NEPAL ELECTRICITY AUTHORITY

(An Undertaking of Government of Nepal)
Project Management Directorate

MULPANI SUBSTATION CONSTRUCTION PROJECT

A component of
Electricity Grid Modernization Project
(Additional Financing)

BIDDING DOCUMENT
FOR

Design, Supply, Installation, Testing and Commissioning of Mulpani 132/11kV GIS Substation

(Procurement of Plant)

Single-Stage, Two-Envelope
Bidding Procedure

Issued on:	**11 August 2021**
Invitation for Bids No.:	**PMD/EGMP/MSCP-077/78-01**
OCB No.:	**PMD/EGMP/MSCP-077/78-01**
Employer:	**Nepal Electricity Authority**
Country:	**Nepal**

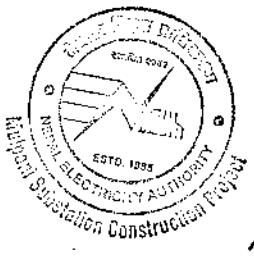
VOLUME –III OF III (REVISED)
August 2021

Mulpani Substation Construction Project
Project Management Directorate
NEA Training Centre Complex, Kharipati, Bhaktapur, Nepal
Telephone: +977 1-6615457
Bhaktapur, Nepal

SECTION IV PRICE SCHEDULE

Note:

1) Bidder is required to quote prices in this Schedule for all the individual items/sub-items.
2) The Prices of equipment's are inclusive of type test charges.
3) BOQ given is indicative only, the quantities mentioned above may undergo changes during detailed engineering to meet the functional requirement and scope of work defined in Employer's Requirements. Based on the detail engineering and design, the Contractor shall prepare and submit the final BOQ within 90 days of signing of Contract.
4) The bidders are require to quote their price including all taxes and duties applicable in their county / Country of origin, & all business taxes, income taxes (TDS etc) applicable in Nepal. The quoted price shall be exclusive of taxes and duties applicable in Nepal like Custom, VAT etc.
5) The bid price is inclusive of all Environmental, Health and Safety management compliance cost.



NEPAL ELECTRICITY AUTHORITY
PROJECT MANAGEMENT DIRECTORATE
Mulpani Substation Construction Project

Electricity Grid Modernization Project-Additional Financing
PMD/EGMP/MSCP-077/78-01:Design, Supply, Installation and Commissioning of Gas insulated 132kV Mulpani Substation

Schedule No.1: Plant and Equipment including Mandatory Spares to be supplied from abroad

FC: Foreign Currency
LC: Local Currency

Item No.	Item description	Country of origin	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)	Custom, VAT and other taxes
			Unit	Quantity	FC			FC	LC
					Currency#	Unit Rate	Amount		
1	2	3	4	5	6	7	8 = (7) x (5)	9=8	10
PART 1	132/11 kV Mulpani S/S								
	PART -A: OWNER ASSESSED QUANTITIES								
A	POWER TRANSFORMER								
1	31.5/45 MVA, 132/11 kV Three Phase Power Transformer (without transformer Oil)		Nos.	2					
2	Insulating oil for the above Power Transformer		Lot	2					
3	Oil Storage tank of 20KL		Nos.	1					
B	LT Transformer								
1	630KVA 11/0.400 kV		Nos.	1					
C	145kV Equipment								
1.0	145KV GIS Equipment								
1.0	145kV, SF6 GIS Bus Bars Module [Module description as per Technical Project specification]		Sets	2					
1.2	145kV, SF6 GIS Bus Coupler bay Module [Module description as per Technical Project specification]		Set	1					
1.3	145kV, SF6 GIS Line bay Module [Module description as per Technical Projet specification]		Sets	4					
1.4	145kV, SF6 GIS ICT feeder bay Module for Transformer [Module description as per Technical Project specification]		Sets	2					
D	145kV EQUIPMENT (AIS)								
1.0	120 kV Surge Arrestors (1-Phase)		Nos.	12					
2.0	145KV Bus Post Insulator		Nos.	6					
E	11 KV EQUIPMENT								
1.0	11 kV Isolator (3-phase)-HDB								
1.1.1	400A, 25kA for 3 sec, Isolator without E/s (Beam Mounted)		Set	6					
2.0	9 kV Surge Arrester (1 ph.)		Nos	15					
F	11 kV Indoor VCB Switchgear								
1.1	11kV 2500A Incomer		Nos	2					
1.2	11kV 1250A Outgoing		Nos	10					
1.3	11kV 2500A Buscoupler		nos	1					
1.4	11kV 2500A Trunking		no	1					

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G	**Testing & Maintenance Equipment for GIS**								
1.1	SF6 Gas processing Unit		Set	1					
1.2	Partial Discharge Monitoring System for 145kV GIS System as per Technical Specification, GIS		Set	1					
1.3	Dew Point meter for 145kV GIS System		Set	1					
1.4	SF6 Gas Leak Detector for 145kV GIS System		Set	1					
1.5	EOT crane for 145kV GIS Hall		Nos.	1					
1.6	SF6 Gas Analyser		Set	1					
H	**RELAY PANELS (WITH AUTOMATION)**								
1	145kV								
1.1	Line Control and Protection Panel with Differential / Distance Relay		Nos.	4					
1.2	Line Differential relays for adjacent substation		Nos.	4					
1.3	Transformer Control and Protection Panel (For both HV & MV side)		Nos.	2					
1.4	Bus Coupler Control and Protection Panel		set	1					
1.5	Busbar Protection Panel		set	1					
3	Other/Common equipments Pertaining to C & R System								
3.1	Time Synchronisation Equipment		No.	1					
3.2	Relay Test kit		No.	1					
I	**SUBSTATION AUTOMATION**								
1	Substation Automation System as per Technical Specification:								
1.1	132 kV System		Nos.	7					
1.2	BCU for auxilary system		set	1					
1.3	11 kV HT Indoor Switchgear		Nos	13					

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J	**DIgital Protection Coupler & IP-PBAX**								
1	Digital Protection Coupler		Nos	8					
2	IP-PBAX as per TS		Set	1					
K	**LT Switchgear (As per Technical specification)**								
1	400V Main switchboard		Set	1					
2	400V ACDB		Set	1					
3	400V MLDB		Set	1					
4	400V Emergency LDB		Set	1					
5	220V DCDB		Sets	1					
6.0	48V DCDB		Set	1					
L	**Batteries**								
1	220V								
1.1	600 AH		Nos	1					
2	48V								
2.1	600AH		Nos	1					
M	**Float Cum Boost Battery Charger**								
1	220V Float Cum Boost Battery Charger								
1.1	80A/80A		Nos	2					
2	48V Float Cum Boost Battery Charger								
2.1	80A/80A		Nos	2					
N	**Diesel Generator with control Panel**								
1	100 kVA		Set	1					
O	**Fire Protection System**								
1	Portable /Trolley/Wheel mounted extinguishers								
1.1	9 litre water type		Nos	2					
1.2	50 litre foam type		Nos	2					
1.3	4.5 kg CO_2 type		Nos	6					
1.4	4.5 kg Dry Chemical Power (DCP) type		Nos	2					
2.0	Smoke detection system		Set	1					
3.0	Fire detection and Alarm System		Set	1					

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P	**Cables along with clamps, glands, lugs and straight joints etc.**								
1.0	11kV HT 3C, 400 Sq.mm Aluminum Cable alongwith accessories and termination equipments for termination of 11 kV Line		KM	2					
2.0	11kV HT 3C, 400 Sq.mm Aluminum Cable alongwith accessories and termination equipments for termination of 11 kV LT Transformer		KM	0.25					
3.0	11kV HT Cable (1CX800 SQmm) Copper for 11k kV side of 132/11 kV Transformer alongwith accessories and termination equipments		KM	1					
4.0	Power Cables - (145kV grade)								
i	1Cx500 sqmm (XLPE) copper cable for line bay along with termination and joiinting arrangement as per TS		KM	1.5					
ii	1Cx240 sqmm (XLPE) copper cable for Transformer bay along with termination and joiinting arrangement as per TS		KM	1					
5	Power Cables - (1.1kV grade)								
4.1	3.5Cx300 sqmm (XLPE) cable for filter Machine along with 2 nos outdoor receptacles -250A		KM	0.15					
Q	**Air conditioning**								
1	High wall type split AC unit of 2 TR capacities for control room, relay room and battery room		Nos.	20					
R	**STEEL STRUCTURES (Tower,Gantry structures& Equipment support structures)**								
1.0	Lattice/pipe Structure for towers,beams and equipments including peak plates/pack washers and guest paltes including foundation bolts(nuts,washers,MS plate welded at the bottom)								
1.1	Lattice stucture & foundation bolts		MT	60					
1.2	Fastners for towers,beams and equipment support strcutures		MT	5					
S	**Communication Equipment (detail as per TS)**								
1.0	**Transmission Equipment**								
	Telecommunication Equipments								
1.1	SDH Equipment (STM-4 MADM upgradable to STM - 16 upto 4 MSP protected directions)								
1.1.1	Base Equipment (Common cards, Cross Connect/control cards, optical base cards, power supply cards, power cabling, other hardware and accessories including sub racks, patch cord, DDF etc fully equiped excluding (ii) & (iii) below, integration with existing SDH equipment **at Chapali and Bhaktapur Substation.**		No.	1					
(ii)	Optical Interface Cards/SFP								
(a)	S4.1 SFP		Nos.	6					
(b)	L4.1 SFP		Nos.	2					
(c)	L4.2 SFP		Nos.						

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(iii)	Tributary cards								
(a)	E1 Interface card (Min.8 interfaces per card)		Nos.	2					
(b)	Giga -Ethernet Interface 10/100/1000 Mbps Base T with Layer-2 switching (Min 4 Interfaces per card)		No.	2					
1.1.2	Equipment Cabinets		No	1					
1.1.3	VOIP telephone instrument with one common POE+ switch (min. 8 port)		set	2					
	SUB TOTAL PART-A								
	PART-B: VENDOR ASSESSED QUANTITIES								
A	Erection Hardware :-Insulator strings, Disc Insulators, Hardware, conductor, bus-bar materials, cable trays, clamps, spacers, connectors including conectors for Transformer , Junction box, earthwire, earthing material risers, buried cable trenches/pipe of equipment & lighting, all accessories etc. as required to complete the specified scope of work								
1	**132 kV GIS termination arrangement and AIS termination arrangement**								
1.1	Line Bay		Sets	4					
1.3	Transformer Bay		Sets	2					
B	**Ventilation & heating System**								
1	132 kV GIS Hall		LS	1					

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C	**Illumination System**								
1.1	Substation Lighting								
1.1.1	Control Room cum administrative building illumination		LS	1					
1.1.2	132kV GIS Building		LS	1					
1.1.3	11kV Control Room		LS	1					
1.2	Fire Fighting Room		LS	1					
1.3	Security Room		LS	1					
1.4	Outdoor and Street Lighting		LS	1					
1.5	Occupancy sensor		LS	1					
D	**Fire Protection System per technical Specification)**								
1	Pumping arrangement for HVW system & hydrant system, complete with all piping, valves, fittings,etc. inside pump house		set	1					
2	Hydrant system, complete U/G piping and accessories etc. outside the Pump House.		set	1					
3	HVW spray system, Hydrant system and complete U/G & O/G piping and accessories etc. out side the pump house for Transformer :								
3.1	132/11 kV Three Phase Transformer		nos	1					
F	**POWER & CONTROL CABLES**								
1	**1.1 kV LV Cables**								
1.1	Power Cables(PVC)- (1.1kV grade)		LS	1					
1.2	Control Cable (PVC)- (1.1kV grade)		LS	1					
1.3	Cable glands, lugs & straight through joints for Power & Control cables		LS	1					
G	Visual Monitoring System for watch & ward as per technical specification		LS	1					
H	Earthing and lightning protection including necesaary connectors/connections, risers etc. complete in all respect								
1.0	Earth Conductor (copper)		LS	1					
2.0	Earth Rod (copper clad steel)		LS	1					
3.0	Equipment for lightning protection		LS	1					
I	**SUBSTATION AUTOMATION**								
1	Integration of all 132/11kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.		LS	1					
2	Integration of all 132/11kV Bays under present scope with the SCADA of MCC at Baneshwor including supply of Hardware, Software, accessories etc. as per TS Section Project.		LS	1					
	SUB TOTAL PART-B								

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	PART-C: MANDATORY SPARES (Break up of Lumpsum quantity shall be as per Annexure-I, Section Project of Technical Specification).								
I.	Transformer(132/11 kV) 45 MVA								
1.1	Oil cooler pump with motor								
1.2	Cooler Fan with motor		No.	1					
1.3	Local & Remote WTI with sensing device & contact (each type)		Set	1					
1.4	Buchholz relay complete with contacts (Main tank)		Set	1					
1.5	Magnetic oil level gauge		No.	1					
1.6	Starters, contactors, switches & relays for electrical control panels (one set of each type)		Set	1					
1.7	Remote tap position Indicator		No.	1					
1.8	Oil Flow indicator with flow switch		Set	1					
1.9	145kV Bushing with metal parts and gaskets and lifting tools		Nos.	1					
1.10	12 kV Bushing with metal parts and gaskets and lifting tools		Nos.	1					
1.11	Spare insulating oil to be handed over to Employer after commissioning for O&M requirement		KL	10					
II	**GIS (132 KV)**								
1	**General**								
1.1	SF6 gas Pressure Relief Devices, 1Nos. of each type		Set	1					
1.2	SF6 Pressure gauge cum switch OR Density monitors and pressure switch as applicable (1 no. of each type)		Set	1					
1.3	Coupling device for pressure gauge cum switch for connecting Gas handling plant		Set	1					
1.4	Rubber Gaskets, "O" Rings and Seals for SF6 gas of each type		Set	1					
1.5	Molecular filter for SF6 gas with filter bags(20% of total weight)		Set	1					
1.6	All types of Control Valves for SF6 gas of each type		Set	1					
1.7	SF6 gas (20 % of total gas quantity)		Set	1					
1.8	All types of coupling for SF6 gas (1 no. of each type)		Set	1					
1.9	Pipe length (Copper or Steel as applicable) for SF6 Circuit of each type		Set	1					
1.10	Covers with all accessories necessary to close a compartment in case of dismantling of any part of the Enclosure to ensure the sealing of this compartment								
1.10.1	For 3 Phase Enclosure if applicable		No.	1					
1.10.2	For Single phase enclosure if applicable		No.	1					
1.11	Locking device to keep the Dis-connectors (Isolators) and Earthing switches in close or open position in case of removal of the driving Mechanism		Set	1					
1.12	Bus Support insulator of each type for 3 phase/single phase enclosure.		No.	1					
2	**145KV SF6 CIRCUIT BREAKER:**								

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2.1	Complete Circuit Breaker pole of each type & rating complete with interrupter, main circuit enclosure and Marshalling Box with operating mechanism		No.	1					
2.2	Rubber gaskets, `O' rings and seals for SF6 gas (1 No. of each type)		Set	1					
2.3	Trip coil assembly with resistor as applicable		Set	1					
2.4	Closing coil assembly with resistor as applicable .		Set	1					
2.5	Relays, Power contactors, push buttons, timers & MCBs etc (1 No. of each type & rating)		Set	1					
2.6	Closing coil assembly (including valve, if applicable)		Set	1					
2.7	Trip coil assembly (including valve, if applicable)		Set	1					
2.8	Auxiliary switch assembly of each type		Set	1					
3	***145KV ISOLATORS :***								
3.1	Complete set of 3-phase dis-connector including main circuit, enclosure, driving mechanism		Set	1					
3.2	3-phase Earthing switch including main circuit, enclosure, driving mechanism.		Set	1					
3.3	Copper contact fingers for dis-connector male & female contact for one complete (3 phase) dis-connector of each type and rating		Set	1					
3.4	Copper contact fingers for earthing switch male & female contacts, for one complete (3 phase) earthing switch of each type and rating		Set	1					
3.5	Open / Close contactor assembly, timers, key interlock for one complete (3 phase) dis-connector and (3 phase) earthing switch of each rating (1 No. of each type and rating)		Set	1					
3.6	Push button switch - (1 No. of each type & rating) as applicable		Set	1					
3.7	Limit switch and Aux. Switches for complete 3 phase equipment								
3.7.1	For isolator		Set	1					
3.7.2	For earth switch		Set	1					
4	**145KV CURRENT TRANSFORMER**								
4.1	Gas insulated complete CT of each type and rating with enclosure.		No.	1					
4.2	Secondary bushing of each type		Set	1					
5	**145 kV Voltage Transformer**								
5.1	Gas insulated complete PT of each type and rating with enclosure.		No.	1					
IV	120kV LA								
1	120kV Surge Arrestor with insulating base, terminal connector , Surge counter & accessories (excluding support structure)		Set	1					
V	DG Set								
1	Self starter assembly		No.	1					

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2	AVR (Auto Voltage Regulator)/ AVR card		Set	1					
VI	Battery Charger								
1	*220V Battery Chargers*								
1.1	Set of Control Cards		Set	1					
1.2	Set of relays		Set	1					
1.3	Rectifier transformer		No.	1					
1.4	Thyristor/ Diode		Set	1					
1.5	Fuses of Thyristor with indicators		Set	6					
2	*48V Battery Chargers*								
2.1	Set of Control Cards		Set	1					
2.2	Set of relays		Set	1					
2.3	Rectifier transformer		No.	1					
2.4	Thyristor/ Diode		Set	1					
2.5	Fuses of Thyristor with indicators		Set	6					
VII	Relay & Protection								
1	Line Protection Panel								
1.1	Numerical distance relay / Differential relay (1 no. of each type)		Set	1					
2	Transformer Protection Panel								
2.1	Transformer differential protection		No.	1					
2.2	Restricted earth fault protection relay with non-linear resistor		No.	1					
2.3	Directional over current & E/F Protection Relay		no	1					

नेपाल विद्युत प्राधिकरण
ESTD. 1985
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3	COMMON SPARES								
3.1	Power supply module for Bus Bar protection.		No.	1					
3.2	Bay unit module		Set	1					
3.3	Breaker protection Relay								
3.3.1	Breaker failure relay		No.	1					
3.3.2	Trip circuit supervision relay		Nos.	1					
3.3.3	Self reset trip relay (relay of each type)		Set	1					
3.3.4	Hand reset trip relay(relay of each type)		Set	1					
3.3.5	Timer relay(relay of each type)		Set	1					
3.3.6	DC supervision relay(relay of each type)		Set	1					
3.3.7	Flag relays(relay of each type)		Set	1					
3.3.8	Auxiliary relays(relay of each type)		Set	1					
VIII	**Digital protection Coupler**		LS	1					
IX	Sub-Station Automation System								
1	Bay control unit (IED) of each type		Set	1					
2	Ethernet switch of each type		Set	1					
X	LT Transformer								
1	Bushings (Each type)		Set	1					
2	Diaphragm for pressure relief vent		No.	1					
3	Silica gel container		No.	1					
4	Set of Valves (Each Type)		Set	1					
5	Buchholz relay (if applicable)		No.	1					
XI	Illumination System								
1	5% of each type of lighting fixture supplied		LS	1					
XII	Erection Hardware								
1	5% spares of the actual quantities for Insulator strings &hardwares, clamps & connectors (including equipment connectors), spacers, corona bell and welding sleeves,		LS	1					

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XIII	LT Indoor Switchgear		LS	1					
1	Each type of MCB, MCCB, ELCB								
XIV	Fire Fighting								
1	Recommended Spares		Set	1					
XV	**MV Indoor Swtichgear**								
1	11 kV Switchgear								
1.1	11kV Vacuum Interrupter for Incomer and Outgoing		No.	1					
1.2	Tripping Coils		No.	3					
1.3	Closing Coils		Set	3					
1.4	Spring Charging Motor		Set	1					
1.5	Protection Relays								
1.5.1	3 phase Overcurrent and Earthfault Relay, for 11kV side one of each type		Nos.	1					
1.6	Ammeter, Nos one of each rating		Nos.	1					
1.7	Voltmeter, Nos		Nos.	1					
1.8	kVA Meter, each		Nos.	1					
1.9	CTs of each type		set	1					
1.10	Operating Handle		No.	1					
1.11	Indicating lamps and fuses (100% of used), Lot		LS	1					
	SUB-TOTAL-C								
	Total for Mulpani Substation (Part-A+ Part-B+ Part C)								
	Total for Schedule 1 (Total of column 9 to be carried forward to Schdule 5: Grand Summary)								

Note :
1) Bidder is required to quote prices in this Schedule for all the individual items/sub-items.
2.) The Prices of equipments are inclusive of type test charges
3.) BOQ given above is indicative only based on the scope of work as given in Employer's Requirements. The quantities mentioned above may undergo change during detailed engineering to meet the functional requirement
Specify currency in accordance with BDS ITB Clause 32.1, Part-I of the Bidding Documents.
* Strike-out whichever is not applicable.

Name of Bidder:
Signature of Bidder:
(Printed Name)
(Designation)
(Common Seal)

Date:

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Mulpani Substation Construction Project

Electricity Grid Modernization Project-Additional Financing

PMD/EGMP/MSCP-077/78-01:Design, Supply, Installation and Commissioning of Gas insulated 132kV Mulpani Substation

Schedule No.2: Plant and Equipment including Mandatory Spares Parts to be supplied from within Nepal

LC: Local Currency (ALL Price in Local Currency)

Item No.	Item description	Unit	Quantity	Ex Faxtory Price (Excluding VAT)		Inland transportation to site in LC		Total Amount (Excluding Taxes)	VAT and other taxes
				Unit Rate	Amount	Unit Rate	Amount		
1	2	3	4	5	6 = (4) x (5)	7	8=(4)x(7)	9=6+8	10
PART 1	132/11 kV Mulpani S/S								
PART 1	Total for Mulpani Substation (Part-A+ Part-B+ Part C)								
	Total for Schedule 2 (Total of column 9 to be carried forward to Schdule 5: Grand Summary)								

Note : 1) Bidder is required to quote prices in this Schedule for all the items in Schedule 1 which they wish to supply from within Nepal.

2.) The Prices of equipments are inclusive of type test charges

\# Specify currency in accordance with BDS ITB Clause 32.1, Part-I of the Bidding Documents.

* Strike-out whichever is not applicable.

[a] *Specify currency in accordance with ITB 19.1 of the BDS.*

[b] *Column 5 Price shall include all customs duties and sales and other taxes already paid or payable on the components and raw materials used in the manufacture or assembly of the item or*

Name of Bidder:
Signature of Bidder:
(Printed Name)
(Designation)
(Common Seal)

Date:

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Mulpani Substation Construction Project

Electricity Grid Modernization Project-Additional Financing

PMD/EGMP/MSCP-077/78-01:Design, Supply, Installation and Commissioning of Gas insulated 132kV Mulpani Substation

Schedule A-3: Design Services

Item No.	Item Description	Estimated		Unit Prices		Total Prices	
				Local Currency Portion	Foreign Currency Portion		
		Quantity	Unit	NRs	Currency	LC	FC
1	2	3	4	5	6	7=3x5	8=3x6
	NOT APPLICABLE						
	Total for Schedule 3 (Total of column 7 & 8 to be carried forward to Schdule 5: Grand Summary)						

NOTE: The design cost is included in schedule 1.

Name of Bidder:
Signature of Bidder:
(Printed Name)
(Designation)
(Common Seal)

Date:

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Mulpani Substation Construction Project

Electricity Grid Modernization Project-Additional Financing

PMD/EGMP/MSCP-077/78-01:Design, Supply, Installation and Commissioning of Gas insulated 132kV Mulpani Substation

Schedule No. 4 (a): Installation and Other Services

(a): Installation and Construction Charges

Sl. No.	Item Description	Installation Charges								
		Country of Origin	Type & Designation	Unit	Qty.	Portion in Foreign Currency			Portion in Nepalese Currency (in NPR)	
						Currency #	Unit Rate	Total Charges	Unit Rate	Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	7	8	9=8x6	10	11=10x6
PART 1	132/11 kV Mulpani S/S									
	PART -A: OWNER ASSESSED QUANTITIES									
A	POWER TRANSFORMER									
1.1	31.5/45 MVA, 132/11 kV Three Phase Power Transformer (without transformer Oil)			Nos.	2					
1.2	Insulating oil for the above Power Transformer			Lot	2					
B	LT Transformer									
1.1	630 KVA 11/0.400 kV			Nos.	1					
E	145kV Equipment									
E.1	145KV GIS Equipment									
1.1	145kV, SF6 GIS Bus Bars Module [Module description as per Technical Project specification]			Sets	2					
1.2	145kV, SF6 GIS Bus Coupler bay Module [Module description as per Technical Project specification]			Set	1					
1.3	145kV, SF6 GIS Line bay Module [Module description as per Technical Projet specification]			Sets	4					
1.4	145kV, SF6 GIS ICT feeder bay Module for Transformer [Module description as per Technical Project specification]			Sets	2					
E.2	145kV EQUIPMENT(AIS)									
1.0	120 kV Surge Arrestors (1-Phase)			Nos.	12					
2.0	145KV Bus Post Insulator			Nos.	6					

Schedule No. 4 (a): Installation and Other Services
(a): Installation and Construction Charges

Sl. No.	Item Description	Installation Charges								
		Country of Origin	Type & Designation	Unit	Qty.	Portion in Foreign Currency			Portion in Nepalese Currency (in NPR)	
						Currency #	Unit Rate	Total Charges	Unit Rate	Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	7	8	9=8x6	10	11=10x6
F	**11 KV EQUIPMENT**									
1.0	11 kV Isolator (3-phase)-HDB									
1.1	400A, 25kA for 3 sec, Isolator without E/s (Beam Mounted)			Set	6					
2.0	9 kV Surge Arrester (1 ph.)			Nos	15					
G	**(11) kV Indoor VCB Switchgear**									
1.0	11kV 2500A Incomer			Nos	2					
2.0	11kV 1250A Outgoing			Nos	10					
3.0	11kV 2500A Buscoupler			nos	1					
4.0	11kV 2500A Trunking			no	1					
H	**Testing & Maintenance Equipment for GIS**									
1.1	SF6 Gas processing Unit			Set	1					
1.2	Partial Discharge Monitoring System for 145kV GIS System as per Technical Specification, GIS			Set	1					
1.3	EOT crane for 145kV GIS Hall			Nos.	1					
I	**RELAY PANELS (WITH AUTOMATION)**									
1	145kV									
1.1	Line Control and Protection Panel			Nos.	4					
1.2	Line Differential relays for adjacent substation			Nos.	4					
1.3	Transformer Control and Protection Panel (For both HV & MV side)			Nos.	2					
1.4	Bus Coupler Control and Protection Panel			Nos.	1					
1.5	Busbar Protection Panel			Nos.	1					
1.5	Other/Common equipments Pertaining to C & R System									
1.5.1	Time Synchronisation Equipment			No.	1					
1.5.2	Relay Test kit			No.	1					

Schedule No. 4 (a): Installation and Other Services
(a): Installation and Construction Charges

Sl. No.	Item Description	Installation Charges								
		Country of Origin	Type & Designation	Unit	Qty.	Portion in Foreign Currency			Portion in Nepalese Currency (in NPR)	
						Currency #	Unit Rate	Total Charges	Unit Rate	Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	7	8	9=8x6	10	11=10x6
J	**SUBSTATION AUTOMATION**									
1	Substation Automation System as per Technical Specification:									
1.1	132 kV System			Nos.	7					
1.2	BCU for auxilary system			set	1					
1.3	11 kV HT Indoor Switchgear			Nos	13					
K	**DIgital Protection Coupler & PBAX**									
1.1	Digital Protection Coupler			Nos	8					
1.2	PBAX with per TS			Set	1					
L	**LT Switchgear (As per Technical specification)**									
1	400V Main switchboard			Set	1					
2	400V ACDB			Set	1					
3	400V MLDB			Set	1					
4	400V Emergency LDB			Set	1					
5	220V DCDB			Sets	1					
6.0	48V DCDB			Set	1					
M	**Batteries**									
1	220V									
1.1	600 AH			Nos	1					
2	48V									
2.1	600AH			Nos	1					
N	**Float Cum Boost Battery Charger**									
1	220V Float Cum Boost Battery Charger									
1.1	80A/80A			Nos	2					
2	48V Float Cum Boost Battery Charger									
2.1	80A/80A			Nos	2					
O	**Diesel Generator with control Panel**									
1	100 kVA			Set	1					

Schedule No. 4 (a): Installation and Other Services
(a): Installation and Construction Charges

Sl. No.	Item Description	Installation Charges								
		Country of Origin	Type & Designation	Unit	Qty.	Portion in Foreign Currency			Portion in Nepalese Currency (in NPR)	
						Currency #	Unit Rate	Total Charges	Unit Rate	Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	7	8	9=8x6	10	11=10x6
P	**Fire Protection System**									
1	Portable /Trolley/Wheel mounted extinguishers									
1.1	9 litre water type			Nos	2					
1.2	50 litre foam type			Nos	2					
1.3	4.5 kg CO_2 type			Nos	6					
1.4	4.5 kg Dry Chemical Power (DCP) type			Nos	2					
2.0	Smoke detection system			Set	1					
3.0	Fire detection and Alarm System			Set	1					
Q	**Cables along with clamps, glands, lugs and straight joints etc.**									
1.0	11kV HT 3C, 400 Sq.mm Aluminum Cable alongwith accessories and termination equipments for termination of 11 kV Line			KM	2					
2.0	11kV HT 3C, 400 Sq.mm Aluminum Cable alongwith accessories and termination equipments for termination of 11 kV LT Transformer			KM	0.25					
3.0	11kV HT Cable (1CX800 SQmm) Copper for 11k kV side of 132/11 kV Transformer alongwith accessories and termination equipments			KM	1					
4	Power Cables - (145kV grade)									
i	1Cx500 sqmm (XLPE) copper cable for line bay along with termination and joiinting arrangement as per TS			KM	1.5					
ii	1Cx240 sqmm (XLPE) copper cable for Transformer bay along with termination and joiinting arrangement as per TS			KM	1					
4	Power Cables - (1.1kV grade)									
4.1	3.5Cx300 sqmm (XLPE) cable for filter Machine along with 2 nos outdoor receptacles -250A			KM	0.15					
R	**Air conditioning**									
1	High wall type split AC unit of 2 TR capacities for control room, relay room and battery room			Nos.	20					

Schedule No. 4 (a): Installation and Other Services
(a): Installation and Construction Charges

Sl. No.	Item Description	Installation Charges								
		Country of Origin	Type & Designation	Unit	Qty.	Portion in Foreign Currency			Portion in Nepalese Currency (in NPR)	
						Currency #	Unit Rate	Total Charges	Unit Rate	Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	7	8	9=8x6	10	11=10x6
S	**STEEL STRUCTURES (Tower,Gantry structures& Equipment support structures)**									
1.0	Lattice/pipe Structure for towers,beams and equipments including peak plates/pack washers and guest paltes including foundation bolts(nuts,washers,MS plate welded at the bottom)									
1.1	Lattice stucture & foundation bolts			MT	60					
1.2	Fastners for towers,beams and equipment support strcutures			MT	5					
T	Communication Equipment (detail as per TS)									
1	Transmission Equipment									
	Telecommunication Equipments									
1.1	SDH Equipment (STM-4 MADM upgradable to STM - 16 upto 4 MSP protected directions)									
1.1.1	Base Equipment (Common cards, Cross Connect/control cards, optical base cards, power supply cards, power cabling, other hardware and accessories including sub racks, patch cord, DDF etc fully equiped excluding (ii) & (iii) below, integration with existing SDH equipment **at Chapali and Bhaktapur Substation.**			No.	1					
(ii)	Optical Interface Cards/SFP									
(a)	S4.1 SFP			Nos.	6					
(b)	L4.1 SFP			Nos.	2					
(c)	L4.2 SFP			Nos.						
(iii)	Tributary cards									
(a)	E1 Interface card (Min.8 interfaces per card)			Nos.	2					
(b)	Giga -Ethernet Interface 10/100/1000 Mbps Base T with Layer-2 switching (Min 4 Interfaces per card)			No.	2					
1.1.2	Equipment Cabinets			No	1					
1.1.3	VOIP telephone instrument with one common POE+ switch (min. 8 port)			set	2					
	SUB TOTAL PART-A									

Schedule No. 4 (a): Installation and Other Services
(a): Installation and Construction Charges

Sl. No.	Item Description	Installation Charges								
		Country of Origin	Type & Designation	Unit	Qty.	Portion in Foreign Currency			Portion in Nepalese Currency (in NPR)	
						Currency #	Unit Rate	Total Charges	Unit Rate	Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	7	8	9=8x6	10	11=10x6
	PART-B: VENDOR ASSESSED QUANTITIES									
A	Erection Hardware :-Insulator strings, Disc Insulators, Hardware, conductor, bus-bar materials, cable trays, clamps, spacers, connectors including conectors for Auto Transformer , Junction box, earthwire, earthing material risers, buried cable trenches/pipe of equipment & lighting, all accessories etc. for the following:									
1	**132 kV GIS termination arrangement and AIS termination arrangement**									
1.1	Line Bay			Sets	4					
1.3	Transformer Bay			Sets	2					
B	**Ventilation & heating System**									
1	Ventilation & heating system (as per technical specification)									
1.1	132 kV GIS Hall			LS	1					
C	**Illumination System**									
1	Substation Lighting									
1.1	Control Room cum administrative building illumination			LS	1					
1.2	132kV GIS Building			LS	1					
1.3	11kV Control Room			LS	1					
2	Fire Fighting Room			LS	1					
3	Security Room			LS	1					
4	Outdoor and Street Lighting			LS	1					
5	Occupancy sensor			LS	1					

Schedule No. 4 (a): Installation and Other Services
(a): Installation and Construction Charges

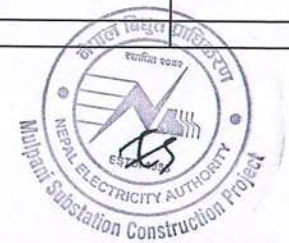
Sl. No.	Item Description	Installation Charges								
		Country of Origin	Type & Designation	Unit	Qty.	Portion in Foreign Currency			Portion in Nepalese Currency (in NPR)	
						Currency #	Unit Rate	Total Charges	Unit Rate	Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	7	8	9=8x6	10	11=10x6
D	**Fire Protection System per technical Specification)**									
1	Pumping arrangement for HVW system & hydrant system, complete with all piping, valves, fittings,etc. inside pump house			set	1					
2	Hydrant system, complete U/G piping and accessories etc. outside the Pump House.			set	1					
3	HVW spray system, Hydrant system and complete U/G & O/G piping and accessories etc. out side the pump house for Transformer :									
3.1	132/11 kV Three Phase Transformer			nos	1					
E	**POWER & CONTROL CABLES**									
1	**1.1 kV LV Cables**									
1.1	Power Cables(PVC)- (1.1kV grade)			LS	1					
1.2	Control Cable (PVC)- (1.1kV grade)			LS	1					
1.3	Cable glands, lugs & straight through joints for Power & Control cables			LS	1					
F	Visual Monitoring System for watch & ward as per technical specification			LS	1					
G	Earthing and lightning protection including necesaary connectors/connections, risers etc. complete in all respect									
1.0	Earth Conductor (copper)			LS	1					
2.0	Earth Rod (copper clad steel)			LS	1					
3.0	Equipment for lightning protection			LS	1					
H	**SUBSTATION AUTOMATION**									
1	Integration of all 132/11kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project			LS	1					

Schedule No. 4 (a): Installation and Other Services
(a): Installation and Construction Charges

Sl. No.	Item Description	Installation Charges								
		Country of Origin	Type & Designation	Unit	Qty.	Portion in Foreign Currency			Portion in Nepalese Currency (in NPR)	
						Currency #	Unit Rate	Total Charges	Unit Rate	Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	7	8	9=8x6	10	11=10x6
2	Integration of all 132/11kV Bays under present scope with the SCADA of MCC at Baneshwor including supply of Hardware, Software, accessories etc. as per TS Section Project.			LS	1					
	SUB TOTAL PART-B									

Schedule No. 4 (a): Installation and Other Services
(a): Installation and Construction Charges

Sl. No.	Item Description	Installation Charges								
		Country of Origin	Type & Designation	Unit	Qty.	Portion in Foreign Currency			Portion in Nepalese Currency (in NPR)	
						Currency #	Unit Rate	Total Charges	Unit Rate	Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	7	8	9=8x6	10	11=10x6
	PART-C: Civil Works									
1.0	Excavation in all types of soil and rock including backfilling disposal etc. for all leads and lifts			Cu.M	6,000					
2.0	Providing and laying of Plain Cement Concrete (PCC) (1:4:8)			Cu.M	400					
3.0	Providing and laying of Plain Cement Concrete (PCC) (1:2:4)			Cu.M	200					
4.0	Providing and laying of Reinforced Cement Concrete Design Mix M25 including pre cast, shuttering, Grouting of pockets & underpinning but excluding steel reinforcement			Cu.M	6500					
5.0	Providing and laying Plain Cement Concrete 1:5:10 (1 cement : 5 sand : 10 Stone aggregate)			Cu.M	400					
6.0	Steel Reinforcement (Fe 500)			MT	1100					
7.0	Stone filling (40 mm size) over grating of transformer/ reactor foundation			Cu.M	105					
8.0	Misc. Structural steel including rails, embedments, edge protection angles, gratings etc. but excluding the reinforcement steel and steel for lattice and pipe structures.			MT	28					
9.0	Stone spreading including antiweed treatment in switchyard excluding PCC			Sq. M.	1000					
10.0	All civil works for following structures as per technical specification and approved drawings including internal and external finishing. However excavation, PCC, RCC and reinforcement steel (Fe-500), shall be measured and paid seperately under respective items of BPS :									
10.1	Fire fighting pump house building			Sq. M.	50					
10.2	Water Tank			LS	1					
10.3	Security room			Sq. M.	20					
11.0	**BUILDINGS**									
11.1	**CONTROL ROOM BULIDING**									
	All Civil works including finishing, internal cable trench, etc. complete as per technical specification and approved drawings, excluding excavation, PCC, RCC and reinforcement steel which shall be measured and paid seperately under respective items of BPS.			Sq.m	375					
11.1	**132kV GIS HALL**									



Schedule No. 4 (a): Installation and Other Services
(a): Installation and Construction Charges

Sl. No.	Item Description	Installation Charges								
		Country of Origin	Type & Designation	Unit	Qty.	Portion in Foreign Currency			Portion in Nepalese Currency (in NPR)	
						Currency #	Unit Rate	Total Charges	Unit Rate	Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	7	8	9=8x6	10	11=10x6
	All Civil works including finishing, internal cable trench, etc. complete as per technical specification and approved drawings, excluding excavation, PCC, RCC and reinforcement steel which shall be measured and paid seperately under respective items of BPS.			Sq.m	200					
11.1	**11kV SWITCHGEAR ROOM**									
	All Civil works including finishing, internal cable trench, etc. complete as per technical specification and approved drawings, excluding excavation, PCC, RCC and reinforcement steel which shall be measured and paid seperately under respective items of BPS.			Sq.m	160					
12.0	Concrete road as per drawing except reinforcement & concrete									
	(a) Road 3.75m wide			Sq.m	800					
13.0	Construction of rail cum road as per drawing including all items such as excavation, compaction, rolling, watering, WBM etc but excluding concrete, reinforcement and structural steel.									
	a) Section having four rails			Sq.m	125					
14.0	Chain link fencing as per technical sepcification and approved drawing excluding concrete			RM	300					
15.0	Switchyard Gate excluding Concrete			Nos.	2					
16.0	Septic tank and soak pit (10 User) complete as per technical specification and approved drawing excluding concrete & reinforcment which shall be measured and paid seperately under respective items of BPS .			LS	2					

Schedule No. 4 (a): Installation and Other Services
(a): Installation and Construction Charges

Sl. No.	Item Description	Installation Charges								
		Country of Origin	Type & Designation	Unit	Qty.	Portion in Foreign Currency			Portion in Nepalese Currency (in NPR)	
						Currency #	Unit Rate	Total Charges	Unit Rate	Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	7	8	9=8x6	10	11=10x6
17.0	Supplying & laying hume pipe of grade (NP-3) excluding concrete and reinforcement									
17.1	250mm dia			RM	150					
17.2	300mm dia			RM	120					
17.3	450mm dia			RM	80					
17.4	600mm dia			RM	40					
17.5	900mm dia			RM	10					
18.0	Supplying and erecting dewatering pumps									
18.1	5 HP			Nos.	2					
18.2	0.5 HP			Nos.	2					
19.0	Drains Excluding Concrete									
19.1	Section A-A (300 mm wide X depth up to 600mm)			RM	400					
19.2	Section B-B (450 mm wideX depth from 600 mm to 900 mm)			RM	200					
19.3	Section C-C (600 mm wide X depth from 900 mm to 1200 mm)			RM	100					
19.4	Section D-D (750 mm wide X depth from 1200 mm to 1500mm)			RM	100					
20.0	External water supply from borewell/main water supply point to Fire water Tank, control room building, township buildings									
	(i) 80 mm Dia GI pipe			RM	100					
	(ii) 50 mm Dia GI pipe			RM	80					
	(iii) 40mm Dia GI pipe			RM	60					
	(iii) 25mm Dia GI pipe			RM	40					
21.0	External sewerage system including all item such as excavation, piping, pipe fittings, manholes, gali trap, gali chamber etc.									
	(i) 250 mm Dia.			RM	50					
	(i) 150 mm Dia.			RM	50					
22.0	All civil works for Boundary wall including excavation, concrete, reinforcement steel ,structural steel, plaster, painting, barbed wire and concertina coil etc all complete as per technical specification (2.5 m high brick masonary wall and 0.5 m high angle support on top).			RM	500					
23.0	Main boundary wall Gate (Steel) including all works complete as per technical specification			LS	1					
24.0	**Site levelling**									
24.1	Earth work in excavation and filling in all types of soils including soft/disintegrated rock with all leads and lifts within sub station boundary			Cu. M	5000					

Schedule No. 4 (a): Installation and Other Services
(a): Installation and Construction Charges

Sl. No.	Item Description	Installation Charges								
		Country of Origin	Type & Designation	Unit	Qty.	Portion in Foreign Currency			Portion in Nepalese Currency (in NPR)	
						Currency #	Unit Rate	Total Charges	Unit Rate	Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	7	8	9=8x6	10	11=10x6
24.2	Earth work in filling with borrowed earth with all leads and lifts including royalty,taxes etc			Cu. M	2000					
25.0	Retaining Walls									
25.1	Construction of retaining wall with random rubble masonary in cement sand mortar (1:6) including levelling up with cement concrete (1:6:12), providing weep holes of PVC pipes (150 mm dia) with necessary filter material at the mouth of weep holes but excluding 50 mm thick cement concrete (1:2:4) copping on the top of wall, 100 mm thick PCC (1:4:8) below RR masonary work, excavation of foundation for all lifts up to 3m above from lower level. Item of excavation, PCC (1:2:4 & 1:4:8) shall be measured and paid seperately under respective items of BPS			Cu. M	2000					
25.2	Construction of RCC Retaining wall, excluding M25 concrete and reinforcement steel but including formwork all complete. M25 concrete and reinforcement steel, shall be measured and paid seperately under respective items of BPS			Cu.M	1000					
26	Soil Investigation as per TS			LS	1					
27	Detail Survey, Contour mapping			LS	1					
29	Supplying -Providing stone work packed in steel wire crats as per design and drawing to be developed by the contractor for all leads and lifts along the boundary wall and other places as required			Cu.M	1000					
30	Local sand filling around and under DG set foundation and other foundations as applicable			Cu.M	300					
31	Stone soling below foundations whereever specified in aproved drawings during detailed Engineering			Cu.M	200					
32	**Pile Foundation**									

Schedule No. 4 (a): Installation and Other Services
(a): Installation and Construction Charges

Sl. No.	Item Description	Installation Charges								
		Country of Origin	Type & Designation	Unit	Qty.	Portion in Foreign Currency			Portion in Nepalese Currency (in NPR)	
						Currency #	Unit Rate	Total Charges	Unit Rate	Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	7	8	9=8x6	10	11=10x6
32.1	Boring, providing and installation of bored cast-in-situ RCC vertical piles of specified diameter and of any length below the pile cap with M25 grade of concrete, excluding reinforcement steel and M25 concrete in all type of soil but including temporary guide casing (supplying and providing M.S Liner), Betonite solution and the length of pile to be embedded in the pile cap (Length of pile for payment shall be measured from bottom of pile cap), all necessary labour, plants, tools and tackles, excavation with necessary lift and lead etc. complete as necessary for proper execution of the job. RCC and reinforcement steel, shall be measured and paid seperately under respective items of BPS									
	a. 500mm diameter RCC bored pile of all type			meter	2500					
	b. 750 mm diameter RCC bored pile of all type			meter	2500					
	c. 1000 mm diameter RCC bored pile of all type			meter	2500					
32.2	Conducting integrity test on pile using electronic control unit, hand held hammer, accelerometer, computer with required software to assess as-installed pile characterestics including mobilisation of necessary manpower, equipments,materials etc. required for successful completion of the job			No.	500					
32.3	Initial Load Test			Lot	1					
32.4	Routine Test			Lot	1					
	SUB-TOTAL-C									
	Total for Mulpani Substation (Part-A+ Part-B+ Part C)									
	Total for Schedule 4(Total of column 9 and 11 to be carried forward to Schedule 5: Grand Summary)									

Specify currency in accordance with ITB Clause 12.1 and corresponding BDS clauses, Vol.I of the Bidding Documents.

Name of Bidder:
Signature of Bidder:
(Printed Name)
(Designation)
(Common Seal)

Date:

नेपाल विद्युत प्राधिकरण
स्थापित २०४२
ESTD. 1985
NEPAL ELECTRICITY AUTHORITY
Mulpani Substation Construction Project

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Mulpani Substation Construction Project

Electricity Grid Modernization Project-Additional Financing

PMD/EGMP/MSCP-077/78-01:Design, Supply, Installation and Commissioning of Gas insulated 132kV Mulpani Substation

Schedule No. 4 : Installation and Other Services *(Common for all)*

(b):Training Charges for training to be imparted abroad

Sl. No.	Description	Item for which training is to be imparted.	Country where training is to be imparted	Nos. of Trainee	Training duration in days	Total Training Charges	
						Currency	Total Training Charges
1	2		3	4	5	6	7 = 4x5 x 6
A	Training to Owners personnel on Design , testing and Maintenance aspect as per Section Project, Technical Specification at manufacturer's works	i) Control & Protection and Substation Automation System		3	5 days		
		ii) GIS		3	5 days		
		iii) Telecommunication Equipment (SDH ,MUX & NMS (Craft Terminal))		3	5 days		
		iv)Transformer		3	5 days		
	Total for Training Charges						
	Total for Schedule 4 (Total of column 7 to be carried forward to Schedule 5: Grand Summary)						

REMARKS:

1. Training at Manufacturer's works: The Contractor shall include in the training charges payment of per Diem allowance to NEA trainees @ USD 100 per day per trainee for the duration of training abroad towards accommodation, meals and other incidental expenses and to and fro economy class air ticket from Nepal to place of training. The duration of training shall be excluding travelling period.

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Mulpani Substation Construction Project

Electricity Grid Modernization Project-Additional Financing

PMD/EGMP/MSCP-077/78-01:Design, Supply, Installation and Commissioning of Gas insulated 132kV Mulpani Substation

Schedule No. 4 : Installation and Other Services *(Common for all)*

(c):Training Charges for training to be imparted to Employer's Personnel by Bidder's Instructor in Nepal

Sl. No.	Description of the Test	Item for which training is to be imparted.	Training duration in days	Currency	Training Charges for Contractors Trainers	
					Unit rate	Total Training Charges
1	2	3	4	5	6	7 = 4x 6
a)	On Job training on operation, maintenance and testing & commissioning aspectat at one Location in Nepal as per section Project, Technical Specification	i) Control & Protection	5			
		ii) Substation Automation System including integration aspect of existing SCADA (of Siemens suppliedSINAUT Spectrum Software) at Load Dispatch Center	5			
		iii. GIS	5			
		iv) Telecommunication Equipment (SDH ,MUX & NMS (Craft Terminal))	5			
		v. TRANSFORMERS	5			
	Total for Training Charges					
	Total for Schedule 4 (Total of column 7 to be carried forward to Schedule 5: Grand Summary)					

REMARKS:

2. On Job Training in Nepal: The traveling and living expenses of Owner's personnel for the training programme conducted in Nepal shall be borne by the Owner.

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Mulpani Substation Construction Project

Electricity Grid Modernization Project-Additional Financing

PMD/EGMP/MSCP-077/78-01:Design, Supply, Installation and Commissioning of Gas insulated 132kV Mulpani Substation

Schedule No. 4 : Installation and Other Services *(Common for all)*
(d): Maintenance Charges

Sl No	Description	Unit	Qty.	Total Maintenance Charges	
				Currency	Total Maintenance Charges
	1	2	3	4	5
1	Maintenance Charges for Communication Equipments including SDH & MUX. for One (1) year during Warranty period	Year	1		
2	Maintenance Charges for Communication Equipments including SDH & MUX. for Six (6) years after Warranty period	Year	6		
	Total Maintenance Charges for Communication Equipment Package (Total Schedule 4c)				
	Total for Schedule 4 (Total of column 5 to be carried forward to Schedule 5: Grand Summary)				

Name of Bidder: **Date:**
Signature of Bidder:
(Printed Name)
(Designation)
(Common Seal)

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Mulpani Substation Construction Project

Electricity Grid Modernization Project-Additional Financing

PMD/EGMP/MSCP-077/78-01:Design, Supply, Installation and Commissioning of Gas insulated 132kV Mulpani Substation

Schedule No. 5: Grand Summary

				Total	
Sl. No.	**Description**	**Total Price Foreign ( )***	**Total Price Local ( )***	**Total Price Foreign ( )***	**Total Price Local ( )***
1	**TOTAL SCHEDULE NO. 1**	**3**	**4**	**5**	**6**
	Plant and Equipment including Mandatory Spares to be supplied from abroad, including Type Test Charges for Type Tests to be conducted abroad.				
2	**TOTAL SCHEDULE NO. 2**				
	Plant and Equipment including Mandatory Spares Parts to be supplied from within Nepal including Type Test Charges				
3	**TOTAL SCHEDULE NO. 3**				
	Design Services				
4	**TOTAL SCHEDULE NO. 4**				
	a. Installation Charges				
	b. Training Charges for Training to be imparted abroad				
	c. Training Charges for Training to be imparted in Nepal				
	d. Maintenance charges				
	GRAND TOTAL [1+2+3+4(a)+4(b)+4 (c) +4 (d)]				

Date:
Place:

नेपाल विद्युत प्राधिकरण NEPAL ELECTRICITY AUTHORITY ESTD. 1985 Mulpani Substation Construction Project

Signature of Bidder