NEPAL ELECTRICITY AUTHORITY

(An Undertaking of Government of Nepal)

DISTRIBUTION AND CONSUMER SERVICES DIRECTORATE DISTRIBUTION SYSTEM UPGRADE AND EXPANSION PROJECT



TENDER DOCUMENT

for

Procurement of material, equipment, associated accessories and necessary installation services including design, erection, testing, and commissioning of 132/33 kV substation in Bajhang District
- Package No. EIB-W6

Single-Stage: Two-Envelope
Tender Procedure

Issued on:

Invitation for Tenders No.: ICB-DCSD-2080/81-DSUEP-EIB-W6

Contract Ref. No.: ICB-DCSD-2080/81-DSUEP-EIB-W6

Employer: Nepal Electricity Authority

Country: Nepal

Volume III of III (Bill of Quantities)

Distribution System Upgrade and Expansion Project Distribution and Consumer Services Directorate Nepal Electricity Authority Durbarmarg, Kathmandu

Tel: +977-1- 4153145

Email: <u>dsuep.eib@gmail.com</u>; <u>dsuep@nea.org.np</u>





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PART III	CONDITIONS OF CONTRACT AND CONTRACT FORMS Section 7 - General Conditions of Contract (GCC) This section contains the general clauses to be applied in all contracts. These Conditions are subject to the variations and additions set out in Section 8 (Special Conditions of Contract). Section 8 - Special Conditions of Contract (SCC) This section contains provisions that are specific to each contract and that modify or supplement the GCC. Whenever there is a conflict, the provisions herein shall prevail over those in the GCC. The clause number of the SCC is the corresponding clause number of the GCC.	
	Section 9 - Contract Forms (COF) This section contains forms, which, once completed, will form part of the Contract. The forms for Performance Security and Advance Payment Security, when required, shall only be completed by the successful Tenderer after contract award.	9-1

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Schedule of Rates and Prices

Schedule No. 5: Grand Summary (Excluding Custom Duty and VAT applicable in Employer's Country)

FC: USD

Schedule No.	Title	Total Price				
Scriedule No.	Title	Foreign Currency	Local Currency			
1	Plant and Mandatory Spare Parts Supplied from Abroad	-	-			
2	Plant and Mandatory Spare Parts Supplied from Within the Employer's Country					
3	Design Services	-	-			
4	Installation and Other Services	-	-			
	Grand Total to be carried forward to Letter of Price Tender	-	-			



Name of	Tenderer				

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Summary of Schedule No. 1: Plant and Mandatory Spare Parts Supplied from Abroad (Excluding Custom Duty and VAT applicable in Employer's Country)

FC: USD

Schedule No.	Title	Total Price			
Schedule No.	Title	Foreign Currency	Local Currency		
A.	Switchyard	-	-		
B.	Control Room	-	-		
C.	Tariff Metering	-	-		
D.	Mandatory Spare Parts	-	-		
	Grand Total to be carried forward to Schedule 5	-	-		



Name of ⁻	Tenderer				

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Schedule No. 1: Plant and Mandatory Spare Parts Supplied from Abroad (Excluding Custom Duty and VAT applicable in Employer's Country)

Item	Description	Country of Origin	Unit	Quantity	Unit Rate, CIP (Nepal Border)	Unit Rate, Domestic Transportation and Insurance	Total, CIP (Nepal Border)	Total, Domestic Transportation and Insurance
					Foreign Currency	Local Currency	Foreign Currency	Local Currency
1	2	3	4	5	6	7	8 = 5 x 6	9 = 5 x 7
A.	Switchyard							
A.1	Transformers compatible to SAS as per the Technical Specification							
1	132/33 kV, 3-phase, 12.5/15 MVA, ONAN/ONAF Power Transformer complete with On Load Tap Changer (OLTC) & RTCC facility, and Bushing CT on both sides complete with all accessories.		nos.	1.00			-	-
2	100 kVA, 33/0.4 kV, 3-phase, ONAN, Off load Tap Changer, Station Transformer with current limiting fuse and all accessories.		nos.	1.00			-	-
A.2	Circuit Breakers compatible to SAS with Support Structures as per the Technical Specification							
1	145 kV, 1250A, 3-phase $\rm SF_6$ Circuit Breaker (three pole operation type) complete with all accessories and suppot structures for 132/33 kV Power Transformers.		Sets	1.00			-	-
2	36 kV, 1250 A, 3 phase, Vaccum Circuit Breaker (three pole operation type) complete with all accessories and support structures for Incoming Lines.		Sets	1.00			-	-
3	36 kV, 800 A, 3 phase, Vaccum Circuit Breaker (three pole operation type) complete with all accessories and support structures for 3 Outgoing Lines.		Sets	3.00			-	-
A.3	Disconnecting Switch/Isolators compatible to SAS as per the Technical Specification.							
1	145 kV, 1250 A, 3 phase, Double Break Disconnecting Switch (without Earth Switch) complete with all accessories.		Sets	1.00			-	-
2	36 kV, 1250 A, 3 phase, Double Break Disconnecting Switch (without Earth Switch) complete with all accessories for 33 kV Incoming Lines.		Sets	1.00			-	-
3	36 kV, 800 A, 3 phase, Double Break Disconnecting Switch (without Earth Switch) complete with all accessories for 33 kV Outgoing Lines.		Sets	3.00			-	-



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Schedule No. 1: Plant and Mandatory Spare Parts Supplied from Abroad (Excluding Custom Duty and VAT applicable in Employer's Country)

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		_			Foreign Currency	Local Currency	Foreign Currency	Local Currency
1	2	3	4	5	6	7	8 = 5 x 6	9 = 5 x 7
4	36 kV, 800 A, 3 phase, Double Break Disconnecting Switch (with Earth Switch) complete with all accessories for 33 kV Outgoing Lines.		Sets	3.00			-	-
5	36 kV, 400 A, 3 phase, Double Break Disconnecting Switch (without Earth Switch) complete with all accessories for Station Transformer.		Sets	1.00			-	-
A.4	Current Transformers as per the Technical Specification							
1	145 kV, 50 VA, 5 core (2 core - for protection of Class 5P20, 2 core - for tariff metering of Class 0.2 and 1 core - measurement of Class 0.5), 200-100/1 A, Current Transformer (1-phase) complete with all accessories for 132 kV Transformer Bay.		nos.	3.00			-	-
2	36 kV, 30 VA, 3 core (2 core - for protection of Class 5P20, 1 core - for measurement of Class 0.5), 600-400-200/1 A, Current Transformer (1-phase) complete with all accessories for 33 kV Incoming Lines.		nos.	3.00			-	-
3	36 kV, 30 VA, 2 core (1 core - for protection of Class 5P20, 1 core - for measurement of Class 0.5), 400-200-100/1 A, Current Transformer (1-phase) complete with all accessories for 33 kV Outgoing Lines.		nos.	9.00			-	-



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Schedule No. 1: Plant and Mandatory Spare Parts Supplied from Abroad (Excluding Custom Duty and VAT applicable in Employer's Country)

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					Foreign Currency	Local Currency	Foreign Currency	Local Currency
1	2	3	4	5	6	7	8 = 5 x 6	9 = 5 x 7
A.5	Capacitive Voltage Transformer as per the Technical Specification							
1	145 kV, 50 VA, 5 core (2 core - for protection of Class 3P, 2 core - for tariff metering of Class 0.2 and 1 core - for measurement of Class 0.5), 132/V3 /0.110/V3 kV, Capacitive Voltage Transformer (1-phase) complete with all accessories as per the Technical Specification for 132 kV Transformer Bay.		nos.	3.00			-	-
2	36 kV, 30 VA, 2 core (1 core - for protection of Class $3P$, 1 core - for measurement of Class 0.5), $33/\sqrt{3}$ / $0.110/\sqrt{3}$ kV, Capacitive Voltage Transformer (1-phase) complete with all accessories as per the Technical Specification for 33 kV Bus and three outgoing lines.		nos.	12.00			-	-
A.6	Surge Arrestor as per the Technical Specification							
1	120 kV, 10 kA Surge Arrestor (1-phase) including Discharge Counter complete with all accessories as per the Technical Specification.		nos.	3.00			-	-
2	$30\ kV$, $10\ kA$ Surge Arrestor (1-phase) including Discharge Counter complete with all accessories as per the Technical Specification.		nos.	12.00			-	-
A.7	Cables along with clamps, glands, lugs and straight joints etc. for switchyard and control room as per the Technical Specification.							
1	36 kV, 400 sq. mm, single core, XLPE Copper Power Cable including necessary accessories and termination kit as per the technical specification complete from LV Box of Power Transformer to the Bay.		Rm	75.00			-	-
2	Low Voltage Power Cables (PVC), 1.1 kV grade along with accessories.		Lot	1.00			-	-
3	Control Cable (PVC), 1.1 kV grade along with accessories.		Lot	1.00			-	-
A.8	Erection Hardware and Miscellaneous Materials (insulators, necessary hardware, clamps, connectors, etc.) as per the Technical Specification and approved drawings							
1	132 kV Busbar Extension		Sets	1.00			-	-



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Item	Description	Country of Origin	Unit	Quantity	Unit Rate, CIP (Nepal Border)	Unit Rate, Domestic Transportation and Insurance	Total, CIP (Nepal Border)	Total, Domestic Transportation and Insurance
		-			Foreign Currency	Local Currency	Foreign Currency	Local Currency
1	2	3	4	5	6	7	8 = 5 x 6	9 = 5 x 7
2	132 kV Transformer Bay		Sets	1.00			-	-
3	33 kV Incomer Bay		Sets	1.00			-	-
4	33 kV Outgoing Line Bay		Sets	3.00			-	-
5	33 kV Busbar		Sets	1.00			-	-
6	33 kV take off gantry		Lot	1.00			-	-
7	33/0.4 kV Station Transformer including Autorecloser, Surge Arrestor etc. all complete		Lot	1.00			-	-
A.9	Steel Structure as per the Technical Specification							
1	Galvanized steel structure in hot rolled standard sections for all sub-station, gantry tower, Surge masts etc. required for the switch yards complete with all accessories and resembling the structure of the existing sub-station.		Metric Ton	7.00			-	-
2	Pipe structure for supporting all equipment of 132kV and 33 kV system.		Metric Ton	2.50			-	-
3	Checker plate covering of indoor/outdoor cable trench and grating (galvanized), anchor-bolts and all other accessories required to complete the sub-station work as specified.		Metric Ton	0.50			-	-
A.10	Illumination System							
1	Lighting system for switchyard, internal roads, Control Room Building and its periphery.		Lot	1.00			-	-
2	Emergency DC lighting system with necessary accessories all complete for control room.		Lot	1.00			-	
A.11	Earthing Material as per the Technical Specification							



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FC: USD

Item	Description	Country of Origin	Unit	Quantity	Unit Rate, CIP (Nepal Border)	Unit Rate, Domestic Transportation and Insurance	Total, CIP (Nepal Border)	Total, Domestic Transportation and Insurance
		.			Foreign Currency	Local Currency	Foreign Currency	Local Currency
1	2	3	4	5	6	7	8 = 5 x 6	9 = 5 x 7
1	Galvanized E.H.S steel wires of size 7/3.35 for Surge shield wire in take off and internal structures with accessories to complete the works.		Lot	1.00			-	-
2	Surge Protection System with Surge mast, complete earthing of substation including switchyard, control building with copper conductor, electrodes, grounding material complete with all accessories.		Lot	1.00			-	-



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					Foreign Currency	Local Currency	Foreign Currency	Local Currency
1	2	3	4	5	6	7	8 = 5 x 6	9 = 5 x 7
В.	Control Room							
B.1	Control & Relay Panels Compatible to Substation Automation System (SAS) as per the Technical Specification							
1	132/33 kV Power Transformer Control & Protection Panel complete set for HV and LV side with all accessories for 132/33 kV Transformer Bay.		nos.	1.00			-	-
2	33kV Line Control & Protection Panel complete with all accessories for 33 kV Outgoing Lines.		nos.	3.00			-	-
3	Time Synchronization Equipment as per specification pertaining to C&R System.		nos.	1.00			-	-
B.2	Substation Automation System (SAS) based on latest revision of IEC 61850							
1	Complete substation automation system as required for Unmanned's substation including hardware and software for the substation.		Lot	1.00			-	-
2	Substation automation system as required for remote control station (Bajhang DC) alongwith contol and monitoring of assiciated equipment for 132 kV System, 33 kV system and auxiliary system all complete.		Lot	1.00			-	-
3	Equipment required for Integration of SAS with NEA's existing Master Control Centre (MCC) in coordination with NEA at Attariya Regional Office for its remote operation from Attariya alongwith Controlling and Monitoring of associated equipments for 132 kV system, 33 kV system and auxiliary system.		Lot	1.00			-	-



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1	2	3	4	5	6	7	8 = 5 x 6	9 = 5 x 7
B.3	Teleprotection and Communication Equipments as per the Technical Specification and Drawings							
1	SDH Equipment with MPLS - TP facility (STM -4 upto 4 MSP Protected directions as well as 10 G upto 4 MSP Protected directions)							
1.1	Base Equipment (Common cards, Cross Connect/control cards, optical base cards, power supply cards, power cabling, other hardware and accessories including sub racks (Additional Sub Rack if required to accomodate all facilities including SDH and MPLS - TP mentioned above), patch cord, DDF etc. fully equiped excluding (1.2) & (1.3) below for KHPS and Bagthala		Nos	2.00			-	-
1.2	Optical Interface Cards/SFP							
	a. L4.1 SFP (For Integration with SDH Equipment at Bagthala, Bungal and Spare Substation)		Nos	6.00			-	-
	b. 10 G SFP(For Integration with FOX615 Equipment at MCC and LDC)		Nos	2.00			-	-
1.3	Tributary Cards							
	a. E1 Interface card (Min. 8 Interfaces per card)		Set	4.00			-	-
	b. Fast-Ethernet Interface 10/100 Mbps Base T with Layer-2 switching (Min. 8 Interfaces per card)		Nos.	4.00			-	-
2	Optical Distribution Frames/Equipment Cabinet complete in all respect.		Nos.	2.00			-	-
3	Optical Approach cable - 24 pair fibre (DWSM-G.652D) alongwith installation hardware set complete in all respects.		Lot	1.00			-	_
4	Optical ADSS Cable, support hardwares for SAS for data transfer to Bagthala Substation (Bajhang DC)		km	4.00			-	-
5	VOIP Telephone instrument with one common POE+ switch (min. 8 port)		Nos	2.00			-	-



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1	2	3	4	5	6	7	8 = 5 x 6	9 = 5 x 7
B.4	Auxiliary Power Supply System Compatible to SAS as per the Technical Specification							
	400V AC Main Switch Control Panel, Distribution Board Panel, Main Lighting Distribution Board including MCCB, MCB, energy meter, ammeter, voltmeter, cables etc.		Sets	1.00			-	-
2	110V DC Distribution Board and emergency Lighting board including cable and accessories.		Sets	1.00			-	-
3	48V DC Distribution Board including cable and accessories.		Sets	1.00			-	-
B.5	Battery and Battery Charger Compatible to SAS as per the Technical Specification							
1	110V Dual Mode Float cum Boost Charger complete with all accessories.		Sets	1.00			-	-
2	110V 300 AH maintenance free lead acid sealed type battery complete with all accessories.		Sets	1.00			-	-
3	48V Dual Mode Float cum Boost Charger complete with all accessories.		Sets	1.00			-	-
4	48V 200 AH maintenance free lead acid sealed type battery complete with all accessories.		Sets	1.00			-	-
5	Battery Health Monitoring System (BHMS)		LS	1.00			-	-



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FC: USD

Item	Description	Country of Origin	Unit	Quantity	Unit Rate, CIP (Nepal Border)	Unit Rate, Domestic Transportation and Insurance	Total, CIP (Nepal Border)	Total, Domestic Transportation and Insurance
					Foreign Currency	Local Currency	Foreign Currency	Local Currency
1	2	3	4	5	6	7	8 = 5 x 6	9 = 5 x 7
B.6	Visual Monitoring System as per the Technical Specification							
1	Visual Monitoring system for watch & ward of switchyard and control room all complete even from Bagthala S/S.		Lot	1.00			-	-
B.7	Air Conditioning System Compatible to SAS							
1	High wall type split AC unit of 2TR capacities for control room.		Sets	1.00			-	-
2	High wall type split AC unit of 1.5TR capacities for communication, battery and office room.		Sets	3.00			-	-
B.8	Fire Fighting System							
1	50 litre foam type Trolley/Wheel mounted fire Extinguishers		Nos	1.00			-	-
2	4.5 kg CO ₂ type Fire Extiguisher		Nos	8.00			-	-
3	22.5 kg Dry Chemical Power (DCP) type Trolley/Wheel mounted fire extinguishers		Nos	2.00			-	-
4	Fire Detection System in Control Room cum Administrative Building		Sets	1.00			-	-



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		J			Foreign Currency	Local Currency	Foreign Currency	Local Currency
1	2	3	4	5	6	7	8 = 5 x 6	9 = 5 x 7
C.	Tariff Metering			-			-	-
C.1	For Kalanga Hydro Power Station as per the Technical Specification			-			-	-
1	Tariff Metering System (Main and Check Meter) comprising of energy meter of 0.1 accuracy class and the cabinet for second unit of the hydro power station, its accessories in similar with the existing system.		Sets	2.00			-	-
C.2	For 132 kV Transformer Bay as per the Technical Specification							
1	Tariff Metering System (Main and Check Meter) comprising of energy meter of 0.1 accuracy class and the cabinet for 132 kV Transformer Bay, its accessories and integrating system with SAS.		Sets	1.00			-	-



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Schedule No. 1: Plant and Mandatory Spare Parts Supplied from Abroad (Excluding Custom Duty and VAT applicable in Employer's Country)

Item	Description	Country of Origin	Unit	Quantity	Unit Rate, CIP (Nepal Border)	Unit Rate, Domestic Transportation and Insurance	Total, CIP (Nepal Border)	Total, Domestic Transportation and Insurance
					Foreign Currency	Local Currency	Foreign Currency	Local Currency
1	2	3	4	5	6	7	8 = 5 x 6	9 = 5 x 7
D.	Mandatory Spare Parts			-			-	-
D.1	For 132/33 kV Transformers			-			-	-
1	132 kV and 33 kV Bushing (one of each type) with metal parts gaskets and lifting tools.		Sets	1.00			-	-
2	Local and Remote WTI and OTI with sensing device & contact (each type)		Sets	1.00			-	-
3	Oil Level Gauges		Sets	1.00			-	-
4	Insulating Oil (10% of total required)		Lot	1.00			-	-
5	Indicating Lamps (25% of used or 1, whichever is higher)		Lot	1.00			-	-
6	All types of Fuses (25% of used or 1, whichever is higher)		Lot	1.00			-	-
7	Complete set of Gaskets of each type		Sets	1.00			-	-
8	Complete set of Pressure Relief Device		Sets	1.00			-	-
9	All type of Auxiliary, Current, Voltage and Thermal Relays, Contactors and Timers for electrical control, protection and cooling circuit (one of each type)		Lot	1.00			-	-
10	OLTC Motor with Contactor		Sets	1.00			-	-
11	Complete set of Buchholz relay with contacts		Sets	1.00			-	-
12	Cooler Fan with Motor		Nos.	1.00			-	-
13	Remote Tap Position Indicator		Nos.	1.00			-	-
D.2	For 145 kV SF6 Circuit Breaker							
1	Complete set (one chamber) of interrupter.		Sets	1.00			-	-
2	Tripping Coils Assembly with resistor as applicable		Nos.	2.00			-	-



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1	2	3	4	5	6	7	8 = 5 x 6	9 = 5 x 7
3	Closing Coils assembly with resistor as applicable		Nos.	2.00			-	-
1 4	Pressure switch, relays, contactors, push buttons, timers & MCBs etc. (one of each type and rating)		Sets	2.00			-	-
5	Motors for mechanish of each type		Nos.	1.00			-	-
6	SF ₆ gas filling equipment, nozzle & adaptor complete with accessories.		Sets	1.00			-	-
7	Rubber gaskets, 'O' rings and seals for SF ₆ gas (1 No. of each type)		Sets	2.00			-	-
8	Gas in sealed non-returnable bottles		kgs	20.00			-	-
D.3	For 36 kV Vaccum Circuit Breaker							
1	Complete set (one chamber) of Vaccum Interrupter		Sets	1.00			-	-
2	Tripping Coils Assembly with resistor as applicable		Nos.	4.00			-	-
3	Closing Coils assembly with resistor as applicable		Nos.	4.00			-	-
4	Relays and Contactors (one of each type)		Nos.	1.00			-	-
5	Motors for Mechanism of each type		Sets	2.00			-	-
6	Complete set (one chamber) of sealing rings and gaskets		Sets	2.00			-	-
D.4	For 145 kV Disconnecting Switch/Isolators							
1 1	Copper contact fingers for disconnector male & female contact for one complete disconnector.		Sets	1.00			-	-
2	Open / Close contactor assembly, timers, key interlock for one complete disconnector (1 No. of each type and rating).		Sets	1.00			-	-
3	Procelain Insulator		Sets	1.00			-	-



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Schedule No. 1: Plant and Mandatory Spare Parts Supplied from Abroad (Excluding Custom Duty and VAT applicable in Employer's Country)

Item	Description	Country of Origin	Unit	Quantity	Unit Rate, CIP (Nepal Border)	Unit Rate, Domestic Transportation and Insurance	Total, CIP (Nepal Border)	Total, Domestic Transportation and Insurance
					Foreign Currency	Local Currency	Foreign Currency	Local Currency
1	2	3	4	5	6	7	8 = 5 x 6	9 = 5 x 7
4	Main Contact Assembly		Sets	1.00			-	-
5	Auxiliary Contact Assembly		Sets	1.00			-	-
6	Interlocking Coil		Nos.	1.00			-	-
7	Motor for driving mechanism		Nos.	1.00			-	-
8	Contactor for mechanism		Nos.	1.00			-	-
9	Push button switch (1 No. of each type & rating) as applicable		Sets	1.00			-	-
10	Limit switch and Aux. switches (1 No. of each type and rating)		Lot	1.00			-	-
D.5	For 33 kV Disconnecting Switch/Isolators							
1	Complete set of 3-phase disconnector including main circuit with enclosure		Sets	1.00			-	-
2	Complete set of 3-phase earthing including main circuit with enclosure		Sets	1.00			-	-
3	Procelain Insulator		Sets	3.00			-	-
4	Main Contact Assembly		Sets	2.00			-	-
5	Auxiliary Contact Assembly		Sets	2.00			-	-
6	Motor for driving mechanism		Nos.	2.00			-	-
7	Interlocking Coil		Nos.	2.00			-	-
8	Push button switch (1 No. of each type & rating) as applicable		Sets	2.00			-	-
9	Limit switch and Aux. switches (1 No. of each type and rating) for Isolator		Sets	2.00			-	-
10	Limit switch and Aux. switches (1 No. of each type and rating) for earth switch		Nos.	1.00			-	-
D.6	For Instrument Transformers and Surge Arrestor			-			-	-



Name of Tenderer	
Name of Tenderer	

Nepal Electricity Authority

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Schedule of Rates and Prices

Schedule No. 1: Plant and Mandatory Spare Parts Supplied from Abroad (Excluding Custom Duty and VAT applicable in Employer's Country)

ltem	Description	Country of Origin	Unit	Quantity	Unit Rate, CIP (Nepal Border)	Unit Rate, Domestic Transportation and Insurance	Total, CIP (Nepal Border)	Total, Domestic Transportation and Insurance
		-			Foreign Currency	Local Currency	Foreign Currency	Local Currency
1	2	3	4	5	6	7	8 = 5 x 6	9 = 5 x 7
1	145 kV, 50 VA, 5 core (2 core - for protection of Class 5P20, 2 core - for tariff metering of Class 0.2 and 1 core - measurement of Class 0.5), 200-100/1 A, Current Transformer (1-phase) complete with all accessories for 132 kV Transformer Bay.		Nos.	1.00			-	-
2	36 kV, 30 VA, 3 core (2 core - for protection of Class 5P20, 1 core - for measurement of Class 0.5), 400-200/1 A, Current Transformer (1-phase) complete with all accessories for 33 kV Incoming Lines.		Nos.	2.00			-	-
3	36 kV, 30 VA, 2 core (1 core - for protection of Class 5P20, 1 core - for measurement of Class 0.5), 400-200/1 A, Current Transformer (1-phase) complete with all accessories for 33 kV Outgoing Lines.		Nos.	1.00			-	-
4	145 kV, 50 VA, 5 core (2 core - for protection of Class 3P, 2 core - for tariff metering of Class 0.2 and 1 core - for measurement of Class 0.5), 132/V3 /0.110/V3 kV, Capacitive Voltage Transformer (1-phase) complete with all accessories as per the Technical Specification for 132 kV Transformer Bay.		Nos.	1.00			-	-
5	36 kV, 30 VA, 2 core (1 core - for protection of Class 3P, 1 core - for measurement of Class 0.5), $132/\sqrt{3}$ /0.110/ $\sqrt{3}$ kV, Capacitive Voltage Transformer (1-phase) complete with all accessories as per the Technical Specification for 33 kV Bus.		Nos.	1.00			-	-
6	36 kV, 30 VA, 2 core for measurement of Class 3P, 132/V3 /0.110/V3 kV, Capacitive Voltage Transformer (1-phase) complete with all accessories as per the Technical Specification for 33 kV Outgoing Lines to Bagthala S/S.		Nos.	1.00			-	-
7	120 kV, 10 kA Surge Arrestor (1-phase) including Discharge Counter complete with all accessories as per the Technical Specification.		nos.	1.00			-	-
8	30 kV, 10 kA Surge Arrestor (1-phase) including Discharge Counter complete with all accessories as per the Technical Specification.		nos.	3.00			-	-
D.7	For Control & Relay Panels			-			-	-
1	Transformer Protection Panel							



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Schedule of Rates and Prices

Schedule No. 1: Plant and Mandatory Spare Parts Supplied from Abroad (Excluding Custom Duty and VAT applicable in Employer's Country)

Item	Description	Country of Origin	Unit	Quantity	Unit Rate, CIP (Nepal Border)	Unit Rate, Domestic Transportation and Insurance	Total, CIP (Nepal Border)	Total, Domestic Transportation and Insurance
		-			Foreign Currency	Local Currency	Foreign Currency	Local Currency
1	2	3	4	5	6	7	8 = 5 x 6	9 = 5 x 7
1.1	Transformer Differential Protection Relay		Nos	1.00			-	-
1.2	Direction Overcurrent with Earthfault Protection Relay		Nos.	1.00			-	-
1.3	Restricted Earth Fault Protection Relay with Non-linear resistor		Nos.	1.00			-	-
1.4	Breaker failure relay		Nos.	1.00			-	-
1.5	Trip-circuit supervision relay		Nos.	1.00			-	-
1.6	Self reset trip relay (1 nos. of each type)		Set	1.00			-	-
1.7	Hand reset trip relay (1 nos. of each type)		Set	1.00			-	-
1.8	Timer relay (1 nos. of each type)		Set	1.00			-	-
1.9	DC supervision relay (1 nos. of each type)		Set	1.00			-	-
1.10	Flag relay (1 nos. of each type)		Set	1.00			-	-
1.11	Auxiliary relay (1 nos. of each type)		Set	1.00			-	-
1.12	Synchro check relay		Nos.	1.00			-	-
1.13	Indicating lamps (50% of total required)		Lot	1.00			-	-
1.14	Fuses of each type (50% of total required)		Lot	1.00			-	-
1.15	Color caps of each color for indicating lamps (30% of total required)		Lot	1.00			-	-
1.16	Switch, Timer and other special devices (1 nos. of each type)		Lot	1.00			-	-
1.17	Watt meter (1 nos. of each type)		Set	2.00			-	-



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Schedule No. 1: Plant and Mandatory Spare Parts Supplied from Abroad (Excluding Custom Duty and VAT applicable in Employer's Country)

Item	Description Country of Origin Unit Quantity Border	Unit Rate, CIP (Nepal Border)	Unit Rate, Domestic Transportation and Insurance	Total, CIP (Nepal Border)	Total, Domestic Transportation and Insurance			
		J			Foreign Currency	Local Currency	Foreign Currency	Local Currency
1	2	3	4	5	6	7	8 = 5 x 6	9 = 5 x 7
1.18	Energy meter (1 nos. of each type)		Set	2.00			-	-
1.19	MVAR meter (1 nos. of each type)		Set	2.00			-	-
1.20	Frequency meter (1 nos. of each type)		Set	2.00			-	-
1.21	Ammeter (1 nos. of each type)		Set	2.00			-	-
1.22	Voltmeter (1 nos. of each type)		Set	2.00			-	-
2	33 kV Panel							
2.1	3-Phase Overcurrent and Earthfault Protection Relay (1 nos. of each type)		Nos	1.00			-	-
2.2	Breaker failure relay		Nos.	2.00			-	-
2.3	Trip-circuit supervision relay		Nos.	2.00			-	-
2.4	Self reset trip relay (1 nos. of each type)		Set	2.00			-	-
2.5	Hand reset trip relay (1 nos. of each type)		Set	2.00			-	-
2.6	Timer relay (1 nos. of each type)		Set	2.00			-	-
2.7	DC supervision relay (1 nos. of each type)		Set	2.00			-	-
2.8	Flag relay (1 nos. of each type)		Set	2.00			-	-
2.9	Auxiliary relay (1 nos. of each type)		Set	2.00			-	-
2.10	Synchro check relay		Nos.	2.00			-	-
2.11	Indicating lamps (50% of total required)		Lot	1.00			-	-



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Schedule of Rates and Prices

Schedule No. 1: Plant and Mandatory Spare Parts Supplied from Abroad (Excluding Custom Duty and VAT applicable in Employer's Country)

Item	Description	Country of Origin	Unit	Quantity	Unit Rate, CIP (Nepal Border)	Unit Rate, Domestic Transportation and Insurance	Total, CIP (Nepal Border)	Total, Domestic Transportation and Insurance
					Foreign Currency	Local Currency	Foreign Currency	Local Currency
1	2	3	4	5	6	7	8 = 5 x 6	9 = 5 x 7
2.12	Fuses of each type (50% of total required)		Lot	1.00			-	-
2.13	Color caps of each color for indicating lamps (30% of total required)		Lot	1.00			-	-
2.14	Switch, Timer and other special devices (1 nos. of each type)		Lot	1.00			-	-
2.15	Watt meter (1 nos. of each type)		Set	3.00			-	-
2.16	Energy meter (1 nos. of each type)		Set	3.00			-	-
2.17	MVAR meter (1 nos. of each type)		Set	3.00			-	-
2.18	Frequency meter (1 nos. of each type)		Set	3.00			-	-
2.19	Ammeter (1 nos. of each type)		Set	3.00			-	-
2.20	Voltmeter (1 nos. of each type)		Set	3.00			-	-
ואנו	For Substation Automation System (SAS), Teleprotection and Communication Equipments							
1 1 1	SDH Equipment with MPLS - TP facility (STM -4 upto 4 MSP Protected directions as well as 10 G upto 4 MSP Protected directions)							
1.1	Base Equipment (Common cards, Cross Connect/control cards, optical base cards, power supply cards, power cabling, other hardware and accessories including sub racks (Additional Sub Rack if required to accomodate all facilities including SDH and MPLS - TP mentioned above), patch cord, DDF etc. fully equiped excluding (1.2) & (1.3) below for KHPS and Bagthala		Nos	1.00			-	-
1.2	Optical Interface Cards/SFP							
	a. L4.1 SFP (For Integration with SDH Equipment at Bagthala, Bungal and Spare Substation)		Nos	2.00			-	-



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Schedule No. 1: Plant and Mandatory Spare Parts Supplied from Abroad (Excluding Custom Duty and VAT applicable in Employer's Country)

ltem	Description Country of Origin Unit Quantity		Unit Rate, CIP (Nepal Border)	Unit Rate, Domestic Transportation and Insurance	Total, CIP (Nepal Border)	Total, Domestic Transportation and Insurance		
		_			Foreign Currency	Local Currency	Foreign Currency	Local Currency
1	2	3	4	5	6	7	8 = 5 x 6	9 = 5 x 7
	b. 10 G SFP (For Integration with FOX615 Equipment at MCC and LDC)		Nos	1.00			-	-
1.3	Tributary Cards							
	a. E1 Interface card (Min. 8 Interfaces per card)		Set	2.00			-	-
	b. Fast-Ethernet Interface 10/100 Mbps Base T with Layer-2 switching (Min. 8 Interfaces per card)		Nos.	2.00			-	-
2	VOIP Telephone instrument with one common POE+ switch (min. 8 port)		Set	1.00			-	-
D.9	For Networking and Visual Monitoring System							
1	Dual Band Router, Wi-Fo 6 / IEEE 802.11ac compatible		Nos.	2.00			-	-
2	Wireless Access Points		Nos.	2.00			-	-
3	Video Camera of each type (50% of total used)		Set	1.00			-	-
4	NVR/DVR with storage as per the Technical Specification		Nos.	1.00			-	-
D.10	For Auxiliary Power Supply System (ACDB and DCDB)							
1	All type of meter viz. Energy meter, voltmeter, Ammeter, etc. (1 nos. of each type)		Set	1.00			-	-
2	MCCB (1 nos. of each type)		Set	1.00			-	-
3	MCB and ELCB (10% of total used for each type)		Set	1.00			-	-
D.11	For Battery and Battery Charger							
1	110 V Battery Charger							
1.1	Set of control cards		Set	1.00			-	-
1.2	Set of relays		Set	1.00			-	-



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Schedule No. 1: Plant and Mandatory Spare Parts Supplied from Abroad (Excluding Custom Duty and VAT applicable in Employer's Country)

ltem	Description	Country of Origin	Unit	Quantity	Unit Rate, CIP (Nepal Border)	Unit Rate, Domestic Transportation and Insurance	Total, CIP (Nepal Border)	Total, Domestic Transportation and Insurance	
		_			Foreign Currency	Local Currency	Foreign Currency	Local Currency	
1	2	3	4	5	6	7	8 = 5 x 6	9 = 5 x 7	
1.3	Rectifier transformer		Nos.	1.00			-	-	
1.4	Thyristor / Diode		Set	1.00			-	-	
1.5	Fuses of Thyristor with indicators		Set	1.00			-	-	
1.6	Fuses of each type (50% of total used)		Lot	1.00			-	-	
1.7	Indicating Lamp (50% of total used)		Lot	1.00			-	-	
1.8	Ammeter of each type		Set	1.00			-	-	
1.9	Voltmeter of each type		Set	1.00			-	-	
2	48 V Battery Charger								
2.1	Set of control cards		Set	1.00			-	-	
2.2	Set of relays		Set	1.00			-	-	
2.3	Rectifier transformer		Nos.	1.00			-	-	
2.4	Thyristor / Diode		Set	1.00			-	-	
2.5	Fuses of Thyristor with indicators		Set	1.00			-	-	
2.6	Fuses of each type (50% of total used)		Lot	1.00			-	-	
2.7	Indicating Lamp (50% of total used)		Lot	1.00			-	-	
2.8	Ammeter of each type		Set	1.00			-	-	
2.9	Voltmeter of each type		Set	1.00			-	-	
D.12	For Erection Hardware and 33 kV Power Cables								



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Schedule of Rates and Prices

Schedule No. 1: Plant and Mandatory Spare Parts Supplied from Abroad (Excluding Custom Duty and VAT applicable in Employer's Country)

FC: USD

ltem	Description	Country of Origin	Unit	Quantity	Unit Rate, CIP (Nepal Border)	Unit Rate, Domestic Transportation and Insurance	Total, CIP (Nepal Border)	Total, Domestic Transportation and Insurance
					Foreign Currency	Local Currency	Foreign Currency	Local Currency
1	2	3	4	5	6	7	8 = 5 x 6	9 = 5 x 7
1	3% spares of the actual quantities for insulator strings & hardwares, clamps and connectors (including equipment connectors), spacers, corona bell and welding sleeves		Lot	1.00			-	-
2	33 kV XLPE Cable Termination Kit including all accessories complete		Set	2.00			-	-
D.13	For Tariff Metering							
1	One set of Tariff meter		Set	1.00			-	-



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Distribution System Upgrade and Expansion Project

Schedule of Rates and Prices

Summary of Schedule No. 2: Plant and Mandatory Spare Parts Supplied Within the Employer's Country (Excluding VAT applicable in Employer's Country)

Currency

Schedule No.	Title	Total Price				
Scriedule No.	Title	Foreign Currency	Local Currency			
A.	Switchyard	-	-			
В.	Control Room	-	-			
C.	Tariff Metering	-	-			
D.	Mandatory Spare Parts	-	-			
	Grand Total to be carried forward to Schedule 5	-	-			



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Schedule of Rates and Prices

Schedule No. 2: Plant and Mandatory Spare Parts Supplied from Within the Employer's Country (Excluding VAT applicable in Employer's Country)

						Currency	NPR (Local)	NPR (Local)
Item	Description	Unit	Quantity	Unit Rate Ex-works	Unit Rate, Domestic Transportation and Insurance	Total Ex-works	Total, Domestic Transportation and Insurance	Total Price
1	2	3	4	5	6	7 = 4 x 5	8 = 4 × 6	9 = 7 + 8
A.	Switchyard							
A.1	Transformers compatible to SAS as per the Technical Specification							
1	132/33 kV, 3-phase, 12.5/15 MVA, ONAN/ONAF Power Transformer complete with On Load Tap Changer (OLTC) & RTCC facility, and Bushing CT on both sides complete with all accessories.		1.00			-	-	
2	100 kVA, 33/0.4 kV, 3-phase, ONAN, Off load Tap Changer, Station Transformer with current limiting fuse and all accessories.	nos.	1.00			-	-	
A.2	Circuit Breakers compatible to SAS with Support Structures as per the Technical Specification							
1	145 kV, 1250A, 3-phase $\rm SF_6$ Circuit Breaker (three pole operation type) complete with all accessories and suppot structures for 132/33 kV Power Transformers.	Sets	1.00			-	-	
2	36 kV, 1250 A, 3 phase, Vaccum Circuit Breaker (three pole operation type) complete with all accessories and support structures for Incoming Lines.	Sets	1.00			-	-	
3	36 kV, 800 A, 3 phase, Vaccum Circuit Breaker (three pole operation type) complete with all accessories and support structures for 3 Outgoing Lines.	Sets	3.00			-	-	
A.3	Disconnecting Switch/Isolators compatible to SAS as per the Technical Specification.							
1	145 kV, 1250 A, 3 phase, Double Break Disconnecting Switch (without Earth Switch) complete with all accessories.	Sets	1.00			-	-	
2	36 kV, 1250 A, 3 phase, Double Break Disconnecting Switch (without Earth Switch) complete with all accessories for 33 kV Incoming Lines.	Sets	1.00			-	-	
3	36 kV, 800 A, 3 phase, Double Break Disconnecting Switch (without Earth Switch) complete with all accessories for 33 kV Outgoing Lines.	Sets	3.00			-	-	
4	36 kV, 800 A, 3 phase, Double Break Disconnecting Switch (with Earth Switch) complete with all accessories for 33 kV Outgoing Lines.	Sets	3.00			-	-	



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Signature of Tenderer_

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Schedule of Rates and Prices

Schedule No. 2: Plant and Mandatory Spare Parts Supplied from Within the Employer's Country (Excluding VAT applicable in Employer's Country)

						Currency	NPR (Local)	NPR (Local)
Item	Description	Unit	Quantity	Unit Rate Ex-works	Unit Rate, Domestic Transportation and Insurance	Total Ex-works	Total, Domestic Transportation and Insurance	Total Price
1	2	3	4	5	6	7 = 4 x 5	8 = 4 x 6	9 = 7 + 8
5	36 kV, 400 A, 3 phase, Double Break Disconnecting Switch (without Earth Switch) complete with all accessories for Station Transformer.	Sets	1.00			-	-	
A.4	Current Transformers as per the Technical Specification							
1	145 kV, 50 VA, 5 core (2 core - for protection of Class 5P20, 2 core - for tariff metering of Class 0.2 and 1 core - measurement of Class 0.5), 200-100/1 A, Current Transformer (1-phase) complete with all accessories for 132 kV Transformer Bay.		3.00			-	-	
2	36 kV, 30 VA, 3 core (2 core - for protection of Class 5P20, 1 core - for measurement of Class 0.5), 600-400-200/1 A, Current Transformer (1-phase) complete with all accessories for 33 kV Incoming Lines.		3.00			-	-	
3	36 kV, 30 VA, 2 core (1 core - for protection of Class 5P20, 1 core - for measurement of Class 0.5), 400-200-100/1 A, Current Transformer (1-phase) complete with all accessories for 33 kV Outgoing Lines.		9.00			-	-	
A.5	Capacitive Voltage Transformer as per the Technical Specification							
1	145 kV, 50 VA, 5 core (2 core - for protection of Class 3P, 2 core - for tariff metering of Class 0.2 and 1 core - for measurement of Class 0.5), 132/V3 /0.110/V3 kV, Capacitive Voltage Transformer (1-phase) complete with all accessories as per the Technical Specification for 132 kV Transformer Bay.		3.00			-	-	
2	36 kV, $30 VA$, $2 core (1 core - for protection of Class 3P, 1 core - for measurement of Class 0.5), 33/V3 /0.110/V3 kV, Capacitive Voltage Transformer (1-phase) complete with all accessories as per the Technical Specification for 33 kV Bus and three outgoing lines.$	nos	12.00			-	-	



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Schedule of Rates and Prices

Schedule No. 2: Plant and Mandatory Spare Parts Supplied from Within the Employer's Country (Excluding VAT applicable in Employer's Country)

Name Pecipision Pecipisis Pecipision Pecipisis							Currency	NPR (Local)	NPR (Local)
As Surge Arrestor as per the Technical Specification 1 120 kV, 10 kA Surge Arrestor (1-phase) including Discharge Counter complete with all accessories as per the Technical Specification. 2 30 kV, 10 kA Surge Arrestor (1-phase) including Discharge Counter complete with all accessories as per the Technical Specification. A7 Cables along with clamps, glands, lugs and straight joints etc. for switchyard and control room as per the Technical Specification. A8 6 VA, 400 sq. mm, single core, XLPE Copper Power Cable including necessary accessories and termination kit as per the technical specification complete from LV Box of Power Transformer to the Bay. 2 Low Voltage Power Cables (PVC), 1.1 kV grade along with accessories. 3 Control Cable (PVC), 1.1 kV grade along with accessories. 4 Lot 1.00 5 Control Cable (PVC), 1.1 kV grade along with accessories. 4 Lot 1.00 6 Lot 1.00 7 Cables along with accessories and termination kit as per the technical specification complete from LV Brown Transformer and Miscellaneous Materials (insulators, necessary hardware, clamps, connectors, etc.) as per the Technical Specification and approved drawings 1 Lot 1.00 1 Lov 1.1 kV grade along with accessories. 1 Lot 1.00 2 Lov Voltage Power Cables (PVC), 1.1 kV grade along with accessories. 3 Lot 1.00 4 Lov Voltage Power Cables (PVC) and the Cable	Item	Description	Unit	Quantity		Transportation and		Transportation and	Total Price
1 10 kV, 10 kA Surge Arrestor (1-phase) including Discharge Counter complete with all accessories as per the Technical Specification. 2 30 kV, 10 kA Surge Arrestor (1-phase) including Discharge Counter complete with all accessories as per the Technical Specification. A.7 Cables along with clamps, glands, lugs and straight joints etc. for switchyard and control room as per the Technical Specification. 3 6k kV, 400 sq. mm, single core, XVPE Copper Power Cable including necessary accessories and termination kit as per the technical specification complete from tV Box of Power Transformer to the Bay. 2 Low Voltage Power Cables (PVC), 1.1 kV grade along with accessories. Lot 1.00 3 Control Cable (PVC), 1.1 kV grade along with accessories. Lot 1.00 4 Control Cable (PVC), 1.1 kV grade along with accessories. Lot 1.00 5 Control Cable (PVC), 1.1 kV grade along with accessories. Lot 1.00 6 Trection Hardware and Miscellaneous Materials (insulators, necessary hardware, clamps, connectors, etc.) as per the Technical Specification and approved drawings 1 132 kV Busbar Extension 5 Sets 1.00 7 Control Cable (PVC) 1.1 kV grade along with accessories. 1 1.00 8 Control Cable (PVC), 1.1 kV grade along with accessories. 1 1.00 8 Control Cable (PVC), 1.1 kV grade along with accessories. 2 Lot 1.00 8 Control Cable (PVC), 1.1 kV grade along with accessories. 3 3 kV Busbar Sets 1.00 9 Control Cable (PVC), 1.1 kV grade along with accessories. 1 1.00 1 Control Cable (PVC), 1.1 kV grade along with accessories. 2 Control Cable (PVC), 1.1 kV grade along with accessories. 3 1.00 1 Control Cable (PVC), 1.1 kV grade along with accessories. 3 1.00 1 Control Cable (PVC), 1.1 kV grade along with accessories. 4 1.00 1 Control Cable (PVC), 1.1 kV grade along with accessories. 5 1.00 1 Control Cable (PVC), 1.1 kV grade along with accessories. 6 1.00 1 Control Cable (PVC), 1.1 kV grade along with accessories. 8 Lot 1.00 1 Control Cable (PVC), 1.1 kV grade along with accessories. 8 Lot 1.00 1 Control Cable (PVC), 1.1 kV grade along with a	1	2	3	4	5	6	7 = 4 x 5	8 = 4 x 6	9 = 7 + 8
accessories as per the Technical Specification. 2	A.6	Surge Arrestor as per the Technical Specification							
accessories as per the Technical Specification. A.7 Cables along with clamps, glands, lugs and straight joints etc. for switchyard and control room as per the Technical Specification. 36 kV, 400 sq. mm, single core, XLPE Copper Power Cable including necessary accessories and termination kit as per the technical specification complete from LV Box of Power Transformer to the Bay. 2 Low Voltage Power Cables (PVC), 1.1 kV grade along with accessories. 4 Lot 1.00 5 Control Cable (PVC), 1.1 kV grade along with accessories. 6 Lot 1.00 6 Lot 1.00 7 Control Cable (PVC), 1.1 kV grade along with accessories. 8 Lot 1.00 8 Erection Hardware and Miscellaneous Materials (insulators, necessary hardware, clamps, connectors, etc.) as per the Technical Specification and approved drawings 1 132 kV Busbar Extension 1 2 132 kV Transformer Bay 1 33 kV Incomer Bay 1 33 kV Incomer Bay 2 Sets 1.00 3 33 kV Incomer Bay 3 34 kV Outgoing Line Bay 5 Sets 1.00 5 33 kV Busbar 5 Sets 1.00 6 33 kV take off gantry 7 33/0.4 kV Station Transformer including Autorecloser, Surge Arrestor etc. all complete 1 Lot 1.00 1 Lot 1.00 3 33/0.4 kV Station Transformer including Autorecloser, Surge Arrestor etc. all complete 1 Lot 1.00 1 Lot 1.00 1 Lot 1.00 2 Lot 1.00 3 3/0.4 kV Station Transformer including Autorecloser, Surge Arrestor etc. all complete	1		nos.	3.00			-	-	
control room as per the Technical Specification. 1 36 kV, 400 sq. mm, single core, XLPE Copper Power Cable including necessary accessories and termination kit as per the technical specification complete from LV Box of Power Transformer to the Bay. 2 Low Voltage Power Cables (PVC), 1.1 kV grade along with accessories. 3 Control Cable (PVC), 1.1 kV grade along with accessories. 4 Lot 1.00	2		nos.	12.00			-	-	
accessories and termination kit as per the technical specification complete from LV Box of Power Transformer to the Bay. Low Voltage Power Cables (PVC), 1.1 kV grade along with accessories. Lot 1.00 Control Cable (PVC), 1.1 kV grade along with accessories. Lot 1.00	A.7	control room as per the Technical Specification.							
3 Control Cable (PVC), 1.1 kV grade along with accessories. Lot 1.00	1	accessories and termination kit as per the technical specification complete from LV		75.00			-	-	
A.8 Erection Hardware and Miscellaneous Materials (insulators, necessary hardware, clamps, connectors, etc.) as per the Technical Specification and approved drawings 1 132 kV Busbar Extension	2	Low Voltage Power Cables (PVC), 1.1 kV grade along with accessories.	Lot	1.00			-	-	
A.8 clamps, connectors, etc.) as per the Technical Specification and approved drawings Sets 1.00 - - 1 132 kV Busbar Extension Sets 1.00 - - - 2 132 kV Transformer Bay Sets 1.00 - - - 3 33 kV Incomer Bay Sets 1.00 - - - 4 33 kV Outgoing Line Bay Sets 3.00 - - - 5 33 kV Busbar Sets 1.00 - - - 6 33 kV take off gantry Lot 1.00 - - - 7 33/0.4 kV Station Transformer including Autorecloser, Surge Arrestor etc. all complete Lot 1.00 - - -	3	Control Cable (PVC), 1.1 kV grade along with accessories.	Lot	1.00			-	-	
2 132 kV Transformer Bay Sets 1.00 - - - 3 33 kV Incomer Bay Sets 1.00 - - - 4 33 kV Outgoing Line Bay Sets 3.00 - - - 5 33 kV Busbar Sets 1.00 - - - 6 33 kV take off gantry Lot 1.00 - - - 7 33/0.4 kV Station Transformer including Autorecloser, Surge Arrestor etc. all complete Lot 1.00 - - -	A.8								
3 33 kV Incomer Bay Sets 1.00 - - - 4 33 kV Outgoing Line Bay Sets 3.00 - - - 5 33 kV Busbar Sets 1.00 - - - 6 33 kV take off gantry Lot 1.00 - - - 7 33/0.4 kV Station Transformer including Autorecloser, Surge Arrestor etc. all complete Lot 1.00 - - -	1	132 kV Busbar Extension	Sets	1.00			-	-	
4 33 kV Outgoing Line Bay Sets 3.00 - - - 5 33 kV Busbar Sets 1.00 - - - 6 33 kV take off gantry Lot 1.00 - - - 7 33/0.4 kV Station Transformer including Autorecloser, Surge Arrestor etc. all complete Lot 1.00 - - -	2	132 kV Transformer Bay	Sets	1.00			-	-	
5 33 kV Busbar Sets 1.00 - - - 6 33 kV take off gantry Lot 1.00 - - - 7 33/0.4 kV Station Transformer including Autorecloser, Surge Arrestor etc. all complete Lot 1.00 - - -	3	33 kV Incomer Bay	Sets	1.00			-	-	
6 33 kV take off gantry Lot 1.00	4	33 kV Outgoing Line Bay	Sets	3.00			-	-	
7 33/0.4 kV Station Transformer including Autorecloser, Surge Arrestor etc. all complete Lot 1.00	5	33 kV Busbar	Sets	1.00			-	-	
	6	33 kV take off gantry	Lot	1.00			-	-	
A.9 Steel Structure as per the Technical Specification	7	33/0.4 kV Station Transformer including Autorecloser, Surge Arrestor etc. all complete	Lot	1.00			-	-	
	A.9	Steel Structure as per the Technical Specification							



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1	Galvanized steel structure in hot rolled standard sections for all sub-station, gantry tower, Surge masts etc. required for the switch yards complete with all accessories and resembling the structure of the existing sub-station.	Ton	7.00			-	-	
2	Pipe structure for supporting all equipment of 132kV and 33 kV system.	Metric Ton	2.50			-	-	
3	Checker plate covering of indoor/outdoor cable trench and grating (galvanized), anchor-bolts and all other accessories required to complete the sub-station work as specified.	Metric Ton	0.50			-	-	
A.10	Illumination System							
1	Lighting system for switchyard, internal roads, Control Room Building and its periphery.	Lot	1.00			-	-	
2	Emergency DC lighting system with necessary accessories all complete for control room.	Lot	1.00			-	-	
A.11	Earthing Material as per the Technical Specification							
1	Galvanized E.H.S steel wires of size 7/3.35 for Surge shield wire in take off and internal structures with accessories to complete the works.	Lot	1.00			-	-	
2	Surge Protection System with Surge mast, complete earthing of substation including switchyard, control building with copper conductor, electrodes, grounding material complete with all accessories.	l	1.00			-	-	



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В.	Control Room							
B.1	Control & Relay Panels Compatible to Substation Automation System (SAS) as per the Technical Specification							
1	132/33 kV Power Transformer Control & Protection Panel complete set for HV and LV side with all accessories for 132/33 kV Transformer Bay.	nos.	1.00			-	-	
2	33kV Line Control & Protection Panel complete with all accessories for 33 kV Outgoing Lines.	nos.	3.00			-	-	
3	Time Synchronization Equipment as per specification pertaining to C&R System.	nos.	1.00			-	-	
B.2	Substation Automation System (SAS) based on latest revision of IEC 61850							
1	Complete substation automation system as required for Unmanned's substation including hardware and software for the substation.	Lot	1.00			-	-	
2	Substation automation system as required for remote control station (Bajhang DC) alongwith contol and monitoring of assiciated equipment for 132 kV System, 33 kV system and auxiliary system all complete.		1.00			-	-	
3	Equipment required for Integration of SAS with NEA's existing Master Control Centre (MCC) in coordination with NEA at Attariya Regional Office for its remote operation from Attariya alongwith Controlling and Monitoring of associated equipments for 132 kV system, 33 kV system and auxiliary system.	Lot	1.00			-	-	



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1	2	3	4	5	6	7 = 4 x 5	8 = 4 x 6	9 = 7 + 8
B.3	Teleprotection and Communication Equipments as per the Technical Specification and Drawings							
1	SDH Equipment with MPLS - TP facility (STM -4 upto 4 MSP Protected directions as well as 10 G upto 4 MSP Protected directions)							
1.1	Base Equipment (Common cards, Cross Connect/control cards, optical base cards, power supply cards, power cabling, other hardware and accessories including sub racks (Additional Sub Rack if required to accomodate all facilities including SDH and MPLS - TP mentioned above), patch cord, DDF etc. fully equiped excluding (1.2) & (1.3) below for KHPS and Bagthala	Nos	2.00			-	-	
1.2	Optical Interface Cards/SFP							
	a. L4.1 SFP (For Integration with SDH Equipment at Bagthala, Bungal and Spare Substation)	Nos	6.00			-	-	
	b. 10 G SFP(For Integration with FOX615 Equipment at MCC and LDC)	Nos	2.00			-	-	
1.3	Tributary Cards							
	a. E1 Interface card (Min. 8 Interfaces per card)	Set	4.00			-	-	
	b. Fast-Ethernet Interface 10/100 Mbps Base T with Layer-2 switching (Min. 8 Interfaces per card)	Nos.	4.00			-	-	
2	Optical Distribution Frames/Equipment Cabinet complete in all respect.	Nos.	2.00			-	-	
3	Optical Approach cable - 24 pair fibre (DWSM-G.652D) alongwith installation hardware set complete in all respects.	Lot	1.00			-	-	
4	Optical ADSS Cable, support hardwares for SAS for data transfer to Bagthala Substation (Bajhang DC)	km	4.00			-	-	
5	VOIP Telephone instrument with one common POE+ switch (min. 8 port)	Nos	2.00			-	-	
B.4	Auxiliary Power Supply System Compatible to SAS as per the Technical Specification							



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1	2	3	4	5	6	7 = 4 x 5	8 = 4 x 6	9 = 7 + 8
1	400V AC Main Switch Control Panel, Distribution Board Panel, Main Lighting Distribution Board including MCCB, MCB, energy meter, ammeter, voltmeter, cables etc.		1.00			-	-	
2	110V DC Distribution Board and emergency Lighting board including cable and accessories.	Sets	1.00			-	-	
3	48V DC Distribution Board including cable and accessories.	Sets	1.00			-	-	
B.5	Battery and Battery Charger Compatible to SAS as per the Technical Specification							
1	110V Dual Mode Float cum Boost Charger complete with all accessories.	Sets	1.00			-	-	
2	110V 300 AH maintenance free lead acid sealed type battery complete with all accessories.	Sets	1.00			-	-	
3	48V Dual Mode Float cum Boost Charger complete with all accessories.	Sets	1.00			-	-	
4	48V 200 AH maintenance free lead acid sealed type battery complete with all accessories.	Sets	1.00			-	-	
5	Battery Health Monitoring System (BHMS)	LS	1.00			-	-	



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ltem	Description	Unit	Quantity	Unit Rate Ex-works	Unit Rate, Domestic Transportation and Insurance	Total Ex-works	Total, Domestic Transportation and Insurance	Total Price
1	2	3	4	5	6	7 = 4 x 5	8 = 4 x 6	9 = 7 + 8
B.6	Visual Monitoring System as per the Technical Specification							
1	Visual Monitoring system for watch & ward of switchyard and control room all complete even from Bagthala S/S.	Lot	1.00			-	-	
B.7	Air Conditioning System Compatible to SAS							
1	High wall type split AC unit of 2TR capacities for control room.	Sets	1.00			-	-	
2	High wall type split AC unit of 1.5TR capacities for communication, battery and office room.	Sets	3.00			-	-	
B.8	Fire Fighting System							
1	50 litre foam type Trolley/Wheel mounted fire Extinguishers	Nos	1.00			-	-	
2	4.5 kg CO ₂ type Fire Extiguisher	Nos	8.00			-	-	
3	22.5 kg Dry Chemical Power (DCP) type Trolley/Wheel mounted fire extinguishers	Nos	2.00			-	-	
4	Fire Detection System in Control Room cum Administrative Building	Sets	1.00			-	-	



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1	1 2		4	5	6	7 = 4 x 5	8 = 4 x 6	9 = 7 + 8
C.	Tariff Metering		-			-	-	
C.1	For Kalanga Hydro Power Station as per the Technical Specification		-			-	-	
1	Tariff Metering System (Main and Check Meter) comprising of energy meter of 0.1 accuracy class and the cabinet for second unit of the hydro power station, its accessories in similar with the existing system.		2.00			-	-	
C.2	For 132 kV Transformer Bay as per the Technical Specification							
1	Tariff Metering System (Main and Check Meter) comprising of energy meter of 0.1 accuracy class and the cabinet for 132 kV Transformer Bay, its accessories and integrating system with SAS.		1.00			-	-	



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1	2	3	4	5	6	7 = 4 x 5	8 = 4 x 6	9 = 7 + 8
D.	Mandatory Spare Parts		-			-	-	
D.1	For 132/33 kV Transformers		-			-	-	
1	132 kV and 33 kV Bushing (one of each type) with metal parts gaskets and lifting tools.	Sets	1.00			-	-	
2	Local and Remote WTI and OTI with sensing device & contact (each type)	Sets	1.00			-	-	
3	Oil Level Gauges	Sets	1.00			-	-	
4	Insulating Oil (10% of total required)	Lot	1.00			-	-	
5	Indicating Lamps (25% of used or 1, whichever is higher)	Lot	1.00			-	-	
6	All types of Fuses (25% of used or 1, whichever is higher)	Lot	1.00			-	-	
7	Complete set of Gaskets of each type	Sets	1.00			-	-	
8	Complete set of Pressure Relief Device	Sets	1.00			-	-	
9	All type of Auxiliary, Current, Voltage and Thermal Relays, Contactors and Timers for electrical control, protection and cooling circuit (one of each type)	Lot	1.00			-	-	
10	OLTC Motor with Contactor	Sets	1.00			-	-	
11	Complete set of Buchholz relay with contacts	Sets	1.00			-	-	
12	Cooler Fan with Motor	Nos.	1.00			-	-	
13	Remote Tap Position Indicator	Nos.	1.00			-	-	
D.2	For 145 kV SF6 Circuit Breaker							
1	Complete set (one chamber) of interrupter.	Sets	1.00			-	-	
2	Tripping Coils Assembly with resistor as applicable	Nos.	2.00			-	-	
3	Closing Coils assembly with resistor as applicable	Nos.	2.00			-	-	



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1	2	3	4	5	6	7 = 4 x 5	8 = 4 x 6	9 = 7 + 8
4	Pressure switch, relays, contactors, push buttons, timers & MCBs etc. (one of each type and rating)	Sets	2.00			-	-	
5	Motors for mechanish of each type	Nos.	1.00			-	-	
6	SF ₆ gas filling equipment, nozzle & adaptor complete with accessories.	Sets	1.00			-	-	
7	Rubber gaskets, 'O' rings and seals for SF ₆ gas (1 No. of each type)	Sets	2.00			-	-	
8	Gas in sealed non-returnable bottles	kgs	20.00			-	-	
D.3	For 36 kV Vaccum Circuit Breaker							
1	Complete set (one chamber)of Vaccum Interrupter	Sets	1.00			-	-	
2	Tripping Coils Assembly with resistor as applicable	Nos.	4.00			-	-	
3	Closing Coils assembly with resistor as applicable	Nos.	4.00			-	-	
4	Relays and Contactors (one of each type)	Nos.	1.00			-	-	
5	Motors for Mechanism of each type	Sets	2.00			-	-	
6	Complete set (one chamber) of sealing rings and gaskets	Sets	2.00			-	-	
D.4	For 145 kV Disconnecting Switch/Isolators							
1	Copper contact fingers for disconnector male & female contact for one complete disconnector.	Sets	1.00			-	-	
2	Open / Close contactor assembly, timers, key interlock for one complete disconnector (1 No. of each type and rating).	Sets	1.00			-	-	
3	Procelain Insulator	Sets	1.00			-	-	
4	Main Contact Assembly	Sets	1.00			-	-	
5	Auxiliary Contact Assembly	Sets	1.00			-	-	
6	Interlocking Coil	Nos.	1.00			-	-	



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1	2	3	4	5	6	7 = 4 x 5	8 = 4 x 6	9 = 7 + 8
7	Motor for driving mechanism	Nos.	1.00			-	-	
8	Contactor for mechanism	Nos.	1.00			-	-	
9	Push button switch (1 No. of each type & rating) as applicable	Sets	1.00			-	-	
10	Limit switch and Aux. switches (1 No. of each type and rating)	Lot	1.00			-	-	
D.5	For 33 kV Disconnecting Switch/Isolators							
1	Complete set of 3-phase disconnector including main circuit with enclosure	Sets	1.00			-	-	
2	Complete set of 3-phase earthing including main circuit with enclosure	Sets	1.00			-	-	
3	Procelain Insulator	Sets	3.00			-	-	
4	Main Contact Assembly	Sets	2.00			-	-	
5	Auxiliary Contact Assembly	Sets	2.00			-	-	
6	Motor for driving mechanism	Nos.	2.00			-	-	
7	Interlocking Coil	Nos.	2.00			-	-	
8	Push button switch (1 No. of each type & rating) as applicable	Sets	2.00			-	-	
9	Limit switch and Aux. switches (1 No. of each type and rating) for Isolator	Sets	2.00			-	-	
10	Limit switch and Aux. switches (1 No. of each type and rating) for earth switch	Nos.	1.00			-	-	
D.6	For Instrument Transformers and Surge Arrestor		-			-	-	
1	145 kV, 50 VA, 5 core (2 core - for protection of Class 5P20, 2 core - for tariff metering of Class 0.2 and 1 core - measurement of Class 0.5), 200-100/1 A, Current Transformer (1-phase) complete with all accessories for 132 kV Transformer Bay.		1.00			-	-	
2	36 kV, 30 VA, 3 core (2 core - for protection of Class 5P20, 1 core - for measurement of Class 0.5), 400-200/1 A, Current Transformer (1-phase) complete with all accessories for 33 kV Incoming Lines.		2.00			-	-	



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3	36 kV, 30 VA, 2 core (1 core - for protection of Class 5P20, 1 core - for measurement of Class 0.5), 400-200/1 A, Current Transformer (1-phase) complete with all accessories for 33 kV Outgoing Lines.	l	1.00			-	-	
4	145 kV, 50 VA, 5 core (2 core - for protection of Class 3P, 2 core - for tariff metering of Class 0.2 and 1 core - for measurement of Class 0.5), $132/V3/0.110/V3/0.00/0.110/V3/0.110/V3/0.110/V3/0.00/0.110/V3/0.00/0.110/V3/0.00/0.00/0.00/0.00/0.$	l .	1.00			-	-	
5	36 kV, 30 VA, 2 core (1 core - for protection of Class 3P, 1 core - for measurement of Class 0.5), $132/\sqrt{3}$ /0.110/ $\sqrt{3}$ kV, Capacitive Voltage Transformer (1-phase) complete with all accessories as per the Technical Specification for 33 kV Bus.	l .	1.00			-	-	
6	36 kV, 30 VA, 2 core for measurement of Class 3P, $132/V3/0.110/V3$ kV, Capacitive Voltage Transformer (1-phase) complete with all accessories as per the Technical Specification for 33 kV Outgoing Lines to Bagthala S/S.	Nos.	1.00			-	-	
7	120 kV, 10 kA Surge Arrestor (1-phase) including Discharge Counter complete with all accessories as per the Technical Specification.	nos.	1.00			-	-	
8	30 kV, 10 kA Surge Arrestor (1-phase) including Discharge Counter complete with all accessories as per the Technical Specification.	nos.	3.00			-	-	
D.7	For Control & Relay Panels		-			-	-	
1	Transformer Protection Panel							
1.1	Transformer Differential Protection Relay	Nos	1.00			-	-	
1.2	Direction Overcurrent with Earthfault Protection Relay	Nos.	1.00			-	-	
1.3	Restricted Earth Fault Protection Relay with Non-linear resistor	Nos.	1.00			-	-	
1.4	Breaker failure relay	Nos.	1.00			-	-	
1.5	Trip-circuit supervision relay	Nos.	1.00			-	-	
1.6	Self reset trip relay (1 nos. of each type)	Set	1.00			-	-	



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1	2	3	4	5	6	7 = 4 x 5	8 = 4 x 6	9 = 7 + 8
1.7	Hand reset trip relay (1 nos. of each type)	Set	1.00			-	-	
1.8	Timer relay (1 nos. of each type)	Set	1.00			-	-	
1.9	DC supervision relay (1 nos. of each type)	Set	1.00			-	-	
1.10	Flag relay (1 nos. of each type)	Set	1.00			-	-	
1.11	Auxiliary relay (1 nos. of each type)	Set	1.00			-	-	
1.12	Synchro check relay	Nos.	1.00			-	-	
1.13	Indicating lamps (50% of total required)	Lot	1.00			-	-	
1.14	Fuses of each type (50% of total required)	Lot	1.00			-	-	
1.15	Color caps of each color for indicating lamps (30% of total required)	Lot	1.00			-	-	
1.16	Switch, Timer and other special devices (1 nos. of each type)	Lot	1.00			-	-	
1.17	Watt meter (1 nos. of each type)	Set	2.00			-	-	
1.18	Energy meter (1 nos. of each type)	Set	2.00			-	-	
1.19	MVAR meter (1 nos. of each type)	Set	2.00			-	-	
1.20	Frequency meter (1 nos. of each type)	Set	2.00			-	-	
1.21	Ammeter (1 nos. of each type)	Set	2.00			-	-	
1.22	Voltmeter (1 nos. of each type)	Set	2.00			-	-	
2	33 kV Panel							
2.1	3-Phase Overcurrent and Earthfault Protection Relay (1 nos. of each type)	Nos	1.00			-	-	
2.2	Breaker failure relay	Nos.	2.00			-	-	



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Distribution and Consumer Services Directorate

Distribution System Upgrade and Expansion Project

Schedule of Rates and Prices

Schedule No. 2: Plant and Mandatory Spare Parts Supplied from Within the Employer's Country (Excluding VAT applicable in Employer's Country)

						Currency	NPR (Local)	NPR (Local)
item	Description	Unit	Quantity	Unit Rate Ex-works	Unit Rate, Domestic Transportation and Insurance	Total Ex-works	Total, Domestic Transportation and Insurance	Total Price
1	2	3	4	5	6	7 = 4 x 5	8 = 4 x 6	9 = 7 + 8
2.3	Trip-circuit supervision relay	Nos.	2.00			-	-	
2.4	Self reset trip relay (1 nos. of each type)	Set	2.00			-	-	
2.5	Hand reset trip relay (1 nos. of each type)	Set	2.00			-	-	
2.6	Timer relay (1 nos. of each type)	Set	2.00			-	-	
2.7	DC supervision relay (1 nos. of each type)	Set	2.00			-	-	
2.8	Flag relay (1 nos. of each type)	Set	2.00			-	-	
2.9	Auxiliary relay (1 nos. of each type)	Set	2.00			-	-	
2.10	Synchro check relay	Nos.	2.00			-	-	
2.11	Indicating lamps (50% of total required)	Lot	1.00			-	-	
2.12	Fuses of each type (50% of total required)	Lot	1.00			-	-	
2.13	Color caps of each color for indicating lamps (30% of total required)	Lot	1.00			-	-	
2.14	Switch, Timer and other special devices (1 nos. of each type)	Lot	1.00			-	-	
2.15	Watt meter (1 nos. of each type)	Set	3.00			-	-	
2.16	Energy meter (1 nos. of each type)	Set	3.00			-	-	
2.17	MVAR meter (1 nos. of each type)	Set	3.00			-	-	
2.18	Frequency meter (1 nos. of each type)	Set	3.00			-	-	
2.19	Ammeter (1 nos. of each type)	Set	3.00			-	-	
2.20	Voltmeter (1 nos. of each type)	Set	3.00			-	-	
D.8	For Substation Automation System (SAS), Teleprotection and Communication Equipments							



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Schedule No. 2: Plant and Mandatory Spare Parts Supplied from Within the Employer's Country (Excluding VAT applicable in Employer's Country)

						Currency	NPR (Local)	NPR (Local)
ltem	Description	Unit	Quantity	Unit Rate Ex-works	Unit Rate, Domestic Transportation and Insurance	Total Ex-works	Total, Domestic Transportation and Insurance	Total Price
1	2	3	4	5	6	7 = 4 x 5	8 = 4 x 6	9 = 7 + 8
1	SDH Equipment with MPLS - TP facility (STM -4 upto 4 MSP Protected directions as well as 10 G upto 4 MSP Protected directions)							
1.1	Base Equipment (Common cards, Cross Connect/control cards, optical base cards, power supply cards, power cabling, other hardware and accessories including sub racks (Additional Sub Rack if required to accomodate all facilities including SDH and MPLS - TP mentioned above), patch cord, DDF etc. fully equiped excluding (1.2) & (1.3) below for KHPS and Bagthala	Nos	1.00			-	-	
1.2	Optical Interface Cards/SFP							
	a. L4.1 SFP (For Integration with SDH Equipment at Bagthala, Bungal and Spare Substation)	Nos	2.00			-	-	
	b. 10 G SFP (For Integration with FOX615 Equipment at MCC and LDC)	Nos	1.00			-	-	
1.3	Tributary Cards							
	a. E1 Interface card (Min. 8 Interfaces per card)	Set	2.00			-	-	
	b. Fast-Ethernet Interface 10/100 Mbps Base T with Layer-2 switching (Min. 8 Interfaces per card)	Nos.	2.00			-	-	
2	VOIP Telephone instrument with one common POE+ switch (min. 8 port)	Set	1.00			-	-	
D.9	For Networking and Visual Monitoring System							
1	Dual Band Router, Wi-Fo 6 / IEEE 802.11ac compatible	Nos.	2.00			-	-	
2	Wireless Access Points	Nos.	2.00			-	-	
3	Video Camera of each type (50% of total used)	Set	1.00			-	-	
4	NVR/DVR with storage as per the Technical Specification	Nos.	1.00			-	-	
D.10	For Auxiliary Power Supply System (ACDB and DCDB)							
1	All type of meter viz. Energy meter, voltmeter, Ammeter, etc. (1 nos. of each type)	Set	1.00			-	-	
2	MCCB (1 nos. of each type)	Set	1.00			-	-	



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Schedule No. 2: Plant and Mandatory Spare Parts Supplied from Within the Employer's Country (Excluding VAT applicable in Employer's Country)

						Currency	NPR (Local)	NPR (Local)
Item	Description	Unit	Quantity	Unit Rate Ex-works	Unit Rate, Domestic Transportation and Insurance	Total Ex-works	Total, Domestic Transportation and Insurance	Total Price
1	2	3	4	5	6	7 = 4 x 5	8 = 4 x 6	9 = 7 + 8
3	MCB and ELCB (10% of total used for each type)	Set	1.00			-	-	



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Schedule No. 2: Plant and Mandatory Spare Parts Supplied from Within the Employer's Country (Excluding VAT applicable in Employer's Country)

						Currency	NPR (Local)	NPR (Local)
item	Description	Unit	Quantity	Unit Rate Ex-works	Unit Rate, Domestic Transportation and Insurance	Total Ex-works	Total, Domestic Transportation and Insurance	Total Price
1	2	3	4	5	6	7 = 4 x 5	8 = 4 x 6	9 = 7 + 8
D.11	For Battery and Battery Charger							
1	110 V Battery Charger							
1.1	Set of control cards	Set	1.00			-	-	
1.2	Set of relays	Set	1.00			-	-	
1.3	Rectifier transformer	Nos.	1.00			-	-	
1.4	Thyristor / Diode	Set	1.00			-	-	
1.5	Fuses of Thyristor with indicators	Set	1.00			-	-	
1.6	Fuses of each type (50% of total used)	Lot	1.00			-	-	
1.7	Indicating Lamp (50% of total used)	Lot	1.00			-	-	
1.8	Ammeter of each type	Set	1.00			-	-	
1.9	Voltmeter of each type	Set	1.00			-	-	
2	48 V Battery Charger							
2.1	Set of control cards	Set	1.00			-	-	
2.2	Set of relays	Set	1.00			-	-	
2.3	Rectifier transformer	Nos.	1.00			-	-	
2.4	Thyristor / Diode	Set	1.00			-	-	
2.5	Fuses of Thyristor with indicators	Set	1.00			-	-	
2.6	Fuses of each type (50% of total used)	Lot	1.00			-	-	
2.7	Indicating Lamp (50% of total used)	Lot	1.00			-	-	
2.8	Ammeter of each type	Set	1.00			-	-	
2.9	Voltmeter of each type	Set	1.00			-	-	



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Schedule No. 2: Plant and Mandatory Spare Parts Supplied from Within the Employer's Country (Excluding VAT applicable in Employer's Country)

						Currency	NPR (Local)	NPR (Local)
Item	Description	Unit	Quantity	Unit Rate Ex-works	Unit Rate, Domestic Transportation and Insurance	Total Ex-works	Total, Domestic Transportation and Insurance	Total Price
1	2	3	4	5	6	7 = 4 x 5	8 = 4 x 6	9 = 7 + 8
D.12	For Erection Hardware and 33 kV Power Cables							
1	3% spares of the actual quantities for insulator strings & hardwares, clamps and connectors (including equipment connectors), spacers, corona bell and welding sleeves		1.00			-	-	
2	33 kV XLPE Cable Termination Kit including all accessories complete	Set	2.00			-	-	
D.13	For Tariff Metering							
1	One set of Tariff meter	Set	1.00			-	-	



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Schedule of Rates and Prices

Summary of Schedule No. 3: Design Services (Excluding VAT applicable in Employer's Country)

FC: USD

Schedule No.	Title	Total Price				
	Title	Foreign	Local			
А	Design Services	-	-			
	Grand Total to be carried forward to Schedule 5	-	-			



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Distribution System Upgrade and Expansion Project

Schedule of Rates and Prices

Schedule No. 3: Design Services (Excluding VAT applicable in Employer's Country)

FC: USD

			Quantity	Unit F	rice	Total Price	
Item	Description	Unit	Quantity	Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion	Local Currency Portion
1	2	3	4	5	6	7 = 4 x 5	8 = 4 x 6
1	Preconstruction Survey, Investigation Works, Design of resembling Switchyard consisting of 132 kV Transformer Bay, 132/33 kV Transformer and 33 kV System in the alloted space in the existing switchyard of Kalanga Hydro Power Station.		1.00				-
2	Earthing Mat Design	LS	1.00				-
3	Design of Unmanned's Station in KHPS consisting of Substation Automation System (SAS) based on latest revision of IEC 61850, Visual Monitoring System, Teleprotection and Communication equipment and design of Remote Control Station in Bajhang DCS for complete Remote Control and Operation of the Substion and its accessories equipment as well as intergration of the system with existing system of NEA in Attariya Grid and LDC for the control and Operation from Attariya Grid and LDC.	LS	1.00				-
4	As Built Drawings of the Substation	LS	1.00				-



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Schedule of Rates and Prices

Summary of Schedule No. 4: Installation and Other Services (Excluding VAT applicable in Employer's Country)

FC: USD

Schedule No.	Title	Total	Price
Scriedule No.	Tide	Foreign Currency	Local Currency
Α.	Switchyard (Installation, Testing and Commissioning of Switchyard Equipments)		-
B.	Control Room (Installation, Testing and Commissioning of Control Room Equipments)		-
C.	Tariff Metering (Installation, Testing and Commissioning of Tariff Meter)		-
D.	Maintenance Charges after Warranty Period		-
E.	Civil Works (Control Building, Switchyard works)		-
	Grand Total to be carried forward to Schedule 5	-	-



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Distribution System Upgrade and Expansion Project

Schedule of Rates and Prices

Schedule No. 4: Installation and Other Services (Excluding VAT applicable in Employer's Country)

la com	Description	Unit	Overstitus	Unit Rate	Total
Item	Description	Unit	Quantity	(Local Currency)	
1	2	3	4	5	6 = 4 x 5
A.	Switchyard				
A.1	Installation, Testing and Commissioning of Transformers as per the Technical Specification				
1	132/33 kV, 3-phase, 12.5/15 MVA, ONAN/ONAF Power Transformer complete with On Load Tap Changer (OLTC) & RTCC facility, and Bushing CT on both sides complete with all accessories.	nos.	1.00		-
2	100 kVA, 33/0.4 kV, 3-phase, ONAN, Off load Tap Changer, Station Transformer with current limiting fuse and all accessories.	nos.	1.00		-
A.2	Installation, Testing and Commissioning of Circuit Breakers with Support Structures as per the Technical Specification				
1	145 kV, 1250A, 3-phase SF ₆ Circuit Breaker (three pole operation type) complete with all accessories and suppot structures for 132/33 kV Power Transformers.	Sets	1.00		-
2	36 kV, 1250 A, 3 phase, Vaccum Circuit Breaker (three pole operation type) complete with all accessories and support structures for Incoming Lines.	Sets	1.00		-
3	36 kV, 800 A, 3 phase, Vaccum Circuit Breaker (three pole operation type) complete with all accessories and support structures for 3 Outgoing Lines.	Sets	3.00		-
A.3	Installation, Testing and Commissioning of Disconnecting Switch/Isolators as per the Technical Specification.				
1	145 kV, 1250 A, 3 phase, Double Break Disconnecting Switch (without Earth Switch) complete with all accessories.	Sets	1.00		-
2	36 kV, 1250 A, 3 phase, Double Break Disconnecting Switch (without Earth Switch) complete with all accessories for 33 kV Incoming Lines.	Sets	1.00		-
3	36 kV, 800 A, 3 phase, Double Break Disconnecting Switch (without Earth Switch) complete with all accessories for 33 kV Outgoing Lines.	Sets	3.00		-
4	36 kV, 800 A, 3 phase, Double Break Disconnecting Switch (with Earth Switch) complete with all accessories for 33 kV Outgoing Lines.	Sets	3.00		-
5	36 kV, 400 A, 3 phase, Double Break Disconnecting Switch (without Earth Switch) complete with all accessories for Station Transformer.	Sets	1.00		-



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Item	Description	Unit	Quantity	Unit Rate	Total
iteiii	Description	Oilit	Quantity	(Local C	urrency)
1	2	3	4	5	6 = 4 x 5
A.4	Installation, Testing and Commissioning of Current Transformers as per the Technical Specification				
1	145 kV, 50 VA, 5 core (2 core - for protection of Class 5P20, 2 core - for tariff metering of Class 0.2 and 1 core - measurement of Class 0.5), 200-100/1 A, Current Transformer (1-phase) complete with all accessories for 132 kV Transformer Bay.	nos.	3.00		-
2	36 kV, 30 VA, 3 core (2 core - for protection of Class 5P20, 1 core - for measurement of Class 0.5), 600-400-200/1 A, Current Transformer (1-phase) complete with all accessories for 33 kV Incoming Lines.	I nos I → ¬			-
3	36 kV, 30 VA, 2 core (1 core - for protection of Class 5P20, 1 core - for measurement of Class 0.5), 400-200-100/1 A, Current Transformer (1-phase) complete with all accessories for 33 kV Outgoing Lines.		9.00		-
A.5	Installation, Testing and Commissioning of Capacitive Voltage Transformer as per the Technical Specification				
1	145 kV, 50 VA, 5 core (2 core - for protection of Class 3P, 2 core - for tariff metering of Class 0.2 and 1 core - for measurement of Class 0.5), 132/v3 /0.110/v3 kV, Capacitive Voltage Transformer (1-phase) complete with all accessories as per the Technical Specification for 132 kV Transformer Bay including removal of existing Bus Post Insulator.		3.00		-
2	36 kV, 30 VA, 2 core (1 core - for protection of Class 3P, 1 core - for measurement of Class 0.5), 33/V3 /0.110/V3 kV, Capacitive Voltage Transformer (1-phase) complete with all accessories as per the Technical Specification for 33 kV Bus and three outgoing lines.		12.00		-



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Schedule of Rates and Prices

	D	11-24	Our and the c	Unit Rate	Total	
Item	Description	Unit	Quantity	(Local C	urrency)	
1	2	3	4	5	6 = 4 x 5	
A.6	Installation, Testing and Commissioning of Surge Arrestor as per the Technical Specification					
1	120 kV, 10 kA Surge Arrestor (1-phase) including Discharge Counter complete with all accessories as per the Technical Specification.	nos.	3.00		-	
2	30 kV, 10 kA Surge Arrestor (1-phase) including Discharge Counter complete with all accessories as per the Technical Specification.	nos.	12.00		-	
A.7	Installation, Testing and Commissioning of Cables along with clamps, glands, lugs & straight joints etc. for switchyard & control room as per the Technical Specification.					
1	36 kV, 400 sq. mm, single core XLPE Copper Power Cable including accessories and termination kit as per the technical specification complete from LV Box of Power Transformer to the Bay.	Rm	75.00		-	
2	Low Voltage Power Cables (PVC), 1.1 kV grade along with accessories.	Lot	1.00		-	
3	Control Cable (PVC), 1.1 kV grade along with accessories.	Lot	1.00		-	
A.8	Installation, Testing and Commissioning of Erection Hardware and Busbar as per the Technical Specification					
1	132 kV System (Busbar Extension, Insulator strings, Disc/Support Insulators, necessary hardwares, clamps, spacers, connectors for Transformer, Substation Works and connection between line tower, gantry etc. all complete)	Lot	1.00		-	
2	33 kV System (Busbar, Insulator strings, Disc/Support Insulators, necessary hardwares, clamps, spacers, connectors for Transformer, Substation Works and connection between line tower, Internal Gantry, Take-off Gantry etc. all complete)	Lot	1.00		-	
3	33/0.4 kV Station Transformer including Autorecloser, Surge Arrestor etc. all complete	Lot	1.00		-	



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Distribution System Upgrade and Expansion Project

Schedule of Rates and Prices

Schedule No. 4: Installation and Other Services (Excluding VAT applicable in Employer's Country)

Item	Description	Unit	Quantity	Unit Rate	Total
item	Description	Unit	Quantity	(Local Currency)	
1	2	3	4	5	6 = 4 x 5
A.9	Installation, Testing and Commissioning of Steel Structure as per the Technical Specification				
1	Galvanized steel structure for gantry, post, beam and equipment supporting frame complete with bolts, fastner, pack washer, nuts, etc. for 132 kV and 33 kV side and various electrical equipments.				
1.1	132 kV Take off Gantry with Surge mast	Nos.	1.00		-
1.2	33 kV Gantry Structure for 1 nos. of incoming, 3 nos. of going including internal gantry, tower and beam structures and bus bar support etc.	bays	4.00		-
1)	Pipe structure for supporting all equipment of 132kV and 33 kV system including peak plates/pack washers and guest paltes including bolts etc.				
2.1	132 kV SF ₆ Circuit Breaker (3-phase)	Sets	1.00		-
2.2	132 kV Disconnection Switch/Isolator without Earth Switch (3-phase)	Sets	1.00		-
2.3	132 kV Capacitive Voltage Transformer (1-phase)	nos.	3.00		-
2.4	132 kV Current Transformer (1-phase)	nos.	3.00		-
2.5	120 kV Surge Arrestor (1-phase)	nos.	3.00		-
2.6	33 kV Gantry Structure for 1 nos. of incoming, 3 nos. of going including internal gantry, tower and beam structures and bus bar support etc.	bays	4.00		-
2.7	33 kV Vaccum Circuit Breaker (3-phase)	nos.	4.00		-
2.8	33 kV Disconnector Switch/Isolator without Earth Switch (3-phase)	Sets	1.00		-
2.9	33 kV Disconnector Switch/Isolator with Earth Switch (3-phase)	Sets	3.00		-
2.10	33 kV Voltage Transformer (1-phase)	nos.	12.00		-



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Item	Decadation	Unit	Overstitus	Unit Rate	Total
item	Description	Unit	Quantity	(Local C	urrency)
1	2	3	4	5	6 = 4 x 5
2.11	33 kV Current Transformer	nos.	12.00		-
2.12	30 kV Surge Arrestor (3 nos per set) with accessories all complete and connection with earthing	Sets	5.00		-
3	Checker plate covering of indoor/outdoor cable trench and grating (galvanized), anchor-bolts and all other accessories required to complete the sub-station work as specified.	M. ton	0.50		-
A.10	Installation, Testing and Commissioning of Illumination System as per the Technical Specification				
1	Lighting system for switchyard, internal roads, Control Room Building and its periphery.	Lot	1.00		-
2	Emergency DC lighting system with necessary accessories all complete for control room.	Lot	1.00		-
A.11	Installation, Testing and Commissioning of Earthing Material as per the Technical Specification				
1	Galvanized E.H.S steel wires of size 7/3.35 for Surge shield wire in take off and internal structures with accessories to complete the works.	Lot	1.00		-
2	Surge Protection System with Surge mast, complete earthing of substation including switchyard, control building with copper conductor, electrodes, grounding material complete with all accessories.	Lot	1.00		-



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Schedule of Rates and Prices

Item	Description	Unit	Quantity	Unit Rate	Total
iteiii	Description		Quantity	(Local Currency)	
1	2	3	4	5	6 = 4 x 5
В.	Control Room				
B.1	Control & Relay Panels integrable to Substation Automation System (SAS) as per the Technical Specification				
1	2/33 kV Power Transformer Control & Protection Panel complete set for HV and LV side with all accessories for 132/33 kV nsformer Bay.		1.00		-
2	33 kV Line Control & Protection Panel complete with all accessories for 33 kV Outgoing Lines.	nos.	3.00		-
3	Time Synchronization Equipment as per specification pertaining to C&R System.	nos.	1.00		-
B.2	Substation Automation System (SAS) based on latest revision of IEC 61850				
1	Complete substation automation system as required for Unmanned's substation including hardware and software for the substation.		1.00		-
2	Substation automation system as required for remote control station (Bajhang DC) alongwith contol and monitoring of assiciated equipment for 132 kV System, 33 kV system and auxiliary system all complete.		1.00		-
3	Equipment required for Integration of SAS with NEA's existing Master Control Centre (MCC) in coordination with NEA at Attariya Regional Office for its remote operation from Attariya alongwith Controlling and Monitoring of associated equipments for 132 kV system, 33 kV system and auxiliary system.		1.00		-
B.3	Teleprotection and Communication Equipments as per the Technical Specification and Drawings				
1	SDH Equipment with MPLS - TP facility (STM -4 upto 4 MSP Protected directions as well as 10 G upto 4 MSP Protected directions)				
1.1	Base Equipment (Common cards, Cross Connect/control cards, optical base cards, power supply cards, power cabling, other hardware and accessories including sub racks (Additional Sub Rack if required to accommodate all facilities including SDH and MPLS TP mentioned above), patch cord, DDF etc. fully equiped excluding (1.2) & (1.3) below for KHPS and Bagthala		2.00		-
1.2	Optical Interface Cards/SFP				
	a. L4.1 SFP (For Integration with SDH Equipment at Bagthala, Bungal and Spare Substation)	Nos	6.00		-



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Schedule of Rates and Prices

Schedule No. 4: Installation and Other Services (Excluding VAT applicable in Employer's Country)

la	Description	11-24	O	Unit Rate	Total
Item	Description	Unit	Quantity	(Local Currency)	
1	2	3	4	5	6 = 4 x 5
	b. 10 G SFP(For Integration with FOX615 Equipment at MCC and LDC)	Nos	2.00		-
1.3	Tributary Cards				
	a. E1 Interface card (Min. 8 Interfaces per card)	Set	4.00		-
	b. Fast-Ethernet Interface 10/100 Mbps Base T with Layer-2 switching (Min. 8 Interfaces per card)	Nos.	4.00		-
2	Optical Distribution Frames/Equipment Cabinet complete in all respect.	Nos.	2.00		-
3	Optical Approach cable - 24 pair fibre (DWSM-G.652D) alongwith installation hardware set complete in all respects.		1.00		-
4	Optical ADSS Cable, support hardwares for SAS for data transfer to Bagthala Substation (Bajhang DC)		4.00		-
5	VOIP Telephone instrument with one common POE+ switch (min. 8 port)		2.00		-
B.4	Auxiliary Power Supply System as per the Technical Specification				
1	400V AC Main Switch Control Panel, Distribution Board Panel, Main Lighting Distribution Board including MCCB, MCB, energy meter, ammeter, voltmeter, cables etc.		1.00		-
2	110V DC Distribution Board and Emergency Lighting board including cable and accessories.	Sets	1.00		-
3	48V DC Distribution Board including cable and accessories.	Sets	1.00		-
B.5	Battery and Battery Charger as per the Technical Specification				
1	110 V Dual Mode Float cum Boost Charger complete with all accessories.	Sets	1.00		-
2	110V 300 AH maintenance free lead acid sealed type battery complete with all accessories.	Sets	1.00		-
3	48V Dual Mode Float cum Boost Charger complete with all accessories.	Sets	1.00		-
4	48V 200 AH maintenance free lead acid sealed type battery complete with all accessories.	Sets	1.00		-



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ltem Description	Description	Unit	Quantity	Unit Rate	Total
item	Description		Quantity	(Local Currency)	
1	2	3	4	5	6 = 4 x 5
5	ttery Health Monitoring System (BHMS)		1.00		-
B.6	Visual Monitoring System as per the Technical Specification				
1	Visual Monitoring system for watch & ward of switchyard and control room all complete.	Lot	1.00		-
B.7	Air Conditioning System				
1	ligh wall type split AC unit of 2TR capacities for control room.		1.00		-
2	High wall type split AC unit of 1.5TR capacities for communication, battery and office room.	Lot	3.00	-	-



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Item	m Description	Unit	Quantity	Unit Rate	Total
item	Description		Quantity	(Local Currency)	
1	2	3	4	5	6 = 4 x 5
B.8	Fire Fighting System				
1	50 litre foam type Trolley/Wheel mounted fire Extinguishers	Lot	1.00		-
2	4.5 kg CO2 type Fire Extiguisher	Lot	8.00		-
3	22.5 kg Dry Chemical Power (DCP) type Trolley/Wheel mounted fire extinguishers	Lot	2.00		-
4	Fire Detection System in Control Room cum Administrative Building	Lot	1.00		-



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Item	Description	Unit	Quantity	Unit Rate	Total
item	Per Description		Quantity	(Local Currency)	
1	2	3	4	5	6 = 4 x 5
C.	Tariff Metering				
1	Tariff Metering System (Main and Check Meter) comprising of energy meter of 0.1 accuracy class for second unit of the hydro power station, its accessories in similar with the existing system.	Lot	1		-
2	Tariff Metering System (Main and Check Meter) comprising of energy meter of 0.1 accuracy class for 132 kV Transformer Bay, its accessories and integrating system with SAS.	Lot	1		-



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Itom	Description	lla:h	Qty	Maintenance Charges			
Item	Description	Unit		Currency	Unit Rate	Total	
1	1 2		4	5	6	7 = 4 x 6	
D.	. Maintenance Charges after Warranty Period						
1	1 Substation Automation System		3			-	
2	Teleprotection and Communication Equipments Year 3		-				
3	3 Visual Monitoring System Year 3		-				



Name of	Tenderer	
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Distribution System Upgrade and Expansion Project

Schedule of Rates and Prices

Item	Description	Unit	Quantity	Unit Rate	Total
Item	Description	Offic	Quantity	(Local C	urrency)
1	2	3	4	5	6 = 4 x 5
E.	Civil Works of Substation and Control Building				
E.1	Civil Works of Switchyard and Substation Components - Concrete Foundation as per Technical Specifications and Approved design/drawings.				
E.1.1	Equipment Support Pedestals for Switchyard Components including Gantries, Current Transformer (CT), Potential Transformer (PT), Lightning Arrestor (LA), Power Transformer, Station Transformer, Disconnection Swiches, Post Insulator (PI), Bus Post Insulator (BPI), Lightning Mast (LM) etc. all complete.				
1	Earthwork Excavation by means of mechnical in all types of soil (soil/gravel/ BMS) as per drawing and technical specifications including removal of stumps and other deleterious matter, all lifts and lead as per drawing and instruction of the engineer.	cu.m	364.71		-
2	Dry flat brick soling works	sq.m	167.31		-
3	Providing and laying of plain cement concrete (PCC Work) M10 in foundation complete as per drawing and technical specifications.	cu.m	12.55		-
4	Providing and laying of reinforcd cement concrete (RCC Work) M25) in foundation complete as per drawing and technical specifications.	cu.m	123.16		-
5	Providing and laying MS Reinforcement including cutting, bending, binding, fixing in position etc. all complete as per specification and drawing.	ton	14.50		-
6	Providing, preparing and installation of form work including necessary supports and removing after completion for structure according to drawings and hauling up to 30 m distance.	sq.m	956.70		-
7	Back filling in layers in foundationpits, trenches , etc, including compaction all complete with watering	cu.m	237.06		-



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14	Description	Unit	Our stitu	Unit Rate	Total
Item	Description	Unit	Quantity	(Local Currency)	
1	2	3	4	5	6 = 4 x 5
E.1.2	Cable Trench				
1	Earthwork Excavation by means of mechnical in all types of soil (soil/gravel/ BMS) as per drawing and technical specifications including removal of stumps and other deleterious matter, all lifts and lead as per drawing and instruction of the engineer.	cu.m	257.98		-
2	Dry flat brick soling works	sq.m	322.48		-
2	Providing and laying of plain cement concrete (PCC Work) M10in foundation complete as per drawing and technical specifications.	cu.m	30.23		-
3	Providing and laying of reinforcd cement concrete (RCC Work) M25 in foundation complete as per drawing and technical specifications.	cu.m	80.84		-
4	Providing and laying of reinforcd cement concrete (RCC Precast Slab Work) M25 in foundation complete as per drawing and technical specifications.	cu.m	16.47		-
5	Providing and laying MS Reinforcement including cutting, bending, binding, fixing in position etc. all complete as per specification and drawing.	ton	9.56		-
6	Providing, preparing and installation of form work including necessary supports and removing after completion for structure according to drawings and hauling up to 30 m distance.	sq.m	1,277.44		-
7	Supply and fixing of cable holding Galvanized M.S. angle bracket as per drawing	kg	6,714.54		-
E.1.3	Grounding System				
1	Providing and laying of plain/reinforcd cement concrete M20 in for Switchyard Lightning Protection System, Earthing arrangement as essential in the substation all complete	cu.m	6.10		-



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Schedule of Rates and Prices

Itam	Description	Unit	Quantity	Unit Rate	Total
Item	Description	Unit	Quantity	(Local Currency)	
1	2	3	4	5	6 = 4 x 5
E.1.4	Illumination System				
1	Concrete required for Switchyard and Substation yard lighting with 36 W, IP 65 LED with at least 20 lux elsewhere and 200 lux at switchyard, as per site conditions all complete	cu.m	0.95		-
E.1.5	Miscellaneous				
1	Surface dressing with Crushed Stone including antiweed treatment as per TS & approved design all complete	cu.m	57.43		-
E.2	Landscaping Works				
E.2.1	Site Levelling				
1	Earth work in cutting including site clearing and contour survey work	cu.m	500.00		-
2	Earth work in Filling and in filling with borrowed earth including site clearing and contour survey work	cu.m	300.00		-
E.2.2	Boundary Wall				
1	Earth work in cutting & Filling and in filling with borrowed earth including site clearing and levelling	cu.m	153.00		-
2	Earthwork in backfilling	cu.m	91.80		-
3	Stone soling and finishing upto approved level, line and dimension	cu.m	11.48		-
4	Supplying mixing, placing, compacting M15 plain cement concrete for foundation bases, brick wall top (copping) and stone masonary top (copping).	cu.m	11.09		-
5	Providing and laying Random rubble masonry in 1:4 cement mortar including scaffolding, curing,preparation of mortar etc.complete, masoned height 0-5m, lead 30m (manual mixing)	cu.m	114.75		-
6	Providing & laying First class chimney made brick masonry work in wall with 1:4 cement sand mortar (1 cement : 4 sand) including lead upto 30 m with curing, cleaning & racking out mortar joint and making ducts, recesses where required as per drawing	cu.m	53.55		-



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Schedule of Rates and Prices

14	Post and the second sec	1114	0	Unit Rate	Total
Item	Description	Unit	Quantity	(Local Currency)	
1	2	3	4	5	6 = 4 x 5
7	Providing, laying & curing cement sand (1:4) Plastering on external walls to perfect plumb, lines & level icluding raking the mortar joints and wetting the masonry surface all complete as per design drawings, specifications and instrcution of the site engineer all complete:	sq.m	306.00		-
9	Chain link fencing as per technical specification and approved drawing but excluding concrete which shall be paid seperately	sq.m.	132.60		-
E.2.4	Switchyard Fencing				
1	Chain link fencing as per technical specification and approved drawing but excluding concrete which shall be paid seperately	rm	54.60		-
2	Switch yard Gate with complete finish as per specifications	Nos.	1.00		-
E.2.5	E.2.5 Miscellaneous Works in Switchyard				
1	Stone spreading including antiweed treatment in switchyard but excluding PCC.	sq.m	640.00		-
2	Providing and laying 75mm thick Plain Cement Concrete 1:5:10 (1 cement : 5 sand : 10 Stone aggregate)	cu.m	48.00		-
3	Providing an dlaying layer of cement slurry of mix 1:6 (1 cement : 6sand) laying uniformly over cement concrete .	sq.m.	640.00		-
E.3	Building Works				
E.3.1	Site Clearance works				
1	Clearing and grubbing including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth upto 300mm, removal of stumps of trees cut earlier and disposal of unserviceable materials amd stacking of serviceable material to be used or auctioned upto a lead of 30m	sqm	185.00		-
E.3.2	Earthworks				
1	Earthwork in Excavation of all types of soil by mechanical means as per drawing and technical specifications including removal of trees, grasses, stumps and other deleterious matter, all lifts and lead as per drawing and instruction of the engineer.	cum	282.14		-



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Distribution System Upgrade and Expansion Project

Schedule of Rates and Prices

Schedule No. 4: Installation and Other Services (Excluding VAT applicable in Employer's Country)

1 1 1 1 1 1 1 1 1 1	Description	l lmia	Our and the	Unit Rate	Total
Item	Description	Unit	Quantity	(Local C	currency)
1	2	3	4	5	6 = 4 x 5
2	Back filling in layers in foundation pits, trenches, etc, with approved soil obtained from the excavation at site and stacked at site or brought from outside in layer including compaction all complete with watering	cum	261.81		-
E.3.3	Concrete Works				
1	Providing and laying of plain/reinforced cement concrete M15 (machine mixed) in foundation complete as per drawing and technical specifications.	cum	12.58		-
2	Providing and laying of plain/reinforced cement concrete M25 (machine mixed) in foundation complete as per drawing and technical specifications.	cum	90.33		-
3	Providing and laying Reinforcement including cutting, bending, binding, fixing in position etc. all complete as per specification and drawing.	ton	10.64		-
	Providing, preparing and installation of form work including necessary supports and removing after completion for structure according to drawings and hauling up to 30 m distance.	sqm	720.80		-
E.3.4	Brick Works				
1	Dry flat brick soling works	sqm	352.88		-
2	Providing & laying First class chimney made brick masonry work in Foundation with 1:6 cement sand mortar including lead upto 30 m with curing, cleaning & racking out mortar joint and making ducts, recesses where required as per drawing	cum	45.67		-
3	Providing & laying First class chimney made brick masonry work in Superstructure with 1:4 cement sand mortar including lead upto 30 m with curing, cleaning & racking out mortar joint and making ducts, recesses where required as per drawing	cum	85.96		-
E.3.5	Finishing Works				
1	2mm thick white putty on wall and ceiling	sqm	870.01		-
2	Two coat plastic emulsion paint over one coat primer (Astar) on new surface	sqm	619.94		-
3	Two coat of weather coating over one coat primer (Astar) on new surface	sqm	299.46		-



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Distribution System Upgrade and Expansion Project

Schedule of Rates and Prices

Schedule No. 4: Installation and Other Services (Excluding VAT applicable in Employer's Country)

				Unit Rate	Total
Item	Description	Unit	Quantity	(Local Currency)	
1	2	3	4	5	6 = 4 x 5
4	Two coat readymade enamel paint over one coat primer (Astar)	sqm	35.50		-
5	Sal wood work for choukosh [0.1x0.075m section]	cum	0.31		-
6	Flush shutter 38mm thick sal wood frame with 3mm thick teak plywood on both side of shutter	sqm	17.75		-
7	Providing, fabricating & fixing Windows and ventilation of Upvc frame using Upvc section with 5mm clear float glass, U-shaped both side plastic gasket, steel hook locks and screws all accessories as per drawing all complete. (frame 60x60mm, sash 60*78mm, white colour with 5mm glass)	sqm	36.00		-
8	3 x 20mm Metal Grill including manufacturing, fitting, painting with Aluminium paint, sand papering all complete	kg	248.68		-
9	Providing, laying, compacting and curing average 38mm mm thick screed with 1:2:4 cement sand mortar in perfect lines & level in whole flooring as per design, specification and instruction of the site engineer.	sqm	421.33		-
10	Provide and laying 3 mm cement punning including cleaning, watering, curing the laid surface all complete as per instruction & specification.	sqm	421.33		-
11	Providing Glazed Ceramic Tile of approved size and colour with 1:4 cement sand mortar.	sqm	154.02		-
12	Providing and fixing non glazed ceramic tiles fixed on floors with $1:4$ Cement Sand Mortar in exact line & level all complete as per drawing specification & instruction.	sqm	14.37		-
13	Providing, laying & curing 12.5 mm thick cement sand (1:3) plastering in ceiling, beams and column surfaces including chipping & wetting the concrete surfaces finished in perfect plumb, lines and level as per drawings, specifications and instructions of the site engineer.	sqm	234.44		-
14	Providing, laying & curing 12.5mm cement sand (1:4) Plastering on internal walls to perfect plumb, lines & level icluding raking the mortar joints and wetting the masonry surface all complete as per design drawings, specifications and instrcution of the site engineer all complete:	sqm	385.50		-
15	Providing, laying & curing 12.5mm cement sand (1:3) Plastering on external walls to perfect plumb, lines & level icluding raking the mortar joints and wetting the masonry surface all complete as per design drawings, specifications and instrcution of the site engineer all complete:	sqm	299.46		-



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Schedule of Rates and Prices

14	Post and the second sec	11	0	Unit Rate	Total
Item	Description	Unit	Quantity	(Local Currency)	
1	2	3	4	5	6 = 4 x 5
16	Providing and application of two coats of water-proofing coating (TAPELASTIC) on the RCC Terrace, share wall, Slope Roof, Sunshade Slab etc. with ordinary hand brusch including cleaning of the surface all complete	sqm	234.44		-
1 / 1	Providing and fixing the 600mm X 600mm Mineral Fibre Board panel false ceiling an dmaking cut out for electrical fixtures, AC diffusers, openable access etc all complete work.	sqm	234.44		-
E.3.6	Miscelleneous Works				
1	Euroguard 7 Liters/min (max) wall mounted with water flow rate 0.25 L/min and purification capacity upto 15L/hr	no	1.00		-
2	Antitermite treatment in foundation as per specifications all complete		185.06		-
3	Plumbing, sanitation and related works including water faucets, valves, pipe, fittings, RCC underground tank, PVC 1000 Litroverhead Tank, Pumps, and all applicable fittings all complete and Electrical wiring, lighting and other related works with a applicable fittings all complete		1.00		-
E.4	Roads and Drainage				
E.4.1	Internal Roads				
1	Earth work in cutting & Filling and in filling with borrowed earth including site clearing and levelling	sq.m	156.00		-
2	Rolling and compaction of earth as per specification all complete.	sq.m	156.00		-
3	Providing and laying of hand pack stone soling with 250mm thick stones and packing with smaller stones on prepared surface as per drawing and technical specifications	cu.m.	39.00		-
4	Supplying mixing, placing, compacting plain cement concrete of M25 including admixture excluding the cost of reinforcement bars & formwork as per drawing, specification and instruction all complete.	cu.m	15.75		-
5	Centering and Shuttering of Plywood / Steel form work in slabs, walls, columns, lintel and beams including bracing and removal of formwork all complete as per drawing, specification & instruction.		19.50		-



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Item	Description		Quantity	Unit Rate	Total
Item			Quantity	(Local Currency)	
1	2	3	4	5	6 = 4 x 5
6	Providing and fixing in position Fe 500 steel reinforcement of various diameter confirming to relevant IS code in R.C.C. work including straightening, cutting, bending, binding with 20 SWG annealed wire for tying the reinforcement bars at each junctions binding wire shall not be measured separately) including all waste and cut pieces, provision for adequate numbers of spacers chairs, providing and placing cement mortar (1:1) cover blocks to keep the bars in intended position at all levels all complete as pedrawings, specifications and instruction of the the engineer. (Authorised lap length and for the bar length exceeding 10 meter illength shall be measured for the payment).		1.86		-
E.4.2	Drainage				
1	Earth work in cutting & Filling and in filling with borrowed earth including site clearing and levelling	cu.m	175.20		-
2	150mm thick stone soling and finishing to approved level, line and dimensions as per instruction & specification complete work	cu.m	19.56		-
3	Supplying mixing, placing, compacting of 100mm thick M15 plain cement concrete for foundation bases & floors lead upto 3 excluding the cost of formwork & reinforcement bars, as per drawing, specification & instruction all complete.		24.23		-
4	Providing & laying First class chimney made brick masonry work in wall with 1:4 cement sand mortar (1 cement : 4 sand) including lead upto 30 m with curing, cleaning & racking out mortar joint and making ducts, recesses where required as per drawing	cu.m	49.68		-
6	Providing and laying of 600mm dia hume pipe for drainage at road crossings as per specification and requirement at site, NP3	rm	20.00		-
7	Supplying and Erecting Dewatering Pumps - 0.5 HP or of required capacity	nos.	1.00		-



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Schedule of Rates and Prices

Schedule No. 6: Recommended Spare Parts (Excluding VAT Applicable in Employer's Country)

FC: USD

			Unit	Price	Total Price		
Item	Description	Quantity	CIP	EXW			
item			Imported Parts	Local Parts	Foreign Currency Portion	Local Currency Portion	
			Foreign Currency	Local Currency			
1	2	3	4	5	6 = 3 x 4	7 = 3 x 5	
TOTAL							



Name of	Tenderer	