective Bus. **If PT panel is offered, the item price should be populated accordingly. If no PT panel is offered, the price should default to BDT 0.001.	Sets	2
	f) Station Auxiliary Transformer panel (LBS or VCB)	Sets	2
3	Supply of 36 kV Vacuum (2500A, 31.5 kA, for 3 Sec.) outdoor circuit breaker along with supporting steel structure and suitable bimetallic connectors. (As per Scope of Works, Technical Specification and GTP)	Set	2
4	Supply of 33 kV single phase Lightning Arrester (ZnO-type) along with surge monitor/ counter, supporting structure and bi-metallic connectors and accessories (As per Scope of Works, Technical Specification and GTP)	Set (01 Set= 03 Nos.)	12
5	Supply of 33 kV Isolator (2500A, 31.5 kA for 3 sec) without Earthing blade gang operated vertical mounted vertical break with supporting steel structure with necessary connectors & accessories (As per Scope of Works, Technical Specification and GTP)	Set	2
6	Supply of 33 kV Isolator (2500A, 31.5 kA for 3 sec) with Earthing blade gang operated vertical mounted vertical break with supporting steel structure with necessary connectors & accessories (As per Scope of Works, Technical Specification and GTP)	Set	2
7	Supply of 33 kV Single phase Current Transformer ratio 2400-1600/1/1/1A class 5p20 for protection and 0.2S for measuring (1 core for protection, 2 core for measuring) along with supporting steel structure and suitable bi-metallic connectors & accessories as required (for Outgoing) (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 Nos.)	2
8	Supply of 33 kV, Single Phase Potential Transformer ratio 33/√3/0.11/√3/0.11/√3 kV Class 0.2 measuring & 3P for protection signaling instrument etc. along with supporting materials for installation on gantry structure with necessary connectors including fused isolator and other accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 nos.)	2
9	Supply of Suitable Bus Bar Droppers, Conductors, connectors and outdoor marshalling kiosk, hardware, clamps, nut-bolts etc. suitable for connecting the individual items. (As per Scope of Works, Technical Specification and GTP)	Lot	1
10	Supply of 33 kV Control Metering and Relay Panel (Outgoing / Incoming) with 3 O/C + 1 E/F + 3 Directional O/C + 1 Directional E/F. (As per Scope of Works, Technical Specification and GTP)	Set	2
11	Supply of 33 kV 1Cx800 Sq. mm XLPE Copper Cable for connection between 33 kV outdoor bus to 33 kV incoming GIS breaker as per field requirement.	Meter	1395
12	Supply of 33kV 1Cx500 Sq. mm XLPE Copper Cable for 33 kV Outgoing GIS breaker to 33 kV outgoing feeder pole as per field requirement.	Meter	1967
13	Supply of 33 kV 3x1Cx95 Sq.mm XLPE Copper Cable for Station Transformer (As per Scope of Works,Technical Specification and GTP)	Meter	50
14	Supply of 0.415 kV 4Cx150 sq-mm PVC Copper Cable for connection between station transformer to AC distribution panel along with LV MCCB and all necessary accessories (As per Scope of works,Technical Specification and GTP)	Meter	50
15	a) Supply of 33 kV indoor GIS termination kits for 800 Sq. mm XLPE cable and accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 Nos.)	4
	b) Supply of 33 kV outdoor termination kits for 800 Sq. mm XLPE cable and accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set	4

Item Sl. No	Description of Item	Unit of Measurement	Quantity
		=3 Nos.)	
16	a) Supply of 33 kV indoor GIS termination kits for 500 Sq. mm XLPE cable and accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 Nos.)	8
	b) Supply of 33 kV outdoor termination kits for 500 Sq. mm XLPE cable and accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 Nos.)	8
17	Supply of All Materials for Grounding System. Earthing mesh with Earthing Electrode (Copper, annealed soft-drawn/ Copper, Commercial hard-drawn). The Substation Earthing Resistance shall be Maximum 0.5 ohm (As per Scope of Works,Technical Specification and GTP)	Lot	1
18	Supply of Hot dip galvanized steel structure for 33 kV Outdoor VCB, CT, LA, PI, 3000A Copper Bar, DS/ES & Cable hanger for 33 kV Incoming & outgoing feeders with all necessary accessories for installation of equipment. (As per Scope of Works,Technical Specification and GTP)	Lot	1
19	Supply of All necessary Control Cable and LV Power Cables (As per Scope of Works,Technical Specification and GTP)	Lot	1
20	Supply of Battery 200AH, NiCd 92 Cells, 110 V. (As per Scope of Works, Technical Specification and GTP)	Set	2
21	Supply of Battery Charger, constant voltage type (adjustable) with current limiting for boost and float charge, input- 400 volts, output DC 110 - 150 volts.	Nos	2
22	Supply of DC Distribution Panel with interlocking along with all necessary accessories. (As per Scope of Works, Technical Specification and GTP)	No	1
23	Supply of AC Distribution Panel with interlocking along with all necessary accessories. (As per Scope of Works, Technical Specification and GTP)	No	1
24	Supply of Fire Extinguisher equipment (As per Scope of Works, Technical Specification and GTP) a) CO2 b) Foam Type c) Dry Chemical Type	Each (2 Nos.)	6
25	Supply of Split type Air Conditioner of capacity 48000 BTU/ Hr including MCB and all other accessories as required. (As per Scope of Works, Technical Specification and GTP)	Nos	6
26	Supply of Outdoor and Indoor Lighting System (As per Scope of Works,Technical Specification and GTP)	Lot	1
27	Supply of Desktop Computer with UPS, Laser Printer, Scanner and accessories (As per Scope of Works, Technical Specification and GTP)	Set	1
28	Supply & Installation of IPTV Camera including all accessories (Such as IP Camera, NVR, POE Switch, Hard Disk, Power Cable, Ethernet Cable). (As per Scope of Works, Technical Specification and GTP)	Lot	1
29	Supply of Fire Detection Facilities for control room building including all accessories/ components required.(As per Scope of Works and Technical Specification)	Lot	1
30	Supply of Substation Automation system for 33 kV System. (As per Scope of Works, Technical Specification and GTP)	Lot	1
31	**Supply of Madatory Spare Parts: (USD)**		
	Supply of Closing and Tripping Coil for 33 kV GIS Switchgear	Set (1 set =2 Nos.)	4
	Supply of Motor Control Unit (MCU) for 33 kV GIS Switchgear	Nos	2
	Supply of Universal Motor for Spring Charge for 33 kV GIS Switchgear	Nos	2
	Supply of Gas pressure manometer for 33 kV GIS Switchgear	Nos	2
	Supply of High Purity SF6 Gas in 40L/50KG Gas Cylinder	Nos	1
	Supply of Tool Kit for 33 kV GIS Switchgear	Set	1
	Supply of 33 kV indoor GIS termination kits for 800 Sq. mm XLPE cable and accessories.	Set (1 set =3 Nos.)	1
	Supply of 33 kV outdoor termination kits for 800 Sq. mm XLPE cable and accessories.	Set (1 set =3 Nos.)	1
	Supply of 33 kV indoor GIS termination kits for 500 Sq. mm XLPE cable and accessories.	Set (1 set =3 Nos.)	1
	Supply of 33 kV outdoor termination kits for 500 Sq. mm XLPE cable and accessories.	Set (1 set =3 Nos.)	1
32	**Civil Works: (taka)**		
	a) Earth filling with compaction as necessary, soil test, Landscaping, Leveling, Dressing	Cum	1500
	b) Design & Construction of new 2-storied Control Building with Office room (Foundation will be 3-storied) including O/H tank, Water Supply, Sanitary system, Internal electrification, Emergency Lighting, False Ceiling etc. complete in all	Sq. m	600

Item Sl. No	Description of Item	Unit of Measurement	Quntity
	respects		
	c) Foundation for Station transformers	Nos	2
	d) Foundation for Supporting structures	Lot	1
	e) Construction of Retaining wall	Rm	
	f) Construction of boundary wall with barbed wire	Rm	
	g) Construction of surface drain	Rm	60
	h) Construction of guard post building	Sq. m	10
	i) Construction of Main gate and electronic Sign Board	Lot	1
	j) Fencing with barbed wire with gate	m	55
	k) Construction of Approach & Internal Road	Rm	10
	l) Construction of RCC Power Cable Trenches with Cable Tray	Rm	100
	m) Operation Key Board, Table, chair, Steel Almirah, File Cabinet, Ceiling Fans etc.	Lot	1
	n) Tree plantation, Gardening and Beautification.	Lot	1
33	**Installation and other services (taka)**		
	Design, Supply, Construction, Installation, Testing & Commissioning of 33 kV Switching Station (GIS) at Jhalokathi 132/33 kV Grid Substation on Turnkey Basis under Grid Power Evacuation System Development for WZPDCL" project	Lot	1

7.12.8.5 BOQ FOR BHANGA 33KV GIS SUBSTATION UNDER FARIDPUR S&D-02 OF WZPDCL

Item Sl. No	Description of Item	Unit of Measurement	Quantity
1	2	3	5
	Supply of Plant and Mandatory Spare Parts (USD)		
1	Supply of Station Service Transformer 33/0.415 KV, 200 kVA (As per Scope of Works, Technical Specification and GTP)	Nos.	2
2	Supply of 33 kV, GIS Indoor Switchgear with 3000A bus having breaker and cubicles for Incoming feeder with Line PT (2500A), Bus Coupler with Riser (2500A), Outgoing feeder (1250A), 1 no. Spare feeder (1250A) and cubicles for 33 kV Bus PT, Station Auxiliary Transformer panel with 33 kV Protection Control and Metering (PCM) in same 33 kV GIS Panel with Indoor Surge Arresters and other related accessories (As per Scope of Works, Technical Specification and GTP)		
	a) Incoming feeder with Line PT (2500A)	Unit	3
	b) Outgoing feeder (1250A)	Unit	12
	c) Spare feeder (1250A)	Unit	1
	d) Bus Coupler with Riser (2500A)	Unit	2
	e) 33 kV Bus PT Panel or Bus PT included in any panel of respective Bus. **If PT panel is offered, the item price should be populated accordingly. If no PT panel is offered, the price should default to BDT 0.001.	Sets	3
	f) Station Auxiliary Transformer panel (LBS or VCB)	Sets	2
3	Supply of 36 kV Vacuum (2500A, 31.5 kA, for 3 Sec.) outdoor circuit breaker along with supporting steel structure and suitable bimetallic connectors. (As per Scope of Works, Technical Specification and GTP)	Set	3
4	Supply of 33 kV single phase Lightning Arrester (ZnO-type) along with surge monitor/ counter, supporting structure and bi-metallic connectors and accessories (As per Scope of Works, Technical Specification and GTP)	Set (01 Set= 03 Nos.)	19
5	Supply of 33 kV Isolator (2500A, 31.5 kA for 3 sec) without Earthing blade gang operated vertical mounted vertical break with supporting steel structure with necessary connectors & accessories (As per Scope of Works, Technical Specification and GTP)	Set	3
6	Supply of 33 kV Isolator (2500A, 31.5 kA for 3 sec) with Earthing blade gang operated vertical mounted vertical break with supporting steel structure with necessary connectors & accessories (As per Scope of Works, Technical Specification and GTP)	Set	3
7	Supply of 33 kV Single phase Current Transformer ratio 2400-1600/1/1/1A class 5p20 for protection and 0.2S for measuring (1 core for protection, 2 core for measuring) along with supporting steel structure and suitable bi-metallic connectors & accessories as required (for Outgoing) (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 Nos.)	3
8	Supply of 33 kV, Single Phase Potential Transformer ratio 33/√3/0.11/√3/0.11/√3 kV Class 0.2 measuring & 3P for protection signaling instrument etc. along with supporting materials for installation on gantry structure with necessary connectors including fused isolator and other accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 nos.)	3
9	Supply of Suitable Bus Bar Droppers, Conductors, connectors and outdoor marshalling kiosk, hardware, clamps, nut-bolts etc. suitable for connecting the individual items. (As per Scope of Works, Technical Specification and GTP)	Lot	1
10	Supply of 33 kV Control Metering and Relay Panel (Outgoing / Incoming) with 3 O/C + 1 E/F + 3 Directional O/C + 1 Directional E/F. (As per Scope of Works, Technical Specification and GTP)	Set	3
11	Supply of 33 kV 1Cx800 Sq. mm XLPE Copper Cable for connection between 33 kV outdoor bus to 33 kV incoming GIS breaker as per field requirement.	Meter	1710
12	Supply of 33kV 1Cx500 Sq. mm XLPE Copper Cable for 33 kV Outgoing GIS breaker to 33 kV outgoing feeder pole as per field requirement.	Meter	4187
13	Supply of 33 kV 3x1Cx95 Sq.mm XLPE Copper Cable for Station Transformer (As per Scope of Works,Technical Specification and GTP)	Meter	50
14	Supply of 0.415 kV 4Cx150 sq-mm PVC Copper Cable for connection between station transformer to AC distribution panel along with LV MCCB and all necessary accessories (As per Scope of works,Technical Specification and GTP)	Meter	50
15	a) Supply of 33 kV indoor GIS termination kits for 800 Sq. mm XLPE cable and accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 Nos.)	6
	b) Supply of 33 kV outdoor termination kits for 800 Sq. mm XLPE cable and accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 Nos.)	6
16	a) Supply of 33 kV indoor GIS termination kits for 500 Sq. mm XLPE cable and accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 Nos.)	13

Item Sl. No	Description of Item	Unit of Measurement	Quantity
	b) Supply of 33 kV outdoor termination kits for 500 Sq. mm XLPE cable and accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 Nos.)	13
17	Supply of All Materials for Grounding System. Earthing mesh with Earthing Electrode (Copper, annealed soft-drawn/ Copper, Commercial hard-drawn). The Substation Earthing Resistance shall be Maximum 0.5 ohm (As per Scope of Works,Technical Specification and GTP)	Lot	1
18	Supply of Hot dip galvanized steel structure for 33 kV Outdoor VCB, CT, LA, PI, 3000A Copper Bar, DS/ES & Cable hanger for 33 kV Incoming & outgoing feeders with all necessary accessories for installation of equipment. (As per Scope of Works,Technical Specification and GTP)	Lot	1
19	Supply of All necessary Control Cable and LV Power Cables (As per Scope of Works,Technical Specification and GTP)	Lot	1
20	Supply of Battery 200AH, NiCd 92 Cells, 110 V. (As per Scope of Works, Technical Specification and GTP)	Set	2
21	Supply of Battery Charger, constant voltage type (adjustable) with current limiting for boost and float charge, input- 400 volts, output DC 110 - 150 volts.	Nos	2
22	Supply of DC Distribution Panel with interlocking along with all necessary accessories. (As per Scope of Works, Technical Specification and GTP)	No	1
23	Supply of AC Distribution Panel with interlocking along with all necessary accessories. (As per Scope of Works, Technical Specification and GTP)	No	1
24	Supply of Fire Extinguisher equipment (As per Scope of Works, Technical Specification and GTP) a) CO2 b) Foam Type c) Dry Chemical Type	Each (2 Nos.)	6
25	Supply of Split type Air Conditioner of capacity 48000 BTU/ Hr including MCB and all other accessories as required. (As per Scope of Works, Technical Specification and GTP)	Nos	6
26	Supply of Outdoor and Indoor Lighting System (As per Scope of Works,Technical Specification and GTP)	Lot	1
27	Supply of Desktop Computer with UPS, Laser Printer, Scanner and accessories (As per Scope of Works, Technical Specification and GTP)	Set	1
28	Supply & Installation of IPTV Camera including all accessories (Such as IP Camera, NVR, POE Switch, Hard Disk, Power Cable, Ethernet Cable). (As per Scope of Works, Technical Specification and GTP)	Lot	1
29	Supply of Fire Detection Facilities for control room building including all accessories/ components required.(As per Scope of Works and Technical Specification)	Lot	1
30	Supply of Substation Automation system for 33 kV System. (As per Scope of Works, Technical Specification and GTP)	Lot	1
31	**Supply of Madatory Spare Parts: (USD)**		
	Supply of Closing and Tripping Coil for 33 kV GIS Switchgear	Set (1 set =2 Nos.)	4
	Supply of Motor Control Unit (MCU) for 33 kV GIS Switchgear	Nos	2
	Supply of Universal Motor for Spring Charge for 33 kV GIS Switchgear	Nos	2
	Supply of Gas pressure manometer for 33 kV GIS Switchgear	Nos	2
	Supply of High Purity SF6 Gas in 40L/50KG Gas Cylinder	Nos	1
	Supply of Tool Kit for 33 kV GIS Switchgear	Set	1
	Supply of 33 kV indoor GIS termination kits for 800 Sq. mm XLPE cable and accessories.	Set (1 set =3 Nos.)	1
	Supply of 33 kV outdoor termination kits for 800 Sq. mm XLPE cable and accessories.	Set (1 set =3 Nos.)	1
	Supply of 33 kV indoor GIS termination kits for 500 Sq. mm XLPE cable and accessories.	Set (1 set =3 Nos.)	1
	Supply of 33 kV outdoor termination kits for 500 Sq. mm XLPE cable and accessories.	Set (1 set =3 Nos.)	1
32	**Civil Works: (taka)**		
	a) Earth filling with compaction as necessary, soil test, Landscaping, Leveling, Dressing	Cum	1500
	b) Design & Construction of new 2-storied Control Building with Office room (Foundation will be 3-storied) including O/H tank, Water Supply, Sanitary system, Internal electrification, Emergency Lighting, False Ceiling etc. complete in all respects	Sq. m	600
	c) Foundation for Station transformers	Nos	2
	d) Foundation for Supporting structures	Lot	1
	e) Construction of Retaining wall	Rm	45
	f) Construction of boundary wall with barbed wire	Rm	45

Item Sl. No	Description of Item	Unit of Measurement	Quantity
	g) Construction of surface drain	Rm	90
	h) Construction of guard post building	Sq. m	0
	i) Construction of Main gate and electronic Sign Board	Lot	0
	j) Fencing with barbed wire with gate	m	0
	k) Construction of Approach & Internal Road	Rm	10
	l) Construction of RCC Power Cable Trenches with Cable Tray	Rm	110
	m) Operation Key Board, Table, chair, Steel Almirah, File Cabinet, Ceiling Fans etc.	Lot	1
	n) Tree plantation, Gardening and Beautification.	Lot	1
33	**Installation and other services (taka)**		
	Design, Supply, Construction, Installation, Testing & Commissioning of 33 kV Switching Station (GIS) at Jhalokathi 132/33 kV Grid Substation on Turnkey Basis under Grid Power Evacuation System Development for WZPDCL" project	Lot	1

7.12.8.6 BOQ FOR JHALAKHATI 33KV GIS SUBSTATION OF WZPDCL

Item Sl. No	Description of Item	Unit of Measurement	Quntity
1	2	3	5
	Supply of Plant and Mandatory Spare Parts (USD)		
1	Supply of Station Service Transformer 33/0.415 KV, 200 kVA (As per Scope of Works, Technical Specification and GTP)	Nos.	2
2	Supply of 33 kV, GIS Indoor Switchgear with 3000A bus having breaker and cubicles for Incoming feeder with Line PT (2500A), Bus Coupler with Riser (2500A), Outgoing feeder (1250A), 1 no. Spare feeder (1250A) and cubicles for 33 kV Bus PT, Station Auxiliary Transformer panel with 33 kV Protection Control and Metering (PCM) in same 33 kV GIS Panel with Indoor Surge Arresters and other related accessories (As per Scope of Works, Technical Specification and GTP)		
	a) Incoming feeder with Line PT (2500A)	Unit	2
	b) Outgoing feeder (1250A)	Unit	7
	c) Spare feeder (1250A)	Unit	1
	d) Bus Coupler with Riser (2500A)	Unit	1
	e) 33 kV Bus PT Panel or Bus PT included in any panel of respective Bus. **If PT panel is offered, the item price should be populated accordingly. If no PT panel is offered, the price should default to BDT 0.001.	Sets	2
	f) Station Auxiliary Transformer panel (LBS or VCB)	Sets	2
3	Supply of 36 kV Vacuum (2500A, 31.5 kA, for 3 Sec.) outdoor circuit breaker along with supporting steel structure and suitable bimetallic connectors. (As per Scope of Works, Technical Specification and GTP)	Set	2
4	Supply of 33 kV single phase Lightning Arrester (ZnO-type) along with surge monitor/ counter, supporting structure and bi-metallic connectors and accessories (As per Scope of Works, Technical Specification and GTP)	Set (01 Set= 03 Nos.)	12
5	Supply of 33 kV Isolator (2500A, 31.5 kA for 3 sec) without Earthing blade gang operated vertical mounted vertical break with supporting steel structure with necessary connectors & accessories (As per Scope of Works, Technical Specification and GTP)	Set	2
6	Supply of 33 kV Isolator (2500A, 31.5 kA for 3 sec) with Earthing blade gang operated vertical mounted vertical break with supporting steel structure with necessary connectors & accessories (As per Scope of Works, Technical Specification and GTP)	Set	2
7	Supply of 33 kV Single phase Current Transformer ratio 2400-1600/1/1/1A class 5p20 for protection and 0.2S for measuring (1 core for protection, 2 core for measuring) along with supporting steel structure and suitable bi-metallic connectors & accessories as required (for Outgoing) (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 Nos.)	2
8	Supply of 33 kV, Single Phase Potential Transformer ratio 33/√3/0.11/√3/0.11/√3 kV Class 0.2 measuring & 3P for protection signaling instrument etc. along with supporting materials for installation on gantry structure with necessary connectors including fused isolator and other accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 nos.)	2
9	Supply of Suitable Bus Bar Droppers, Conductors, connectors and outdoor marshalling kiosk, hardware, clamps, nut-bolts etc. suitable for connecting the individual items. (As per Scope of Works, Technical Specification and GTP)	Lot	1
10	Supply of 33 kV Control Metering and Relay Panel (Outgoing / Incoming) with 3 O/C + 1 E/F + 3 Directional O/C + 1 Directional E/F. (As per Scope of Works, Technical Specification and GTP)	Set	2
11	Supply of 33 kV 1Cx800 Sq. mm XLPE Copper Cable for connection between 33 kV outdoor bus to 33 kV incoming GIS breaker as per field requirement.	Meter	1260
12	Supply of 33kV 1Cx500 Sq. mm XLPE Copper Cable for 33 kV Outgoing GIS breaker to 33 kV outgoing feeder pole as per field requirement.	Meter	2024
13	Supply of 33 kV 3x1Cx95 Sq.mm XLPE Copper Cable for Station Transformer (As per Scope of Works,Technical Specification and GTP)	Meter	50
14	Supply of 0.415 kV 4Cx150 sq-mm PVC Copper Cable for connection between station transformer to AC distribution panel along with LV MCCB and all necessary accessories (As per Scope of works,Technical Specification and GTP)	Meter	50
15	a) Supply of 33 kV indoor GIS termination kits for 800 Sq. mm XLPE cable and accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 Nos.)	4
	b) Supply of 33 kV outdoor termination kits for 800 Sq. mm XLPE cable and accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 Nos.)	4
16	a) Supply of 33 kV indoor GIS termination kits for 500 Sq. mm XLPE cable and accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 Nos.)	8
	b) Supply of 33 kV outdoor termination kits for 500 Sq. mm XLPE cable and accessories. (As per Scope of Works, Technical Specification and GTP)	Set (1 set =3 Nos.)	8

Item Sl. No	Description of Item	Unit of Measurement	Quantity
17	Supply of All Materials for Grounding System. Earthing mesh with Earthing Electrode (Copper, annealed soft-drawn/ Copper, Commercial hard-drawn). The Substation Earthing Resistance shall be Maximum 0.5 ohm (As per Scope of Works,Technical Specification and GTP)	Lot	1
18	Supply of Hot dip galvanized steel structure for 33 kV Outdoor VCB, CT, LA, PI, 3000A Copper Bar, DS/ES & Cable hanger for 33 kV Incoming & outgoing feeders with all necessary accessories for installation of equipment. (As per Scope of Works,Technical Specification and GTP)	Lot	1
19	Supply of All necessary Control Cable and LV Power Cables (As per Scope of Works,Technical Specification and GTP)	Lot	1
20	Supply of Battery 200AH, NiCd 92 Cells, 110 V. (As per Scope of Works, Technical Specification and GTP)	Set	2
21	Supply of Battery Charger, constant voltage type (adjustable) with current limiting for boost and float charge, input- 400 volts, output DC 110 - 150 volts.	Nos	2
22	Supply of DC Distribution Panel with interlocking along with all necessary accessories. (As per Scope of Works, Technical Specification and GTP)	No	1
23	Supply of AC Distribution Panel with interlocking along with all necessary accessories. (As per Scope of Works, Technical Specification and GTP)	No	1
24	Supply of Fire Extinguisher equipment (As per Scope of Works, Technical Specification and GTP) a) CO2 b) Foam Type c) Dry Chemical Type	Each (2 Nos.)	6
25	Supply of Split type Air Conditioner of capacity 48000 BTU/ Hr including MCB and all other accessories as required. (As per Scope of Works, Technical Specification and GTP)	Nos	6
26	Supply of Outdoor and Indoor Lighting System (As per Scope of Works,Technical Specification and GTP)	Lot	1
27	Supply of Desktop Computer with UPS, Laser Printer, Scanner and accessories (As per Scope of Works, Technical Specification and GTP)	Set	1
28	Supply & Installation of IPTV Camera including all accessories (Such as IP Camera, NVR, POE Switch, Hard Disk, Power Cable, Ethernet Cable). (As per Scope of Works, Technical Specification and GTP)	Lot	1
29	Supply of Fire Detection Facilities for control room building including all accessories/ components required.(As per Scope of Works and Technical Specification)	Lot	1
30	Supply of Substation Automation system for 33 kV System. (As per Scope of Works, Technical Specification and GTP)	Lot	1
31	**Supply of Madatory Spare Parts: (USD)**		
	Supply of Closing and Tripping Coil for 33 kV GIS Switchgear	Set (1 set =2 Nos.)	4
	Supply of Motor Control Unit (MCU) for 33 kV GIS Switchgear	Nos	2
	Supply of Universal Motor for Spring Charge for 33 kV GIS Switchgear	Nos	2
	Supply of Gas pressure manometer for 33 kV GIS Switchgear	Nos	2
	Supply of High Purity SF6 Gas in 40L/50KG Gas Cylinder	Nos	1
	Supply of Tool Kit for 33 kV GIS Switchgear	Set	1
	Supply of 33 kV indoor GIS termination kits for 800 Sq. mm XLPE cable and accessories.	Set (1 set =3 Nos.)	1
	Supply of 33 kV outdoor termination kits for 800 Sq. mm XLPE cable and accessories.	Set (1 set =3 Nos.)	1
	Supply of 33 kV indoor GIS termination kits for 500 Sq. mm XLPE cable and accessories.	Set (1 set =3 Nos.)	1
	Supply of 33 kV outdoor termination kits for 500 Sq. mm XLPE cable and accessories.	Set (1 set =3 Nos.)	1
32	**Civil Works: (taka)**		
	a) Earth filling with compaction as necessary, soil test, Landscaping, Leveling, Dressing	Cum	1500
	b) Design & Construction of new 2-storied Control Building with Office room (Foundation will be 3-storied) including O/H tank, Water Supply, Sanitary system, Internal electrification, Emergency Lighting, False Ceiling etc. complete in all respects	Sq. m	600
	c) Foundation for Station transformers	Nos	2
	d) Foundation for Supporting structures	Lot	1
	e) Construction of Retaining wall	Rm	45
	f) Construction of boundary wall with barbed wire	Rm	45
	g) Construction of surface drain	Rm	90
	h) Construction of guard post building	Sq. m	0
	i) Construction of Main gate and electronic Sign Board	Lot	0
	j) Fencing with barbed wire with gate	m	0
	k) Construction of Approach & Internal Road	Rm	30

Item Sl. No	Description of Item	Unit of Measurement	Quntity
	l) Construction of RCC Power Cable Trenches with Cable Tray	Rm	100
	m) Operation Key Board, Table, chair, Steel Almirah, File Cabinet, Ceiling Fans etc.	Lot	1
	n) Tree plantation, Gardening and Beautification.	Lot	1
33	**Installation and other services (taka)**		
	Design, Supply, Construction, Installation, Testing & Commissioning of 33 kV Switching Station (GIS) at Jhalokathi 132/33 kV Grid Substation on Turnkey Basis under Grid Power Evacuation System Development for WZPDCL" project	Lot	1

*Note-1:

Tenderer are requested to fill the Price Schedule in such a manner so that all cost required to match the above BOQ and required for safe operation & completion of Plant to be included.

*Note-2:

It must be understood and agreed that the installation/upgradation/renovation/Relocation/ shifting/ dismantling/ removal work under this Tender Documents and to carry out such work including factors stated in site visit have been properly investigated and considered in the preparation of the Proposal submitted. No claims for financial and time adjustment to the Contract awarded for the Work under these Specifications and Documents will be permitted which are based on the lack of such prior information or its effect on the cost of the work and its completion time.

