

Schedule 2: Plant and Mandatory Spare Parts Supplied from within the Employer's Country							
Item	Description (For detailed description, please refer to specification and Schedule A)	Unit	Quantity	Unit Price ¹		Total Price ¹	
				Local Currency [In BDT]	Foreign Currency [In]	Local Currency [In BDT]	Foreign Currency [In]
				EXW	EXW	EXW	EXW
1	2	3	4	5	6	7 = 4x5	8 = 4x6
5.8.4	Outgoing MCBs	sets	8				
5.8.5	Battery Charger complete unit, 110V	sets	2				
5.9	<u>LV AC SWITCHGEAR</u>						
5.9.1	3-phase set LVAC board incoming MCCB	no.	2				
5.9.2	3-phase sets outgoing MCCBs	nos.	4				
5.9.3	1-phase sets outgoing MCBs	nos.	10				
5.10.	<u>Fiber Optic Multiplexer Equipment</u>						
5.10.1	Set of spare modules of necessary function for each substation (Transmission Card, Teleprotection card, Differential protection card if used in this project, control / CPU card, power card, optical ethernet card, electrical ethernet card, 2 Nos of maximum distance SFP used)	lot	1				
5.10.2	Underground optical fiber cable, armoured, 48 core	meter	600				
5.11	<u>O&M EQUIPMENT</u>						
5.11.1	3-phase portable (maintenance) earthing equipment devices with connectors and telescopic glass fibre operating pole suitable for plant supplied	sets	4				
5.11.2	All types of fittings and clamp connectors used in this project. (25% or 3 numbers, whichever is higher, of each type)	lot	1				
5.11.3	Scissor Lift: Battery type for minimum two persons. Maximum working height greater than 10m	sets	2				
5.11.4	Desktop PC for Substation incharge. Min. Spec: i7 latest gen processor with latest motherboard, 16 GB RAM, 512 GB SSD, 24" 1080p IPS LED Monitor, 1500VA UPS, Multifunction B/W printer/scanner with ADF with both side printing facility, keyboard, mouse, etc.	sets	2				
		TOTAL OF SECTION V (Carried to Schedule 5 Grand Summary)					
1	Specify currency in accordance with specifications in Bid Data Sheet under ITB 19.1 in Single-stage Bid. Create and use as many columns for Unit Price and Total Price as there are currencies.						

Schedule 1: Plant and Mandatory Spare Parts Supplied from Abroad						
Item	Description (For detailed description, please refer to specification and Schedule A)	Country of Origin	Unit	Quantity	Foreign Currency (in.....)	
					Unit Price ¹	Total Price ¹
					CIP	CIP
1	2	3	4	5	6	7=5x6
i)	Circuit Breaker		set	5		
ii)	Disconnecter without Earth Switch		set	8		
iii)	Disconnecter with Earth Switch		set	6		
iv)	Bus Earth Switch		Deleted	0		
v)	Current Transformer		nos.	15		
vi)	Voltage Transformer		nos.	18		
vii)	Surge Arrester		nos.	12		
viii)	Bay MK		Lot	1		
ix)	Post type support insulators		Nos.	11		
d)	_Cable tray including fitting, fixing accessories		lot	1		
1D	36kV Switches & connection					
1D1	36kV Switches & connection for Auxiliary Transformer					
1D1.1	36kV Vacuum Circuit breaker		Deleted			
1D1.2	36kV Disconnecter switch with dropout fuse		set	2		
1D2	36kV Switches & connection for Incomer/ LV side of 132/33 kV Transformer					
1D.2.1	36kV Vacuum Circuit breaker		set	2		
1D.2.2	36kV Disconnecter switch		set	2		
1D.2.3	36kV Disconnecter switch with ES		set	2		
1D.2.4	36kV Inductive voltage transformer (IVT), 2 core		nos.	12		
1D.2.5	Single phase surge arrester, 30kV rated,10kA		nos.	6		
1D.2.6	Bus sectionalizer DS		nos.	1		
1D.2.7	36kV Current transformer		nos.	6		
1D.2.8	Flexible conductors for bus and jumper, insulators, fittings including all necessary clamps and connectors for busbar compositions (For eight nos. 36KV bays)					
i)	_Flexible Conductor for Bus, jumper, equipment connections		lot	1		
ii)	_Insulator		lot	1		
iii)	_Fittings		lot	1		
1D.2.9	Steel Structures for gantry and equipment supports					
a)	_Gantry Column including nut & bolts (For eight nos. 36KV bays)		lot	1		

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					CIP	CIP
1	2	3	4	5	6	7=5x6
1F.4	Complete Busbar Protection Panel					
a)	Central unit with HMI		set	1		
b)	Complete Protection Panel including annunciation, wiring, lighting, heater, humidity sensor & other accessories with selector switch for switching BBP,BFP and all function.		Lot	1		
1F.5	Complete Digital Fault Disturbance Recorder (DFDR) with panel					
a)	Data Acquisition and processing unit for all 132KV bay and 33KV incomer bays.		Lot	1		
b)	Engineering workstation with ethernet switches.		Lot	1		
c)	Complete Panel including annunciation, test plugs, wiring, lightning, heater, humidity sensor & other accessories.		Lot	1		
1F.6	Complete Tarif metering panel					
a)	Meters (One meter for each 132KV feeder)		nos.	4		
b)	Panel including test plugs, wiring, lightning, heater, humidity sensor & other accessories		lot	1		
1F.7	Complete SAS Hardware and Software					
a)	Industrial Server PC / Operator workstation with SAS & Engineering Software		Set	2		
b)	Ethernet Switches for SAS, GPS System, Monitor 55 inch, Color Laser printer, and common alarm unit with hooter / buzzer for annunciation including all types of cable.		Lot	1		
c)	BCU for all common signals of the substation and additional BCUs to control 5 (five) nos. 33kV outgoing feeders from NLDC.		Lot	1		
d)	Complete Panel including wiring, lighting, heater, humidity sensor & other accessories		Lot	1		
1F.8	Complete RTCC for all 132/33KV transformer		set	2		
	Each comprising					
a)	All temperature meters, AVR and TPI meter		lot	1		x
b)	Panel including annunciation, test plugs, wiring, lightning, heater, humidity sensor & other accessories		lot	1		
	36kV Circuit					
1F.9	Complete Control, Protection, monitoring including BCU for two earthing/auxiliary transformers and associated bays		Deleted			

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					Unit Price ¹	Total Price ¹
					CIP	CIP
1	2	3	4	5	6	7=5x6
a)	All Protection relay		Deleted			x
b)	BCU with required I/Os		Deleted			
c)	Control and Protection Panel including mimic, annunciation, Auxiliary relays (TCS, Lockout etc), Test plugs, wiring, lightning, heater, humidity sensor & other accessories		Deleted			
1F.10	Complete Control, Protection, monitoring including BCU for transformer circuits (132/33 kV)		set	2		
	Each comprising					
a)	All Protection relay		Lot	1		x
b)	BCU with required I/Os		Set	1		
c)	Control and Protection Panel including mimic, annunciation, Auxiliary relays (TCS, Lockout etc), Test plugs, wiring, lightning, heater, humidity sensor & other accessories		Lot	1		
1F.11	Tariff metering					
a)	Meters (One meter for each 33KV feeder)		nos.	2		
b)	Panel including test plugs, wiring, lightning, heater, humidity sensor & other accessories		lot	1		
1G	Multicore Cables					
1G.1	Multicore Cables for control, protection, metering & power circuits					
i)	_LV Control Cable		lot	1		
ii)	_LV Power Cable		lot	1		
1H	Earthing and Lightning Protection					
1H.1	_Earthing system for complete substation		lot	1		
1H.2	_lightning Protection System for complete substation		lot	1		
1I	Batteries, chargers & DC distribution					
1I.1	110V Ni-cad Batteries with chargers & distribution board & others					
i)	_110V Battery Banks, Ah		set	2		
ii)	_Charger, A		set	2		
iii)	_110V DC Distribution panel		lot	1		
1I.2	48V Ni-cad Batteries with chargers & distribution board					
i)	_48V battery Banks, Ah		set	2		

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					Unit Price ¹	Total Price ¹
					CIP	CIP
1	2	3	4	5	6	7=5x6
ix)	Post type support insulators		Nos.	11		
d)	_Cable tray including fitting, fixing accessories		lot	1		
2D	36kV Switches & connection					
2D1	36kV Switches & connection for Auxiliary Transformer					
2D1.1	36kV Vacuum Circuit breaker		Deleted			
2D1.2	36kV Disconnect switch with dropout fuse		set	2		
2D2	36kV Switches & connection for Incomer/ LV side of 132/33 kV Transformer					
2D.2.1	36kV Vacuum Circuit breaker		set	2		
2D.2.2	36kV Disconnect switch		set	2		
2D.2.3	36kV Disconnect switch with ES		set	2		
2D.2.4	36kV Inductive voltage transformer (IVT), 2 core		nos.	12		
2D.2.5	Single phase surge arrester, 30kV rated,10kA		nos.	6		
2D.2.6	Bus sectionalizer DS		nos.	1		
2D.2.7	36kV Current transformer		nos.	6		
2D.2.8	Flexible conductors for bus and jumper, insulators, fittings including all necessary clamps and connectors for busbar compositions (For eight nos. 36KV bays)					
i)	_Flexible Conductor for Bus, jumper, equipment connections		lot	1		
ii)	_Insulator		lot	1		
iii)	_Fittings		lot	1		
2D.2.9	Steel Structures for gantry and equipment supports					
a)	_Gantry Column including nut & bolts (For eight nos. 36KV bays)		lot	1		
b)	_Gantry beam at Main Bus & Jack-Bus height including nut & bolts (For eight nos. 36KV bays)		lot	1		
c)	_Equipment support structures including nut & bolts for two incomer bays of power transformer and two auxiliary transformer bays		lot	1		
d)	_Cable tray including fitting, fixing accessories		lot	1		
2E	Power Transformer & Earthing/Auxiliary Transformer					
2E.1	132/33 kV, 50/75 MVA (ONAN/ONAF), three phase Power Transformer		set	2		
2E.2	33/0.415 kV, 300kVA Earthing auxiliary Transformer		set	2		
2F	Control, Protection, SAS and Metering					

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					CIP	CIP
1	2	3	4	5	6	7=5x6
b)	Panel including test plugs, wiring, lightning, heater, humidity sensor & other accessories		lot	1		
2F.7	Complete SAS Hardware and Software					
a)	Industrial Server PC / Operator workstation with SAS & Engineering Software		Set	2		
b)	Ethernet Switches for SAS, GPS System, Monitor 55 inch, Color Laser printer, and common alarm unit with hooter / buzzer for annunciation including all types of cable.		Lot	1		
c)	BCU for all common signals of the substation and additional BCUs to control 5 (five) nos. 33kV outgoing feeders from NLDC.		Lot	1		
d)	Complete Panel including wiring, lighting, heater, humidity sensor & other accessories		Lot	1		
2F.8	Complete RTCC for all 132/33KV transformer		set	2		
	Each comprising					
a)	All temperature meters, AVR and TPI meter		lot	1		x
b)	Panel including annunciation, test plugs, wiring, lightning, heater, humidity sensor & other accessories		lot	1		
	36kV Circuit					
2F.9	Complete Control, Protection, monitoring including BCU for two earthing/auxiliary transformers and associated bays		Deleted			
a)	All Protection relay		Deleted			x
b)	BCU with required I/Os		Deleted			
c)	Control and Protection Panel including mimic, annunciation, Auxiliary relays (TCS, Lockout etc), Test plugs, wiring, lightning, heater, humidity sensor & other accessories		Deleted			
2F.10	Complete Control, Protection, monitoring Including BCU for transformer circuits (132/33 kV)		set	2		
	Each comprising					
a)	All Protection relay		Lot	1		x
b)	BCU with required I/Os		Set	1		

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				EXW	EXW	EXW	EXW
1	2	3	4	5	6	7 = 4x5	8 = 4x6
iii)	Disconnecter with Earth Switch	set	6				
iv)	Bus Earth Switch	Deleted	0				
v)	Current Transformer	nos.	15				
vi)	Voltage Transformer	nos.	18				
vii)	Surge Arrester	nos.	12				
viii)	Bay MK	Lot	1				
ix)	Post type support insulators	Nos.	11				
d)	_Cable tray including fitting, fixing accessories	lot	1				
1D	36kV Switches & connection						
1D1	36kV Switches & connection for Auxiliary Transformer						
1D1.1	36kV Vacuum Circuit breaker	Deleted					
1D1.2	36kV Disconnecter switch with dropout fuse	set	2				
1D2	36kV Switches & connection for Incomer/ LV side of 132/33 kV Transformer						
1D.2.1	36kV Vacuum Circuit breaker	set	2				
1D.2.2	36kV Disconnecter switch	set	2				
1D.2.3	36kV Disconnecter switch with ES	set	2				
1D.2.4	36kV Inductive voltage transformer (IVT), 2 core	nos.	12				
1D.2.5	Single phase surge arrester, 30kV rated, 10kA	nos.	6				
1D.2.6	Bus sectionalizer DS	nos.	1				
1D.2.7	36kV Current transformer	nos.	6				
1D.2.8	Flexible conductors for bus and jumper, insulators, fittings including all necessary clamps and connectors for busbar compositions (For eight nos. 36KV bays)						
i)	_Flexible Conductor for Bus, jumper, equipment connections	lot	1				
ii)	_Insulator	lot	1				
iii)	_Fittings	lot	1				
1D.2.9	Steel Structures for gantry and equipment supports						
a)	_Gantry Column including nut & bolts (For eight nos. 36KV bays)	lot	1				
b)	_Gantry beam at Main Bus & Jack-Bus height including nut & bolts (For eight nos. 36KV bays)	lot	1				
c)	_Equipment support structures including nut & bolts for two incomer bays of power transformer and two auxiliary transformer bays	lot	1				
d)	_Cable tray including fitting, fixing accessories	lot	1				

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				EXW	EXW	EXW	EXW
1	2	3	4	5	6	7 = 4x5	8 = 4x6
b)	Engineering workstation with ethernet switches.	Lot	1				
c)	Complete Panel including annunciation, test plugs, wiring, lightning, heater, humidity sensor & other accessories.	Lot	1				
1F.6	Complete Tarif metering panel						
a)	Meters (One meter for each 132KV feeder)	nos.	4				
b)	Panel including test plugs, wiring, lightning, heater, humidity sensor & other accessories	lot	1				
1F.7	Complete SAS Hardware and Software						
a)	Industrial Server PC / Operator workstation with SAS & Engineering Software	Set	2				
b)	Ethernet Switches for SAS, GPS System, Monitor 55 inch, Color Laser printer, and common alarm unit with hooter / buzzer for annunciation including all types of cable.	Lot	1				
c)	BCU for all common signals of the substation and additional BCUs to control 5 (five) nos. 33kV outgoing feeders from NLDC.	Lot	1				
d)	Complete Panel including wiring, lighting, heater, humidity sensor & other accessories	Lot	1				
1F.8	Complete RTCC for all 132/33KV transformer	set	2				
	Each comprising						
a)	All temperature meters, AVR and TPI meter	lot	1			x	x
b)	Panel including annunciation, test plugs, wiring, lightning, heater, humidity sensor & other accessories	lot	1				
	36kV Circuit						
1F.9	Complete Control, Protection, monitoring including BCU for two earthing/auxiliary transformers and associated bays	Deleted					
a)	All Protection relay	Deleted					
b)	BCU with required I/Os	Deleted					
c)	Control and Protection Panel including mimic, annunciation, Auxiliary relays (TCS, Lockout etc), Test plugs, wiring, lightning, heater, humidity sensor & other accessories	Deleted					
1F.10	Complete Control, Protection, monitoring Including BCU for transformer circuits (132/33 kV)	set	2				
	Each comprising						

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				EXW	EXW	EXW	EXW
1	2	3	4	5	6	7 = 4x5	8 = 4x6
2C.13	Flexible conductors for bus and jumper, insulators, fittings including all necessary clamps and connectors for busbar compositions						
i)	_Flexible Conductor for Bus, jumper, equipment connections	lot	1				
ii)	_Insulator	lot	1				
iii)	_Fittings	lot	1				
2C.14	Steel Structures for gantry and equipment supports						
a)	_Gantry Column including nut & bolts	lot	1				
b)	_Gantry beam at Main Bus & Jack-Bus height including nut & bolts	lot	1				
c)	_Equipment support structures including nut & bolts						
i)	Circuit Breaker	set	5				
ii)	Disconnecter without Earth Switch	set	8				
iii)	Disconnecter with Earth Switch	set	6				
iv)	Bus Earth Switch	Deleted	0				
v)	Current Transformer	nos.	15				
vi)	Voltage Transformer	nos.	18				
vii)	Surge Arrester	nos.	12				
viii)	Bay MK	Lot	1				
ix)	Post type support insulators	Nos.	11				
d)	_Cable tray including fitting, fixing accessories	lot	1				
2D	36kV Switches & connection						
2D1	36kV Switches & connection for Auxiliary Transformer						
2D1.1	36kV Vacuum Circuit breaker	Deleted					
2D1.2	36kV Disconnecter switch with dropout fuse	set	2				
2D2	36kV Switches & connection for Incomer/ LV side of 132/33 kV Transformer						
2D.2.1	36kV Vacuum Circuit breaker	set	2				
2D.2.2	36kV Disconnecter switch	set	2				
2D.2.3	36kV Disconnecter switch with ES	set	2				
2D.2.4	36kV Inductive voltage transformer (IVT), 2 core	nos.	12				
2D.2.5	Single phase surge arrester, 30kV rated, 10kA	nos.	6				
2D.2.6	Bus sectionalizer DS	nos.	1				
2D.2.7	36kV Current transformer	nos.	6				

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				EXW	EXW	EXW	EXW
1	2	3	4	5	6	7 = 4x5	8 = 4x6
c)	Control and Protection Panel including mimic, annunciation, Auxiliary relays (TCS, Lockout etc), Test plugs, wiring, lightning, heater, humidity sensor & other accessories	Lot	1				
2F.4	Complete Busbar Protection Panel						
a)	Central unit with HMI	set	1				
b)	Complete Protection Panel including annunciation, wiring, lighting, heater, humidity sensor & other accessories with selector switch for switching BBP, BFP and all function.	Lot	1				
2F.5	Complete Digital Fault Disturbance Recorder (DFDR) with panel						
a)	Data Acquisition and processing unit for all 132KV bay and 33KV incomer bays.	Lot	1				
b)	Engineering workstation with ethernet switches.	Lot	1				
c)	Complete Panel including annunciation, test plugs, wiring, lightning, heater, humidity sensor & other accessories.	Lot	1				
2F.6	Complete Tariff metering panel						
a)	Meters (One meter for each 132KV feeder)	nos.	4				
b)	Panel including test plugs, wiring, lightning, heater, humidity sensor & other accessories	lot	1				
2F.7	Complete SAS Hardware and Software						
a)	Industrial Server PC / Operator workstation with SAS & Engineering Software	Set	2				
b)	Ethernet Switches for SAS, GPS System, Monitor 55 inch, Color Laser printer, and common alarm unit with hooter / buzzer for annunciation including all types of cable.	Lot	1				
c)	BCU for all common signals of the substation and additional BCUs to control 5 (five) nos. 33kV outgoing feeders from NLDC.	Lot	1				
d)	Complete Panel including wiring, lighting, heater, humidity sensor & other accessories	Lot	1				
2F.8	Complete RTCC for all 132/33KV transformer	set	2				
	Each comprising						
a)	All temperature meters, AVR and TPI meter	lot	1			×	×
b)	Panel including annunciation, test plugs, wiring, lightning, heater, humidity sensor & other accessories	lot	1				
	36kV Circuit						
2F.9	Complete Control, Protection, monitoring including BCU for two earthing/auxiliary transformers and associated bays	Deleted					
a)	All Protection relay	Deleted					
b)	BCU with required I/Os	Deleted					

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				EXW	EXW	EXW	EXW
				5	6	7 = 4x5	8 = 4x6
1	2	3	4				
c)	Control and Protection Panel including mimic, annunciation, Auxiliary relays (TCS, Lockout etc), Test plugs, wiring, lightning, heater, humidity sensor & other accessories	deleted					
2F.10	Complete Control, Protection, monitoring Including BCU for transformer circuits (132/33 kV)	set	2				
	Each comprising						
a)	All Protection relay	Lot	1			x	x
b)	BCU with required I/Os	Set	1				
c)	Control and Protection Panel including mimic, annunciation, Auxiliary relays (TCS, Lockout etc), Test plugs, wiring, lightning, heater, humidity sensor & other accessories	Lot	1				
2F.11	Tariff metering						
a)	Meters (One meter for each 33KV feeder)	nos.	2				
b)	Panel including test plugs, wiring, lightning, heater, humidity sensor & other accessories	lot	1				
2G	Multicore Cables						
2G.1	Multicore Cables for control, protection, metering & power circuits						
i)	_LV Control Cable	lot	1				
ii)	_LV Power Cable	lot	1				
2H	Earthing and Lightning Protection						
2H.1	_Earthing system for complete substation	lot	1				
2H.2	_lightning Protection System for complete substation	lot	1				
2I	Batteries, chargers & DC distribution						
2I.1	110V Ni-cad Batteries with chargers & distribution board & others						
i)	_110V Battery Banks, Ah	set	N/A				
ii)	_Charger, A	set					
iii)	_110V DC Distribution panel, MCC type	lot					
i)	_110V Battery Banks, Ah	set	2				

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				5	6	7 = 4x5	8 = 4x6
1	2	3	4				
iii)	_Fittings	lot	1				
3C.14	Steel Structures for gantry and equipment supports						
a)	_Gantry Column including nut & bolts	lot	1				
b)	_Gantry beam at Main Bus & Jack-Bus height including nut & bolts	lot	1				
c)	_Equipment support structures including nut & bolts						
i)	Circuit Breaker	set	2				
ii)	Disconnecter without Earth Switch	set	4				
iii)	Disconnecter with Earth Switch	set	2				
iv)	Bus Earth Switch	set	0				
v)	Current Transformer	nos.	6				
vi)	Voltage Transformer	nos.	6				
vii)	Surge Arrester	nos.	6				
viii)	Bay MK	nos.	2				
ix)	Post type support insulators						
ix_i	_For Bus support	nos.	18				
ix_ii	_For Equipment bus	nos.	10				
d)	_Cable tray including fitting, fixing accessories	lot	1				
3F	Control, Protection, SAS and Metering						
	145kV Circuits						
3F.1	Complete Control, Protection, monitoring for overhead line circuits	set	2				
	Each comprising						
a)	All Protection relay (Main 1, Main 2/Backup)	Lot	1			x	x
b)	BCU with required I/Os	Deleted					
c)	Control and Protection Panel including mimic, annunciation, Auxiliary relays (TCS, Lockout etc), Test plugs, wiring, lightning, heater, humidity sensor & other accessories	Lot	1				
3F.2	Complete Tarif metering panel						
a)	Meters (One meter for each 132KV feeder)	nos.	2		x		

Design, Supply, Installation, Testing & Commissioning of 132/33 kV AIS Substation at Paikgacha and 132/33 kV AIS Substation at Mathbaria including associated 132KV bay extension at Sathkhira 132/33kV grid substation & at Bhandaria 132/33kV grid substation on turnkey basis (Package-3)							
Schedule 3: Design Services							
Item	Description (For detailed description, please refer to specification and Schedule A)	Unit	Quantity	Unit Price ¹		Total Price ¹	
				Local Currency [In BDT]	Foreign Currency [In]	Local Currency [In BDT]	Foreign Currency [In]
1	2	3	4	5	6	7 = 4 x 5	8 = 4 x 6
Schedule No. 3 Design Services							
Section-I	PAIKGACHA 132/33 KV AIS SUBSTATION						
1.1	Basic and detailed design as per contract specification and requirement for entire scope of the contract	Lot	1				
1.2	Preparation of As-Built drawing and operation & maintenance manual of the installation	Lot	1				
Total Columns 7 and 8 to be carried forward to Schedule No. 5 - Grand Summary							
Section-II	MATHBARIA 132/33 KV AIS SUBSTATION						
2.1	Basic and detailed design as per contract specification and requirement for entire scope of the contract	Lot	1				
2.2	Preparation of As-Built drawing and operation & maintenance manual of the installation	Lot	1				
Total Columns 7 and 8 to be carried forward to Schedule No. 5 - Grand Summary							
Section-III	BAY EXTENSION OF SATHKHIRA 132/33 KV AIS SUBSTATION						
3.1	Basic and detailed design as per contract specification and requirement for entire scope of the contract	Lot	1				
3.2	Preparation of As-Built drawing and operation & maintenance manual of the installation	Lot	1				
Total Columns 7 and 8 to be carried forward to Schedule No. 5 - Grand Summary							
Section-IV	BAY EXTENSION OF BHANDARIA 132/33 KV AIS SUBSTATION						
4.1	Basic and detailed design as per contract specification and requirement for entire scope of the contract	Lot	1				
4.2	Preparation of As-Built drawing and operation & maintenance manual of the installation	Lot	1				
Total Columns 7 and 8 to be carried forward to Schedule No. 5 - Grand Summary							
1	Specify currency in accordance with specifications in Bid Data Sheet under ITB 19.1 in Single-stage Bid. Create and use as many columns for Unit Price and Total Price as there are currencies.						

Schedule 4: Installation and Other Services							
Item	Description (For detailed description, please refer to specification and Schedule A)	Unit	Quantity	Unit Price ¹		Total Price ¹	
				Local Currency [In BDT]	Foreign Currency [In]	Local Currency [In BDT]	Foreign Currency [In]
				EXW	EXW	EXW	EXW
1	2	3	4	5	6	7 = 4x5	8 = 4x6
a)	_Gantry Column including nut & bolts	lot	1				
b)	_Gantry beam at Main Bus & Jack-Bus height including nut & bolts	lot	1				
c)	_Equipment support structures including nut & bolts						
i)	Circuit Breaker	set	5				
ii)	Disconnecter without Earth Switch	set	8				
iii)	Disconnecter with Earth Switch	set	6				
iv)	Bus Earth Switch	Deleted	0				
v)	Current Transformer	nos.	15				
vi)	Voltage Transformer	nos.	18				
vii)	Surge Arrester	nos.	12				
viii)	Bay MK	Lot	1				
ix)	Post type support insulators	Nos.	11				
d)	_Cable tray including fitting, fixing accessories	lot	1				
1D	36kV Switches & connection						
1D1	36kV Switches & connection for Auxiliary Transformer						
1D1.1	36kV Vacuum Circuit breaker	Deleted					
1D1.2	36kV Disconnecter switch with dropout fuse	set	2				
1D2	36kV Switches & connection for Incomer/ LV side of 132/33 kV Transformer						
1D.2.1	36kV Vacuum Circuit breaker	set	2				
1D.2.2	36kV Disconnecter switch	set	2				
1D.2.3	36kV Disconnecter switch with ES	set	2				
1D.2.4	36kV Inductive voltage transformer (IVT), 2 core	nos.	12				
1D.2.5	Single phase surge arrester, 30kV rated, 10kA	nos.	6				
1D.2.6	Bus sectionalizer DS	nos.	1				
1D.2.7	36kV Current transformer	nos.	6				

Schedule 4: Installation and Other Services							
Item	Description (For detailed description, please refer to specification and Schedule A)	Unit	Quantity	Unit Price ¹		Total Price ¹	
				Local Currency [In BDT]	Foreign Currency [In]	Local Currency [In BDT]	Foreign Currency [In]
				EXW	EXW	EXW	EXW
1	2	3	4	5	6	7 = 4x5	8 = 4x6
b)	Ethernet Switches for SAS, GPS System, Monitor 55 inch, Color Laser printer, and common alarm unit with hooter / buzzer for annunciation including all types of cable.	Lot	1				
c)	BCU for all common signals of the substation and additional BCUs to control 5 (five) nos. 33kV outgoing feeders from NLDC.	Lot	1				
d)	Complete Panel including wiring, lighting, heater, humidity sensor & other accessories	Lot	1				
1F.8	Complete RTCC for all 132/33KV transformer	set	2				
	Each comprising						
a)	All temperature meters, AVR and TPI meter	lot	1				
b)	Panel including annunciation, test plugs, wiring, lightning, heater, humidity sensor & other accessories	lot	1			x	x
	36kV Circuit						
1F.9	Complete Control, Protection, monitoring including BCU for two earthing/auxiliary transformers and associated bays	Deleted	1				
a)	All Protection relay	Deleted					
b)	BCU with required I/Os	Deleted					
c)	Control and Protection Panel including mimic, annunciation, Auxiliary relays (TCS, Lockout etc), Test plugs, wiring, lightning, heater, humidity sensor & other accessories	Deleted					
1F.10	Complete Control, Protection, monitoring Including BCU for transformer circuits (132/33 kV)	set	2				
	Each comprising						
a)	All Protection relay	Lot	1			x	x
b)	BCU with required I/Os	Set	1				

Schedule 4: Installation and Other Services							
Item	Description (For detailed description, please refer to specification and Schedule A)	Unit	Quantity	Unit Price ¹		Total Price ¹	
				Local Currency [In BDT]	Foreign Currency [In]	Local Currency [In BDT]	Foreign Currency [In]
				EXW	EXW	EXW	EXW
1	2	3	4	5	6	7 = 4x5	8 = 4x6
1K.1	Complete land development and slope protection						
i)*	_Complete land development with carried/dredged earth filling including approach road	cum	91410				
ii)*	_Slope protection						
a.	_Slope (1V:2H) protection with turfing	sqm	5850				
1K.2	Complete civil items required for outdoor works						
i)	_Outdoor gantry foundation including tower foundation in 132kV switchyard						
a.	_Gantry column for main bus and jack bus	nos.	29				
ii)	_Outdoor equipment foundation in 132kV switchyard						
a.*	_CB	set**	5				
b.*	_DS without ES	set**	8				
c.*	_DS with ES	set**	6				
d.*	_CT	nos.	15				
e.*	_IVT	nos.	18				
f.*	_SA	nos.	12				
g.*	_PI	Nos.	11				
iii).	_Outdoor gantry/tubular bus bar foundation in 33kV switchyard for incomer/ LV side of 132/33 kV transformer						
a.	_Gantry column (For eight nos. 36KV bays)	lot	1				

Schedule 4: Installation and Other Services							
Item	Description (For detailed description, please refer to specification and Schedule A)	Unit	Quantity	Unit Price ¹		Total Price ¹	
				Local Currency [In BDT]	Foreign Currency [In]	Local Currency [In BDT]	Foreign Currency [In]
				EXW	EXW	EXW	EXW
1	2	3	4	5	6	7 = 4x5	8 = 4x6
iv).	Outdoor equipment foundation in 33kV switchyard for incomer/ LV side of two 132/33 kV transformer bays and 33/0.415 kV auxiliary transformer bays	lot	1				
v).*	Transformer pad with foundation						
a.	50/75 MVA Power Transformer including oil pit	set	2				
b.	300kVA Earthing auxiliary Transformer	set	2				
vi).*	Blast wall with foundation	nos.	1				
vii).*	Boundary wall for overall plan						
a.	Boundary wall without retaining wall	m	486				
viii).*	Substation main gate (motorized)	nos.	1				
ix).*	Chain link fencing	m	285				
x).*	Approach road (pavement width 6m)	m	37				
xi).*	Internal road						
a.	6m wide road	m	150				
b.	4.5m wide road	m	290				
c.	1.5m walk way	m	15				
xii).*	Surface drain	m	482				
xiii)	Cable trench/tunnel with soak pit	lot	1				
xiv).	Whole substation surface finishing with drainage system including outlet (excluding surface drain)	lot	1				
xv).	Gravel laying in switchyard area (as per earth mat design)	lot	1				
xvi).*	Septic tank cum soak well	nos.	2				
xvii).	Pump shed including deep tube well, motor, pump, water reservoir, water pipe line, electrical connection etc.	nos.	2				
xviii).*	Guard house	nos.	1				
xix).*	Sentry post	nos.	1				
xx).*	Car port	nos.	1				
xxi).*	Ansar barrack (Three storied 9.5mx8m)	nos.	1				
xxii).*	Property Line Demarcation	m	560				

Schedule 4: Installation and Other Services							
Item	Description (For detailed description, please refer to specification and Schedule A)	Unit	Quantity	Unit Price ¹		Total Price ¹	
				Local Currency [In BDT]	Foreign Currency [In]	Local Currency [In BDT]	Foreign Currency [In]
				EXW	EXW	EXW	EXW
1	2	3	4	5	6	7 = 4x5	8 = 4x6
2D1	36kV Switches & connection for Auxiliary Transformer						
2D1.1	36kV Vacuum Circuit breaker	Deleted					
2D1.2	36kV Disconnecter switch with dropout fuse	set	2				
2D2	36kV Switches & connection for Incomer/ LV side of 132/33 kV Transformer						
2D.2.1	36kV Vacuum Circuit breaker	set	2				
2D.2.2	36kV Disconnecter switch	set	2				
2D.2.3	36kV Disconnecter switch with ES	set	2				
2D.2.4	36kV Inductive voltage transformer (IVT), 2 core	nos.	12				
2D.2.5	Single phase surge arrester, 30kV rated,10kA	nos.	6				
2D.2.6	Bus sectionalizer DS	nos.	1				
2D.2.7	36kV Current transformer	nos.	6				
2D.2.8	Flexible conductors for bus and jumper, insulators, fittings including all necessary clamps and connectors for busbar compositions (For eight nos. 36KV bays)						
i)	_Flexible Conductor for Bus (3000A), jumper, equipment connections	lot	1				
ii)	_Insulator	lot	1				
iii)	_Fittings	lot	1				
2D.2.9	Steel Structures for gantry and equipment supports						
a)	_Gantry Column including nut & bolts (For eight nos. 36KV bays)	lot	1				

Schedule 4: Installation and Other Services							
Item	Description (For detailed description, please refer to specification and Schedule A)	Unit	Quantity	Unit Price ¹		Total Price ¹	
				Local Currency [In BDT]	Foreign Currency [In]	Local Currency [In BDT]	Foreign Currency [In]
				EXW	EXW	EXW	EXW
1	2	3	4	5	6	7 = 4x5	8 = 4x6
b)	Ethernet Switches for SAS, GPS System, Monitor 55 inch, Color Laser printer, and common alarm unit with hooter / buzzer for annunciation including all types of cable.	Lot	1				
c)	BCU for all common signals of the substation and additional BCUs to control 5 (five) nos. 33kV outgoing feeders from NLDC.	Lot	1				
d)	Complete Panel including wiring, lighting, heater, humidity sensor & other accessories	Lot	1				
2F.8	Complete RTCC for all 132/33KV transformer	set	2				
	Each comprising						
a)	All temperature meters, AVR and TPI meter	lot	1			x	x
b)	Panel including annunciation, test plugs, wiring, lightning, heater, humidity sensor & other accessories	lot	1				
	36kV Circuit						
2F.9	Complete Control, Protection, monitoring including BCU for two earthing/auxiliary transformers and associated bays	Deleted					
a)	All Protection relay	Deleted					
b)	BCU with required I/Os	Deleted					
c)	Control and Protection Panel including mimic, annunciation, Auxiliary relays (TCS, Lockout etc), Test plugs, wiring, lightning, heater, humidity sensor & other accessories	Deleted					
2F.10	Complete Control, Protection, monitoring Including BCU for transformer circuits (132/33 kV)	set	2				
	Each comprising						
a)	All Protection relay	Lot	1				

Schedule 4: Installation and Other Services							
Item	Description (For detailed description, please refer to specification and Schedule A)	Unit	Quantity	Unit Price ¹		Total Price ¹	
				Local Currency [In BDT]	Foreign Currency [In]	Local Currency [In BDT]	Foreign Currency [In]
				EXW	EXW	EXW	EXW
1	2	3	4	5	6	7 = 4x5	8 = 4x6
2I.2	48V Ni-cad Batteries with chargers & distribution board						
i)	_48V battery Banks, Ah	set	2				
ii)	_Charger, A	set	2				
iii)	_48V DC Disattribution Panel	lot	1				
2J	LVAC Distribution						
2J.1	_AC 415V or 240V distribution panels	lot	1				
2J.2	_Tariff metering at LV side (Main & Check for each)	lot	1				
2J.3	_Power Factor Correction Plant in 415V Bus	lot	1				
2K	Civil Works, Building and Foundation						
2K.1	Complete land development and slope protection						
i)*	_Complete land development with carried/dredged earth filling including approach road	cum	91410				
ii)*	_Slope protection						
a.	_Slope (1V:2H) protection with turfing	sqm	5850				
2K.2	Complete civil items required for outdoor works						
i)	_Outdoor gantry foundation including tower foundation in 132kV switchyard						
a.	_Gantry column for main bus and jack bus	nos.	29				
ii)	_Outdoor equipment foundation in 132kV switchyard						
a.*	_CB	set**	5				
b.*	_DS without ES	set**	8				
c.*	_DS with ES	set**	6				

Schedule 4: Installation and Other Services							
Item	Description (For detailed description, please refer to specification and Schedule A)	Unit	Quantity	Unit Price ¹		Total Price ¹	
				Local Currency [In BDT]	Foreign Currency [In]	Local Currency [In BDT]	Foreign Currency [In]
				EXW	EXW	EXW	EXW
1	2	3	4	5	6	7 = 4x5	8 = 4x6
d.*	_CT	nos.	15				
e.*	_IVT	nos.	18				
f.*	_SA	nos.	12				
g.*	_PI	Nos.	11				
iii).	_Outdoor gantry/tubular bus bar foundation in 33kV switchyard for incomer/ LV side of 132/33 kV transformer						
a.	_Gantry column (For eight nos. 36KV bays)	lot	1				
iv).	_Outdoor equipment foundation in 33kV switchyard for incomer/ LV side of two 132/33 kV transformer bays and 33/0.415 kV auxiliary transformer bays	lot	1				
v).*	_Transformer pad with foundation						
a.	_50/75 MVA Power Transformer including oil pit	set	2				
b.	_300kVA Earthing auxiliary Transformer	set	2				
vi).*	_Blast wall with foundation	nos.	1				
vii).*	_Boundary wall for overall plan						
a.	_Boundary wall without retaining wall	m	486				
viii).*	_Substation main gate (motorized)	nos.	1				
ix).*	_Chain link fencing	m	285				
x).*	_Approach road (pavement width 6m)	m	37				
xi).*	_Internal road						
a.	_6m wide road	m	150				

Schedule 4: Installation and Other Services							
Item	Description (For detailed description, please refer to specification and Schedule A)	Unit	Quantity	Unit Price ¹		Total Price ¹	
				Local Currency [In BDT]	Foreign Currency [In]	Local Currency [In BDT]	Foreign Currency [In]
				EXW	EXW	EXW	EXW
1	2	3	4	5	6	7 = 4x5	8 = 4x6
iv)	Bus Earth Switch	set	0				
v)	Current Transformer	nos.	6				
vi)	Voltage Transformer	nos.	6				
vii)	Surge Arrester	nos.	6				
viii)	Bay MK	nos.	2				
ix)	Post type support insulators						
ix_i	_For Bus support	nos.	18				
ix_ii	_For Equipment bus	nos.	10				
d)	_Cable tray including fitting, fixing accessories	lot	1				
3F	Control, Protection, SAS and Metering						
	145kV Circuits						
3F.1	Complete Control, Protection, monitoring for overhead line circuits	set	2				
	Each comprising						
a)	All Protection relay (Main 1, Main 2/Backup)	Lot	1				
b)	BCU with required I/Os	Deleted				x	x
c)	Control and Protection Panel including mimic, annunciation, Auxiliary relays (TCS, Lockout etc), Test plugs, wiring, lightning, heater, humidity sensor & other accessories	Lot	1				
3F.2	Complete Tarif metering panel						

Schedule 4: Installation and Other Services							
Item	Description (For detailed description, please refer to specification and Schedule A)	Unit	Quantity	Unit Price ¹		Total Price ¹	
				Local Currency [In BDT]	Foreign Currency [In]	Local Currency [In BDT]	Foreign Currency [In]
				EXW	EXW	EXW	EXW
1	2	3	4	5	6	7 = 4x5	8 = 4x6
ii)	_Outdoor equipment foundation in 132kV switchyard						
a.*	_CB	set**	2				
b.*	_DS Without ES	set**	4				
c.*	_DS With ES	set**	2				
d.*	_CT	nos.	6				
e.*	_IVT	nos.	6				
f.*	_SA	nos.	6				
g.*	_PI	nos.	28				
iii)	_Cable trench/tunnel with soak pit	meter	20				
iv)	_Switchyard surface finishing with drainage system including outlet (excluding surface drain)	lot	1				
v)	_Gravel laying in switchyard area	lot	1				
3K.2*	Testing of Foundation						
i)	_Uplift test of pile	nos.	1				
3L	lighting, small power, air conditioning and Ventilation , Solar						
3L.1	lighting, small power, air conditioning and Ventilation and emergency DC lightning for control building and local control houses	Deleted					
3L.2	lighting for outside building for security and switchyard area	lot	1				
3M	Fibre Optic Multiplexer Equipment and PLC Equipment for Communication and Protection						
3M.1	Extension of existing/ upgradation of Indoor Fibre Optic Multiplexer Equipment. (if alternate proposal other than existing multiplexer, bidder shall include one set of 48V battery and charger)	lot	1				
3M.2	under ground optical fiber cable, armoured, 48 core including Outdoor termination box,indoor MDF/ODF & pigtail cables	lot	1				

Design, Supply, Installation, Testing & Commissioning of 132/33 kV AIS Substation at Paikgacha and 132/33 kV AIS Substation at Mathbaria including associated 132KV bay extension at Sathkhira 132/33kV grid substation & at Bhandaria 132/33kV grid substation on turnkey basis (Package-3)

Schedule 5: Grand Summary

Item	Description	Total Price ¹	
		Local Currency [In BDT]	Foreign Currency [In]
Section-I	PAIKGACHA 132/33 KV AIS SUBSTATION		
1	Schedule No. 1: Plant and Mandatory Spare Parts Supplied from Abroad		
2	Schedule No. 2: Plant and Mandatory Spare Parts Supplied from within the Employer's Country		
3	Schedule No. 3: Design Services		
4	Schedule No. 4: Installation and Other Services		
5.I	Total of Section-I of Scope;		
Section-II	MATHBARIA 132/33 KV AIS SUBSTATION		
1	Schedule No. 1: Plant and Mandatory Spare Parts Supplied from Abroad		
2	Schedule No. 2: Plant and Mandatory Spare Parts Supplied from within the Employer's Country		
3	Schedule No. 3: Design Services		
4	Schedule No. 4: Installation and Other Services		
5.II	Total of Section-II of Scope;		
Section-III	BAY EXTENSION OF SATHKHIRA 132/33 KV AIS SUBSTATION		
1	Schedule No. 1: Plant and Mandatory Spare Parts Supplied from Abroad		
2	Schedule No. 2: Plant and Mandatory Spare Parts Supplied from within the Employer's Country		
3	Schedule No. 3: Design Services		
4	Schedule No. 4: Installation and Other Services		
5.III	Total of Section-III of Scope;		
Section-IV	BAY EXTENSION OF BHANDARIA 132/33 KV AIS SUBSTATION		
1	Schedule No. 1: Plant and Mandatory Spare Parts Supplied from Abroad		
2	Schedule No. 2: Plant and Mandatory Spare Parts Supplied from within the Employer's Country		
3	Schedule No. 3: Design Services		
4	Schedule No. 4: Installation and Other Services		
5.IV	Total of Section-IV of Scope;		
Section-V	Spare Materials		
1	Schedule No. 1: Plant and Mandatory Spare Parts Supplied from Abroad		
2	Schedule No. 2: Plant and Mandatory Spare Parts Supplied from within the Employer's Country		
5.V	Total of Section-V of Scope;		
Section-VI	Additional Services		
4	Schedule No. 4: Installation and Other Services		

Schedule 5: Grand Summary			
Item	Description	Total Price ¹	
		Local Currency [In BDT]	Foreign Currency [In]
5.VI	Total of Section-VI of Scope ;		
GRAND TOTAL 5.I + 5.II + 5.III + 5.IV + 5.V + 5.VI) (to Price Bid Form)			
Grand Total Price in words.....			
1 Specify currency in accordance with specifications in Bid Data Sheet under ITB 19.1 in Single-stage Bid. Create and use as many columns for Unit Price and Total Price as there are currencies.			