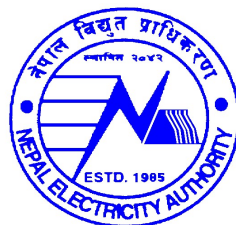


# NEPAL ELECTRICITY AUTHORITY

(An Undertaking of Government of Nepal)  
Project Management Directorate



CHOBHAR PATAN CHAPAGAUN 132 kV UNDERGROUND TRANSMISSION LINE  
PROJECT PROJECT

*A component of  
Electricity Grid Modernization Project-Additional Financing*

## BIDDING DOCUMENT FOR

**Procurement of Plant for  
Design, Supply, Installation, Testing and Commissioning of New Patan 132/66/11 kV GIS  
Substation (Package A1.2)**

**Single-Stage, Two-Envelope  
Bidding Procedure**

<b>Issued on:</b>	<b>5 July, 2023</b>
<b>Invitation for Bids No.:</b>	<b>PMD/EGMPAF/CPCUGTLP-079/80-01</b>
<b>OCB No.:</b>	<b>PMD/EGMPAF/CPCUGTLP-079/80-01</b>
<b>Employer:</b>	<b>Nepal Electricity Authority</b>
<b>Country:</b>	<b>Nepal</b>

VOLUME –III OF III

July, 2023

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**Chobhar Patan Chapagaun 132 kV Underground Transmission Line Project  
Project Management Directorate  
Matatirtha, Kathmandu  
Kathmandu, Nepal  
Telephone: +977-1-5164096**

## Table of Contents

### 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 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 and scope of work defined in Employer's Requirements. The Contractor shall prepare and submit the final BOQ within 90 days of signing of Contract.
- 4) The bidders are required to quote their price including all taxes and duties applicable in their country/ 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  
New Patan 132/66/11 kV GIS Substation

PMD/EGMPAF/CPCUGTLP-079/80-01 : Design, Supply, Installation, Testing and Commissioning of New Patan 132/66/11 KV GIS Substation (Package A1.2)

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

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				
		Currency#			Unit Rate	Amount			
	2	3	4	5	6	7	8 = (7) x (5)	9=8	10
Part 1	132/66/11kV GIS Patan Substation								
	PART - A: OWNER ASSESSED QUANTITIES								
A	POWER TRANSFORMER								
a)	51.5/63 MVA , 132/66 KV, 3-phase Outdoor Transformer fitted with RIP bushings & Nitrogen Injection Fire Protection cum extinguishing System (NIFPES) (Excluding insulating oil)complete with all fittings and accessories including main control cabinet, cooling control cabinet, digital RTCC panel, OLTC, bushing CT & neutral CTs, earthing arrangement, surge protection device and all fittings and accessories as specified/ required for the completion of the scope of works as per technical specifications		Nos.	2					
b)	31.5/45 MVA , 132/11 KV, 3-phase Outdoor Transformer with RIP bushings & Nitrogen Injection Fire Protection cum extinguishing System (NIFPES) (Excluding insulating oil)complete with all fittings and accessories including main control cabinet, cooling control cabinet, digital RTCC panel, OLTC, bushing CT & neutral CTs, earthing arrangement, surge protection device and all fittings and accessories as specified/ required for the completion of the scope of works as per technical specifications		Nos.	3					
c)	Insulating oil for 63 MVA , 132/66 KV, 3-phase Transformer (* 1Lot = Oil for 1 Transformers)		Lot*	2					
d)	Insulating oil for 45 MVA , 132/11 KV, 3-phase Transformer (* 1Lot = Oil for 1 Transformers)		Lot*	3					
B	Testing & Maintenance Equipments								
1	Oil Storage tank of 20KL		Nos.	1					
C	LT Transformer								
1	315 kVA 11/0.400 Kv ONAN		Nos.	2					
D	145kV and 72kV Equipment								
D.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 Project specification]		Sets	6					
1.4	145kV, SF6 GIS ICT feeder bay Module [ Module description as per Technical Project specification]		Sets	5					
D.2	145 kV AIS								
1.1	120 kV Surge Arrestor 1-phase as per TS for transformer protection as per TS if required)		nos	15					
D.3	66 kV AIS								
1.1	60 kV Surge Arrestor 1-phase as per TS for transformer protection as per TS if required)		nos	6					



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			Unit	Quantity	FC			FC	LC
					Currency#	Unit Rate	Amount		
	2	3	4	5	6	7	8 = (7) x (5)	9=8	10
	<b>E Testing &amp; Maintenance Equipment for GIS</b>								
1	SF6 Gas processing Unit		Set	1					
2	Partial Discharge Monitoring System each for 145 kV GIS system as per TS		Set	1					
3	Dew Point Meter for GIS system		Set	1					
4	SF6 Gas Leak Detector for GIS system		Set	1					
6	SF6 Gas Analyzer		Nos	1					
7	EOT crane for 132kV GIS Hall		Set	1					
	<b>F RELAY PANELS (WITH AUTOMATION)</b>								
1	<b>132 kV</b>								
a	132 kV Line Control & Protection Panel as per TS		Set	2					
b	132 kV Line Control & Protection Panel for spare line bay with directional Overcurrent and Earth fault relay		Set	4					
c	Transformer Control & Protection Panel (For 132/11kV)		Set	3					
d	Transformer Control & Protection Panel (For 132/66kV)		Set	2					
e	Buscoupler Control & Protection Panel		Set	1					
f	Bus Bar Protection Panel		Set	1					
2	<b>Other/Common equipments Pertaining to C &amp; R System</b>								
2.1	Time Synchronisation Equipment		No.	1					
2.2	Relay Test kit		No.	1					
	<b>G SUBSTATION AUTOMATION</b>								
1	Integration/upgradation/modification of existing Substation Automation System with new SAS including bus bar system and new SAS as per Technical Specification:								
a	Main bays to be automated								
i	132 kV system		Bay Nos	12					
ii	66 kV system		LS	1					
ii	11 kV system		LS	1					
iii	BCU for controlling & monitoring of Auxilary System		Set	1					
	<b>H Digital Protection Coupler &amp; IP-PBAX</b>								
1	IP-PBAX as per TS		Set	1					
	<b>I LT Switchgear (As per Technical specification)</b>								
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	48V DCDB		Set	1					
	<b>L Batteries &amp; UPS</b>								
1	220V								
i	600 Ah		Nos	1					
2	48V								
i	600 Ah		Nos	1					



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

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					Currency#	Unit Rate	Amount		
	2	3	4	5	6	7	8 = (7) x (5)	9=8	10
	<b>M Float Cum Boost Battery Charger</b>								
1	220V Float Cum Boost Battery Charger								
i	80A/80A		Nos	2					
2	48V Float Cum Boost Battery Charger								
J	80A/80A		Nos	2					
	<b>N Diesel Generator with control Panel</b>								
1	125 kVA		Nos	1					
	<b>O Fire Protection System</b>								
1	Portable /Trolley/Wheel mounted extinguishers								
1.1	9 litre water type		Nos	3					
1.2	50 litre foam type		Nos	1					
1.3	4.5 kg CO <sub>2</sub> type		Nos	5					
1.4	4.5 kg Dry Chemical Power (DCP) type		Nos	3					
2.0	Smoke detection system		Set	1					
3.0	Fire detection and Alarm System		Set	1					
	<b>P Cables along with clamps, glands, lugs and straight joints etc.</b>								
	<b>a) Low Voltage Cables 11 kv</b>								
1	3Rx1Cx800 sqmm (XLPE) copper cable along with accessories and termination arrangement for transformer/incomer as per TS		KM	0.5					
2	3Cx400 sqmm (XLPE) Aluminium cable along with accessories and termination arrangement for connection with nearby line & at necessary places as per TS		KM	0.5					
3	3Cx185 sqmm (XLPE) Aluminium cable along with accessories and termination arrangement for connection with STR transformer as per TS		KM	0.1					
	<b>b) Power Cables - (145kV grade)</b>								
i	1Cx300 sqmm (XLPE) copper cable for transformer bay along with termination arrangement as per TS		KM	1					
ii	Cable Sealing Ends suitable for 300 sqmm cable in GIS as per TS		No	15					
iii)	Cable Sealing Ends suitable for 300 sqmm for connection with transformer as per TS		No	15					
	<b>Q Air conditioning</b>								
1	High wall/casette type split AC unit of 2 TR capacities for control room, relay room and battery room		Nos.	15					
	<b>R STEEL STRUCTURES (required Equipment support structures &amp; other steel structures as required for Substation Works)</b>								
1.0	Lattice/pipe Structure LM,Gantry,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/pipe structure & foundation bolts		MT	20					
1.2	Fastners for towers,beams and equipment support strcutures		MT	2					

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

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			Unit	Quantity	FC			FC	LC
					Currency#	Unit Rate	Amount		
	2	3	4	5	6	7	8 = (7) x (5)	9=8	10
	<b>S Communication Equipment ( detail as per TS)</b>								
	<b>1.0 Transmission Equipment</b>								
	Telecommunication Equipments								
1.1	Telecommunication Equipment(STM-4 MADM upto 4 MSP protected directions as well as MPLS-TP 10G capacity upto 4 MSP protected direction)								
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 Siuchatar and Baneshwor Substations and SDH equipment at Balkumari, Chobhar, Harisiddhi etc		No.	1					
	(i) Optical Interface Cards/SFP								
	(a) S4.1 SFP								
	(b) 10G SFP		Nos.	6					
	(ii) Tributary cards								
	(a) E1 Interface card (Min.8 interfaces per card)		Nos.	1					
	Giga - Ethernet Interface 10/100/1000 Mbps Base T with Layer-2 switching (Min 8 Interfaces per card)		No.	3					
1.1.2	Equipment Cabinets		No	1					
1.1.3	VOIP telephone instrument with one common POE+ switch (min. 8 port)		set	3					
	<b>T PRE-ENGINEERED BUILDINGS</b>								
1	GIS Building and Panel Rooms including all supply materials from abroad except civil works and for civil works refer schedule 4(a)								
	(a) 132 kV GIS Hall		Sq. M.	230					
	(b) AHU		Sq. M.	35					
	<b>SUB TOTAL PART-A</b>								
	<b>PART-B: VENDOR ASSESSED QUANTITIES</b>								
	<b>A Erection Hardware :-Insulator strings, Disc Insulators, Hardware, conductor, bus-bar materials, cable trays, clamps, spacers, connectors including connectors for Transformer , Junction box, earthwire, earthing material risers, buried cable trenches/pipe of equipment &amp; lighting, all accessories etc. for the following:</b>								
1	132 kV & 66 kV termination/connection arrangement								
1.1	Line Bay		LS	1					
1.2	Transformer Bay		LS	1					
	<b>B Air conditioning &amp; ventilation System</b>								
1	Ventilation & Airconditioning system (as per technical specification)								
1.1	132 kv GIS Hall		LS	1					
	<b>C Illumination System</b>								
1.1	Substation Lighting								
1.1.1	Control Room cum administrative building & all other rooms illumination		LS	1					
1.1.2	132kV & GIS Building		LS	1					
1.1.3	Outdoor Switchyard Lighting		LS	1					



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

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	2	3	4	5	6	7	8 = (7) x (5)	9=8	10
	<b>D POWER &amp; CONTROL CABLES</b>								
1	1.1 kV LV Cables								
1.1	Power Cables(PVC)- (1.1kV grade) as per TS requirement		LS	1					
1.2	Control Cable (PVC)- (1.1kV grade) as per TS requirement		LS	1					
1.3	Cable glands, lugs & straight through joints for Power & Control cables		LS	1					
	<b>E Integration/upgradation/extension/modification of existing Visual Monitoring System to Visual Monitoring system for watch &amp; ward as per technical specification</b>		LS	1					
	<b>F Earthing and lightning protection including necessary connectors/connections, risers etc. complete in all respect( but excluding LM structures for Lightning protection)</b>								
1.0	Earth Conductor (copper)		LS	1					
2.0	Earth Rod (copper clad steel)		LS	1					
3.0	Equipment for lightning protection		LS	1					
	<b>G Substation Automation</b>								
1	Upgradation/modification/Adaptation works and extension of existing RTU to new SDH at the Control Room (cards, including cable, connectors, other hardware and software required for data transmission to LDC/ECC and remote operation)		LS	1					
2	Integration of all Bays under present scope and existing bays with the SCADA of SIEMENS (SINAUT Spectrum) at LDC/ECC of NEA including supply of Hardware, Software, accessories etc. as per TS Section Project.		LS	1					
3	Integration of all Bays with the MCC at Baneshwor Substation including supply of Hardware, Software, accessories etc. to complete scope of work.		LS	1					
	<b>SUB TOTAL PART-B</b>								
	<b>PART-C: MANDATORY SPARES (Break up of Lumpsum quantity shall be as per Annexure-I, Section Project of Technical Specification).</b>								
1	<b>Power Transformer 3 phase transformer</b>								
a)	Bushing of each type rating with metal parts & gaskets and lifting tools		Set	1					
b)	Cooler fan with Motor each type rating		No.	1					
c)	Buchholz Relay(Main Tank) complete with floats and contacts		Set	1					
d)	Local and Remote WTI with sensing device and contact(each)		Set	1					
e)	Magnetic oil level gauge		No.	1					
f)	Starters, contactors, switches & Relays for Electrical control panels(One set of each type)		Set	1					
g)	Remote Tap position Indicator		No.	1					
h)	Spare insulating oil to be handed over to Owner after commissioning for O&M requirement		KL	10					
	<b>2 Outdoor Equipment AIS</b>								
i)	Outdoor cable sealing end with accessories required for 132 kV cable of each type		No	1					



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

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<b>3</b>	<b>GIS(132 KV)</b>								
<b>3.1</b>	<b>General</b>								
3.1.1	SF6 gas Pressure Relief Devices, 1Nos. of each type		Set	1					
3.1.2	SF6 Pressure gauge cum switch OR Density monitors and pressure switch as applicable (1 no. of each type)		Set	1					
3.1.3	Coupling device for pressure gauge cum switch for connecting Gas handling plant		Set	1					
3.1.4	Rubber Gaskets, "O" Rings and Seals for SF6 gas of each type		Set	1					
3.1.5	Molecular filter for SF6 gas with filter bags(20% of total weight)		Set	1					
3.1.6	All types of Control Valves for SF6 gas of each type		Set	1					
3.1.7	SF6 gas (20 % of total gas quantity)		Set	1					
3.1.8	All types of coupling for SF6 gas (1 no. of each type)		Set	1					
3.1.9	Pipe length (Copper or Steel as applicable) for SF6 Circuit of each type		Set	1					
3.1.10	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								
3.1.10.1	For 3 Phase Enclosure if applicable		No.	1					
3.1.10.2	For Single phase enclosure if applicable		No.	1					
3.1.11	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					
3.1.12	Bus Support insulator of each type for 3 phase/single phase enclosure.		No.	1					
<b>3.2</b>	<b>132 kV XLPE Cable Termination for GIS of each type</b>		Set	1					
<b>3.3</b>	<b>145KV SF6 CIRCUIT BREAKER:</b>								
3.3.1	Complete Circuit Breaker pole of each type & rating complete with interrupter, main circuit enclosure and Marshalling Box with operating mechanism		No.	1					
3.3.2	Rubber gaskets, 'O' rings and seals for SF6 gas (1 No. of each type)		Set	1					
3.3.3	Trip coil assembly with resistor as applicable		Set	1					
3.3.4	Closing coil assembly with resistor as applicable .		Set	1					
3.3.5	Relays, Power contactors, push buttons, timers & MCBs etc (1 No. of each type & rating)		Set	1					
3.3.6	Closing coil assembly (including valve, if applicable)		Set	1					
3.3.7	Trip coil assembly (including valve, if applicable)		Set	1					
3.3.8	Auxiliary switch assembly of each type		Set	1					
<b>3.4</b>	<b>145KV ISOLATORS :</b>								
3.4.1	Complete set of 3-phase dis-connector including main circuit, enclosure, driving mechanism		Set	1					
3.4.2	3-phase Earthing switch including main circuit, enclosure, driving mechanism.		Set	1					
3.4.3	Copper contact fingers for dis-connector male & female contact for one complete (3 phase) dis-connector of each type and rating		Set	1					
3.4.4	Copper contact fingers for earthing switch male & female contacts, for one complete (3 phase) earthing switch of each type and rating		Set	1					
3.4.5	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					
3.4.6	Push button switch - (1 No. of each type & rating) as applicable		Set	1					
3.4.7	Limit switch and Aux. Switches for complete 3 phase equipment								
3.4.7.1	For isolator		Set	1					
3.4.7.2	For earth switch		Set	1					



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<b>3.5</b>	<b>145KV CURRENT TRANSFORMER</b>								
3.5.1	Gas insulated complete CT of each type and rating with enclosure.		No.	1					
3.5.2	Secondary bushing of each type		Set	1					
<b>3.6</b>	<b>145 kV Voltage Transformer</b>								
3.6.1	Gas insulated complete PT of each type and rating with enclosure.		No.	1					
<b>3.7</b>	<b>120kV SA</b>								
i)	Complete LA with surge monitor of each type		Nos	1					
<b>4</b>	<b>DG Set</b>								
4.1	Self starter assembly		No.	1					
4.2	AVR (Auto Voltage Regulator)/ AVR card		Set	1					
<b>6</b>	<b>Battery Charger</b>								
6.1	220V Battery Chargers								
6.1.2	Set of Control Cards		Set	1					
6.1.3	Set of relays		Set	1					
6.1.4	Rectifier transformer		No.	1					
6.1.5	Thyristor/ Diode		Set	1					
6.1.6	Fuses of Thyristor with indicators		Set	6					
6.2	48V Battery Chargers								
6.2.1	Set of Control Cards		Set	1					
6.2.2	Set of relays		Set	1					
6.2.3	Rectifier transformer		No.	1					
6.2.4	Thyristor/ Diode		Set	1					
6.2.5	Fuses of Thyristor with indicators		Set	6					
<b>7</b>	<b>Relay &amp; Protection</b>								
7.1.1	Line Protection Panel								
7.1.2	Numerical Differential/distance relay ( 1 no. of each type)		Set	1					
7.1.3	Transformer Protection Panel								
7.1.4	Transformer differential protection ( 1 no. of each type)		No.	1					
7.1.5	Restricted earth fault protection relay with non-linear resistor ( 1 no. of each type)		No.	1					
7.1.6	Directional over current & E/F Protection Relay ( 1 no. of each type)		no	1					
7.1.7	COMMON SPARES								
7.1.8	Power supply module for Bus Bar protection.		No.	1					
7.1.9	Bay unit module		Set	1					
7.1.10	Breaker protection Relay								
7.1.11	Breaker failure relay		No.	1					
7.1.12	Trip circuit supervision relay		Nos.	2					
7.1.13	Self reset trip relay (relay of each type)		Set	1					
7.1.14	Hand reset trip relay(relay of each type)		Set	1					
7.1.15	Timer relay(relay of each type)		Set	1					
7.1.16	DC supervision relay(relay of each type)		Set	1					
7.1.17	Flag relays(relay of each type)		Set	1					
7.1.18	Auxiliary relays(relay of each type)		Set	1					

Name of Bidder



Schedule-1, Page 7 of 8

*[Handwritten signature]*

Signature of Bidder

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
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	<b>8 Sub-Station Automation System</b>								
8.1	Bay control unit (IED) of each type		Set	1					
8.2	Ethernet switch of each type		Set	1					
	<b>9 LT Transformer</b>								
9.1	Bushings (Each type)		Set	1					
9.2	Diaphragm for pressure relief vent		No.	1					
9.3	Silica gel container		No.	1					
9.4	Set of Valves (Each Type)		Set	1					
9.5	Buchholz relay (if applicable)		No.	1					
	<b>10 Erection Hardware</b>								
10.1	5% spares of the actual quantities for Insulator strings & hardwares, clamps & connectors (including equipment connectors), spacers, corona bell and welding sleeves,		LS	1					
	<b>11 Telecommunication Equipments</b>								
11.1	Transmission Equipment								
11.1.1	SDH Equipment (STM-4 MADM upgradable to STM - 16 upto 4 MSP protected directions)								
11.1.1.1	Common cards, Power supply cards, power cabling, other hardware & accessories (each)		Set	1					
11.2	Optical Interface/SFP for								
11.2.1	S4.1 SFP		No.	2					
11.2.2	10G SFP		No	2					
11.3	Tributary Cards								
11.3.1	E1 Interface card (Min.8 interfaces per card)		No.	1					
11.3.2	Giga -Ethernet Interface 10/100/1000 Mbps Base T with Layer-2 switching (Min 8 Interfaces per card)		No.	1					
	<b>12 LT Indoor Switchgear</b>								
12.1	Each type of MCB,ACB, MCCB, ELCB		LS	1					
	<b>13 Fire Fighting</b>								
13.1	Recommended Spares		set	1					
	<b>14 Illumination recommended spares</b>								
	5% of each type of lighting fixtures		Ls	1					
	<b>SUB-TOTAL-C</b>								
	<b>Total For PART 1 Patan Substation [(Part-A+ Part-B+ Part C)]</b>								
	<b>Total for Schedule 1 ( Total of column 9 to be carried forward to Schdule 5: Grand Summary)</b>								

# Nepal Electricity Authority

Project Management Directorate

New Patan 132/66/11 KV GIS Substation

PMD/EGMPAF/CPCUGTLP-079/80-01 : Design, Supply, Installation, Testing and Commissioning of New Patan 132/66/11 KV GIS Substation (Package A1.2)

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

Item No.	Item description	Unit	Quantity	Ex Factory Price (Excluding VAT) in LC		Inland transportation to site in LC		Total Amount (Excluding Taxes )	VAT and other taxes
				Unit Rate	Amount	Unit Rate	Amount		
Part 1	2	3	4	5	6 = (4) x (5)	7	8=(4)x(7)	9=6+8	10
	132/66/11 kV GIS Patan Substation								
	<b>Total for Schedule 2 (Total of column 9 to be carried forward to Schdule 5: Grand Summary)</b>								

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.

<sup>a</sup> Specify currency in accordance with ITB 19.1 of the BDS.

<sup>b</sup> 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

Name of Bidder:

Date:

Signature of Bidder:

(Printed Name)

(Designation)

(Common Seal)



# Nepal Electricity Authority

Project Management Directorate

## New Patan 132/66/11 KV GIS Substation

PMD/EGMPAF/CPCUGTLP-079/80-01 : Design, Supply, Installation, Testing and Commissioning of New Patan 132/66/11 KV GIS

Substation (Package A1.2)

### Schedule A-3: Design Services

Item No.	Item Description	Estimated		Unit Prices		Total Prices	
				Local Currency Portion	Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion
		Quantity	Unit	NRs	Currency	LC	FC
1	2	3	4	5	6	7=3x5	8=3x6
1	Design Services						
	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

## New Patan 132/66/11 KV GIS Substation

PMD/EGMPAF/CPCUGTLP-079/80-01 : Design, Supply, Installation, Testing and Commissioning of New Patan 132/66/11 KV GIS Substation

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

(a): Installation and Construction Charges

Sl. No.	Item Description	Installation Charges			
		Unit	Qty.	Portion in Nepalese Currency (in NPR)	
				Unit Rate	Total Charges
(1)	(2)	(5)	(6)	10	11=10x6
<b>Part 1</b>	<b>Patan Substaion</b>				
	<b>Part-A : EMPLOYER ASSESSED QUANTITIES</b>				
<b>A</b>	<b>TRANSFORMER</b>				
<b>A1.1</b>	<b>POWER TRANSFORMER</b>				
a)	51.5/63 MVA , 132/66 KV, 3-phase Outdoor Transformer fitted with RIP bushings & Nitrogen Injection Fire Protection cum extinguishing System (NIFPES) (Excluding insulating oil)complete with all fittings and accessories including main control cabinet, cooling control cabinet, digital RTCC panel, OLTC, bushing CT & neutral CTs, earthing arrangement, surge protection device and all fittings and accessories as specified/ required for the completion of the scope of works as per technical specifications	Nos.	2		
b)	31.5/45 MVA , 132/11 KV, 3-phase Outdoor Transformer with RIP bushings & Nitrogen Injection Fire Protection cum extinguishing System (NIFPES) (Excluding insulating oil)complete with all fittings and accessories including main control cabinet, cooling control cabinet, digital RTCC panel, OLTC, bushing CT & neutral CTs, earthing arrangement, surge protection device and all fittings and accessories as specified/ required for the completion of the scope of works as per technical specifications	Nos.	3		
c)	Insulating oil for 63 MVA , 132/66 KV, 3-phase Transformer (* 1Lot = Oil for 1 Transformers)	Lot*	2		
d)	Insulating oil for 45 MVA , 132/11 KV, 3-phase Transformer (* 1Lot = Oil for 1 Transformers)	Lot*	3		
<b>A1.2</b>	<b>LT Transformer</b>				
1	315 kVA 11/0.400 Kv	Nos.	2		
<b>B</b>	<b>145 kV and 72 kV equipment</b>				
<b>B1</b>	<b>145KV GIS Equipment</b>				
1.01	145kV, SF6 GIS Bus Bars Module [ Module description as per Technical Project specification]	Set	2		
1.02	145kV, SF6 GIS ICT bay Module [ Module description as per Technical Project specification]	Set	5		
1.03	145kV, SF6 GIS Line bay Module [ Module description as per Technical Projct specification]	Set	6		
1.04	145kV, SF6 GIS Bus Coupler bay Module [ Module description as per Technical Project specification]	Set	1		



*[Handwritten Signature]*

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

Sl. No.	Item Description	Installation Charges			
		Unit	Qty.	Portion in Nepalese Currency (in NPR)	
				Unit Rate	Total Charges
(1)	(2)	(5)	(6)	10	11=10x6
B2	145 kV AIS Equipment				
1.1	120 kV Surge Arrestor 1-phase as per TS for transformer protection as per TS if required)	nos	15		
C	66 kV AIS				
1.1	60 kV Surge Arrestor 1-phase as per TS for transformer protection as per TS if required)	nos	6		
C	<b>Testing &amp; Maintenance Equipment for GIS</b>				
(i)	SF6 Gas Processing Unit for testing & processing	Set	1		
(ii)	Partial Discharge Monitoring System for 145kV GIS System as per Technical Specification, GIS	Set	1		
(iii)	EOT crane for 145kV GIS Hall	Set	1		
D	<b>CONTROL RELAY PANELS (WITH AUTOMATION)</b>				
1.0	<b>132 kV</b>				
a	132 kV Line Control & Protection Panel as per TS	Set	2		
b	132 kV Line Control & Protection Panel for spare line bay with directional Overcurrent and Earth fault relay	Set	4		
c	Transformer Control & Protection Panel (For 132/11kV)	Set	3		
d	Transformer Control & Protection Panel (For 132/66kV)	Set	2		
e	Buscoupler Control & Protection Panel (For 132 kV )	Set	1		
f	Bus Bar Protection Panel	Set	1		
2.0	<b>COMMON EQUIPMENTS</b>				
2.1	Time synchronisation equipment	No	1		
2.2	Relay Test Kit for testing	No	1		
E	<b>SUBSTATION AUTOMATION</b>				
E.1	Integration/upgradation/modification of existing Substation Automation System to new SAS including bus bar system and new SAS as per Technical Specification:for Complete Substation Automation System (SAS) for substation including hardware and software for the substation & remote control stations alongwith associated equipments for the following bays as per Technical Specification (including main and backup relays, auxillary relays, switches and other accessories for existing bays, where required)				
a	Main bays to be automated				
i	132 kV system	Bay Nos	12		
ii	66 kV system	LS	1		
iii	11 kV system	LS	1		
iv	BCU for controlling & monitoring of Auxilary System	Set	1		



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

Sl. No.	Item Description	Installation Charges			
		Unit	Qty.	Portion in Nepalese Currency (in NPR)	
				Unit Rate	Total Charges
(1)	(2)	(5)	(6)	10	11=10x6
<b>F</b>	Digital Protection Coupler & IP PABX				
<b>1.0</b>	IP PABX	Set	1		
<b>G</b>	LT Switchgear (As per Technical specification)				
<b>1.0</b>	400V Main switchboard	Set	1		
<b>2.0</b>	400V ACDB	Set	1		
<b>3.0</b>	400V MLDB	Set	1		
<b>4.0</b>	400V Emergency LDB	Set	1		
<b>5.0</b>	220V DCDB	Sets	1		
<b>6.0</b>	48V DCDB	Sets	1		
<b>H</b>	Batteries				
<b>1.0</b>	220V				
<b>i</b>	600 AH	Nos	1		
<b>2.0</b>	48V				
<b>i</b>	600 Ah	Nos	1		
<b>I</b>	Float Cum Boost Battery Charger				
<b>1.0</b>	220V Float Cum Boost Battery Charger				
<b>i</b>	80A/80A	Nos	2		
<b>2.0</b>	48V Float Cum Boost Battery Charger				
<b>i</b>	80A/80A	Nos	2		
<b>J</b>	Diesel Generator with control Panel				
<b>1.0</b>	125 kVA	Set	1		
<b>K</b>	Fire Protection System				
<b>a</b>	Portable /Trolley/Wheel mounted extinguishers				
<b>i</b>	9 litre water type	Nos	3		
<b>ii</b>	50 litre foam type	Nos	1		
<b>iii</b>	4.5 kg CO <sub>2</sub> type	Nos	5		
<b>iv</b>	4.5 kg Dry Chemical Power (DCP) type	Nos	3		
<b>b</b>	Smoke detection system	Set	1		
<b>c</b>	Fire detection and Alarm System	Set	1		
<b>L</b>	Cables along with clamps, glands, lugs and straight joints etc.				
<b>(a)</b>	Power Cables - (12kV grade)				
<b>i</b>	3Rx1Cx800 sqmm (XLPE) copper cable for Incomer with termination arrangement as per TS	KM	0.5		
<b>ii</b>	3Cx400 sqmm (XLPE) Aluminium cable along with accessories and termination arrangement for connection with nearby line & at necessary places as per TS	KM	0.5		



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

Sl. No.	Item Description	Installation Charges			
		Unit	Qty.	Portion in Nepalese Currency (in NPR)	
				Unit Rate	Total Charges
(1)	(2)	(5)	(6)	10	11=10x6
iii)	3Cx185 sqmm (XLPE) Aluminium cable along with accessories and termination arrangement for connection with STR transformer as per TS	KM	0.1		
b)	Power Cables - (145kV grade)				
i)	1Cx300 sqmm (XLPE) copper cable for transformer bay along with termination arrangement as per TS	KM	1.0		
ii)	Cable Sealing Ends suitable for 300 sqmm cable in GIS as per TS	No	15		
iii)	Cable Sealing Ends suitable for 300 sqmm for connection with transformer as per TS	No	15		
M	Air conditioning System for Control building				
a	High wall type/cassette type split AC unit of 2 TR capacity	Nos	15		
N	Fabrication, galvanising and supply of following Steel Structures including nuts, bolts, all types of washers, packplates, step bolts and gusset plates including foundation bolts.				
1.0	Lattice/pipe Structure LM,Gantry,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/pipe structure & foundation bolts	MT	20		
1.2	Fastners for towers,beams and equipment support strcutures	MT	2.0		
O	Communication Equipment				
	Transmission Equipment				
1.0	Telecommunication Equipments				
1.1	Telecommunication Equipment(STM-4 MADM upto 4 MSP protected directions as well as MPLS-TP 10G capacity upto 4 MSP protected direction)				
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 Bhaktapur, Patan and Baneshwor Substations.	No.	1		
(i)	Optical Interface Cards/SFP				
(a)	S4.1 SFP	Nos.			
b)	10G SFP	Nos.	6		
(ii)	Tributary cards				
(a)	E1 Interface card (Min.8 interfaces per card)	Nos.	1		
(b)	Giga -Ethernet Interface 10/100/1000 Mbps Base T with Layer-2 switching (Min 8 Interfaces per card)	No.	3		
1.1.2	Equipment Cabinets	No	1		
1.1.3	VOIP telephone instrument with one common POE+ switch (min. 8 port)	set	3		
	<b>Sub-Total Part-A</b>				





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

Sl. No.	Item Description	Installation Charges			
		Unit	Qty.	Portion in Nepalese Currency (in NPR)	
				Unit Rate	Total Charges
(1)	(2)	(5)	(6)	10	11=10x6
	<b>Part-B: CONTRACTOR ASSESSED QUANTITIES</b>				
<b>A</b>	Erection & Installation Hardware				
	Erection & Installation Hardware :-Insulator strings, Disc Insulators, Hardware, conductor, bus-bar materials, cable trays, clamps, spacers, connectors including connectors for Transformer , Junction box, earthwire, optical fibre cable,optical approach cable,ODF,optical related accesories, earthing material risers, buried cable trenches/pipe of equipment & lighting, all accessories etc. for the following:				
<b>a</b>	132 kV & 66 kV Termination/Connection Arrangement:				
<b>i</b>	Line Bay	LS	1		
<b>ii</b>	Transformer Bay	LS	1		
<b>B</b>	Air Conditioning & Ventillation System				
<b>1.0</b>	Ventilation & Airconditioning system (as per technical specification)				
<b>1.1</b>	132 GIS Hall	LS	1		
<b>C</b>	Illumination System				
<b>1.1</b>	Substation Lighting				
<b>1.1.1</b>	Control Room cum administrative building & all other rooms illumination	LS	1		
<b>1.1.2</b>	132kV GIS Building	LS	1		
<b>1.4</b>	Outdoor Switchyard Lighting	LS	1		
<b>D</b>	POWER & CONTROL CABLES				
<b>a</b>	Power Cables(PVC)- (1.1kV grade)	LS	1		
<b>b</b>	Control Cable (PVC)- (1.1kV grade)	LS	1		
<b>c</b>	Cable glands, lugs & straight through joints for Power & Control cables	LS	1		
<b>E</b>	Substation Automation				
<b>E.a</b>	Upgradation/modification/Adaptation works and extension of existing RTU to new SDH at the Control Room (cards, including cable, connectors, other hardware and software required for data transmission to LDC/ECC and remote operation)	LS	1		
<b>b</b>	Integration of all existing and under scope Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at LDC/ECC of NEA including supply of Hardware, Software, accessories etc. as per TS Section Project.	LS	1		
<b>c</b>	Integration of all existing and under scope Bays with the MCC at Baneshwor Substation including supply of Hardware, Software, accessories etc. to complete scope of work.	LS	1		



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

## (a): Installation and Construction Charges

Sl. No.	Item Description	Installation Charges			
		Unit	Qty.	Portion in Nepalese Currency (in NPR)	
				Unit Rate	Total Charges
(1)	(2)	(5)	(6)	10	11=10x6
<b>F</b>	Integration/Extension/upgradation/modification of existing Visual Monitoring System to Visual monitoring system for watch & ward as per technical specification	LS	1		
<b>G</b>	Earthing and lightning protection including necessary connectors/connections, risers etc. complete in all respect( but excluding LM structures for Lightning protection)				
<b>1.0</b>	Earth Conductor (copper)	LS	1		
<b>2.0</b>	Earth Rod (copper clad steel)	LS	1		
<b>3.0</b>	Equipment for lightning protection	LS	1		
	<b>Sub-Total Part-B</b>				
	PART-C: Civil Works (As per technical specification)				
1	Site Clearance Work				
1.1	Clearing and grubbing the site for construction by removing 150mm thick top soil including bushes, small trees, leveling of undulated ground, sorting and stacking/storing selected top soil for reuse in landscaping works, disposing unsuitable materials from site, etc., all complete as per drawings, specifications and instructions of the Engineer.	LS	1		
1.2	Dismantling and Disposing of Existing Building/Foundation deducting the salvation cost of reusable materials.,and transporting all stock/store materials to place all complete as per drawings, specifications and instructions of the Engineer.	LS	1		
1.3	Felling ,logging of marked trees, Debarking of logs, transportation to specified log yard, piling, stacking of firewood; Clear all bushing, trees with roots and level site for construction	LS	1		
2	Geotechnical Investigation as per TS	LS	1		
3	Detail Survey, Contour Mapping	LS	1		
4	Earthwork				
4.1	Earthwork in Excavation and then backfilling of all types of soil and rock for all leads and lifts.	CuM	2,000.00		
4.2	Earthwork in Filling with earth brought from outside with all leads and lifts including royalty,taxes etc	CuM	1,500.00		
5	Sand Filling				
5.1	Filling with local sand brought from outside with all leads and lifts including royalty,taxes etc	CuM	100.00		
6	PCC works				
6.1	Providing and laying of Plain Concrete Cement PCC (1:5:10)	CuM	100.00		
6.2	Providing and laying of Plain Concrete Cement PCC (1:4:8)	CuM	100.00		
6.3	Providing and laying of Plain Concrete Cement PCC (1:2:4)	CuM	100.00		



*[Handwritten Signature]*

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

## (a): Installation and Construction Charges

Sl. No.	Item Description	Installation Charges			
		Unit	Qty.	Portion in Nepalese Currency (in NPR)	
				Unit Rate	Total Charges
(1)	(2)	(5)	(6)	10	11=10x6
7	RCC Works				
7.1	Providing and Laying of Reinforced Cement Concrete Design Mix M20 including pre cast, shuttering, Grouting of pockets & underpinning but excluding steel reinforcement.	CuM	150.00		
7.2	Providing and Laying of Reinforced Cement Concrete Design Mix M25 including pre cast, shuttering, Grouting of pockets & underpinning but excluding steel reinforcement.	CuM	3000.00		
8	Providing and fixing in position Fe 500 steel reinforcement of various diameter confirming to standard code in R.C.C. works 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 per drawings, specifications and instruction of the the engineer. (Lap length shall not be measured for the payment).	MT	375.00		
9	Structural Steel				
	Miscellaneous Structural steel used for gratings, gratings supports etc for transformer /reactor foundation,cable support stand earthing cleats ,chequered plates, embedments, edge protection angles for cable trenches, structural steel used for rails and plate for rail fixing for transformer/reactor but excluding the reinforcement steel and steel for lattice and pipe structures, which shall be paid seperately.	MT	15.00		
10	Stone filling (40mm) over grating of Transformer /reactor Foundation	CuM	100.00		
11	Stone Spreading including antiweed treatment in switchyard excluding PCC	SqM	100.00		
12	Buidlings				
12.1	Control Room Building				
	All Civil Works including finishing, internal Cable Trenches, door windows, flooring, wall , roof, railing, paint etc all complete as per Technical Specifications and approved drawing but excluding excavation, PCC, RCC and Reinforcment Steel only which shall be measured and paid separately under respective items of BPS; (Ground Floor + First Foor + Roof Cover)	SqM	500.00		
12.2	132 kV GIS Hall				
	All Civil Works related to Pre-Engineered 132 kV GIS Hall to be supplied as per Schedule 1 including foundation, internal cable trench etc. but excluding excavation, PCC, RCC and Reinforcement only which shall be paid separately under respective items of BPS to erect the building as per approved drawing and Technical Specification				
(a)	132 kV GIS Hall	Sq. M.	230.00		
(b)	AHU	Sq. M.	35.00		
13	Chain Link fencing as per Technical Specification and approved drawing exluding concrete	RM	150.00		
14	Switchyard Gate excluding Concrete	Nos.	2		



*[Handwritten Signature]*

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

## (a): Installation and Construction Charges

Sl. No.	Item Description	Installation Charges			
		Unit	Qty.	Portion in Nepalese Currency (in NPR)	
				Unit Rate	Total Charges
(1)	(2)	(5)	(6)	10	11=10x6
15	Supplying & laying hume pipe of grade (NP-3) excluding concrete and reinforcement				
15.1	250mm dia	RM	50.00		
15.2	300mm dia	RM	50.00		
15.3	450mm dia	RM	50.00		
15.4	600mm dia	RM	50.00		
15.5	900mm dia	RM	10.00		
16	Supplying and erecting dewatering pumps				
16.1	5 HP	Nos.	2		
16.2	2 HP	Nos.	2		
17	External water supply from borewell/main water supply point to water Tank, control room building, township buildings as required				
17.1	80 mm Dia GI pipe	RM	100.00		
17.2	50 mm Dia GI pipe	RM	60.00		
17.3	40mm Dia GI pipe	RM	60.00		
17.4	25mm Dia GI pipe	RM	60.00		
18	External sewerage system including all item such as excavation, piping, pipe fittings, manholes, gali trap, gali chamber etc.				
18.1	250 mm Dia.	RM	60.00		
18.2	150 mm Dia.	RM	60.00		
19	Concrete Road (inside Substation) as per drawing except Reinforcement & Concrete	SqM	150.00		
20	Construction of Rail Cum Road as per drawing including all items such as excavation, compaction, rolling, watering, WBM etc but excluding concreting, Reinforcement and Structural Steel				
20.1	Section having two rails	SqM	150.00		
21	<b>Masonry Works</b>				
21.1	Providing and laying first class Chimney Fired brick masonry in cement mortar 1:4 (1cement : 4 coarse sand) in foundation upto plinth, superstructure and other specified places in all heights and level including the cost of single or multi stage self standing scaffolding, soaking bricks, curing, raking joints, provision for recesses, openings, toothing etc., all complete as per drawing, specifications and instructions of the Engineer.	CuM	100.00		
21.2	Providing and laying random rubble masonry 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, 50 mm thick cement concrete (1:2:4) copping on the top of wall, 100 mm thick PCC (1:4:8) below RR masonry work, excavation of foundation for all lifts up to 3m above lower level. Item of excavation, PCC (1:2:4 & 1:4:8) shall be measured and paid seperately under respective items of BPS	CuM	100.00		



*[Handwritten Signature]*

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

## (a): Installation and Construction Charges

Sl. No.	Item Description	Installation Charges			
		Unit	Qty.	Portion in Nepalese Currency (in NPR)	
				Unit Rate	Total Charges
(1)	(2)	(5)	(6)	10	11=10x6
<b>22</b>	<b>Plastering Works:</b>				
22.1	Plaster works over Masonry (1:4)	SqM	500.00		
22.2	Punning Works	SqM	500.00		
22.3	Pointing Works over Stone Masonry (1:3)	SqM	100.00		
23	Stone Soling Work below foundations wherever specified in approvaed drawing during Detailed Engineering	CuM	200.00		
24	Boring, Providing and installation of bored cast-in-situ RCC 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 types of soil but including temporary guide casting (supplying and providing M.S. Liner), Bentonite solution and the length of pile to be embedded in the pile cap (Length of pile for payment shall be measured form the bottoom 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 separately under respective items of BPS				
24.1	500 mm diameter RCC bored pile.	RM	400.00		
24.2	600 mm diameter RCC bored pile.	RM	2,000.00		
24.3	750 mm diameter RCC bored pile.	RM	400.00		
25	Conducting integrity test on pile using electronic control unit, hand held hammer, acclerometer, computer with required software to assess as-installed pile characterstics including mobilisation of necessary manpower, equipments, materials etc required for sucessful completion of the job.	Nos.	160.00		
26	Initial Load Test for Pile	LS	1		
27	Routine Test for Pile	LS	1		
	Sub-Total Part-C				
	Total For Patan Substation [(Part-A+ Part-B+ Part C)]				
	<b>Total for Schedule 4( Total of column 9 and 11 to be carried forward to Schedule 5: Grand Summary)</b>				

# 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)**



*[Handwritten signature]*

## Nepal Electricity Authority

Project Management Directorate

New Patan 132/66/11 KV GIS Substation

PMD/EGMPAF/CPCUGTLP-079/80-01 : Design, Supply, Installation, Testing and Commissioning of New Patan 132/66/11 KV GIS Substation

Schedule 4(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	Unit Rate	Total Training Charges
1	2		3	4	5			
	<b>Part 1 Patan Substation</b>							
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			
		ii) Gas Insulated Substation		3	5			
		iii) Telecommunication Equipment (SDH ,MUX & NMS (Craft Terminal))		3	5			
		iv) Transformer		3	5			
	<b>Total for Training Charges</b>							
	<b>Total for Schedule 4 (Total of column 7 to be carried forward to Schedule 5: Grand Summary)</b>							

REMARKS:

Name of Bidder:

Signature of Bidder:

(Printed Name)

(Designation)

(Common Seal)

Date:



**NEPAL ELECTRICITY AUTHORITY**  
PROJECT MANAGEMENT DIRECTORATE

**New Patan 132/66/11 kV GIS Substation**

**PMD/EGMPAF/CPCUGTLP-079/80-01 : Design, Supply, Installation, Testing and Commissioning of New Patan 132/66/11 KV GIS 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				
	<b>Part 1 Patan Substation</b>					
a)	On Job training on operation, maintenance and testing & commissioning aspect 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 supplied SINAUT Spectrum Software) at Load Dispatch Center	5			
		iii. Gas Insulate Substation	5			
		iv) Telecommunication Equipment (SDH ,MUX & NMS (Craft Terminal))	5			
		v. TRANSFORMERS	5			
	Total for Training Charges					
	Total for Training Charges					
	<b>Total for Schedule 4 (Total of column 7 to be carried forward to Schedule 5: Grand Summary)</b>					

**REMARKS:**

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

**Name of Bidder:**

**Date:**

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



NEPAL ELECTRICITY AUTHORITY  
PROJECT MANAGEMENT DIRECTORATE  
**New Patan 132/66/11kV GIS Substation**  
**PMD/EGMPAF/CPCUGTLP-079/80-01 : Design, Supply, Installation, Testing and Commissioning of New Patan**  
**132/66/11 KV GIS Substation**

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

**(d): Maintenance Charges**

SI No	Description	Unit	Qty.	Total Maintenance Charges	
				Currency	Total Maintenance Charges
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
	<b>Part 1 Patan Substation</b>				
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)				
	<b>Total for Schedule 4 (Total of column 5 to be carried forward to Schedule 5: Grand</b>				

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

**Date:**





**NEPAL ELECTRICITY AUTHORITY**  
**PROJECT MANAGEMENT DIRECTORATE**  
**New Patan 132/66/11kV GIS Substation**

**PMD/EGMPAF/CPCUGTLP-079/80-01 : Design, Supply, Installation, Testing and Commissioning of New Patan 132/66/11 KV GIS Substation (Package A1.2)**

**Schedule No. 5: Grand Summary**

Sl. No.	Description	Part 1: Patan GIS Substation	
		Total Price Foreign ( )*	Total Price Local ( )*
		<b>3</b>	<b>4</b>
<b>1</b>	<b>TOTAL SCHEDULE NO. 1</b>		
	Plant and Equipment including Mandatory Spares to be supplied from abroad, including Type Test Charges for Type Tests to be conducted abroad.		
<b>2</b>	<b>TOTAL SCHEDULE NO. 2</b>		
	Plant and Equipment including Mandatory Spares Parts to be supplied from within Nepal including Type Test Charges		
<b>3</b>	<b>TOTAL SCHEDULE NO. 3</b>		
	Design Services		
<b>4</b>	<b>TOTAL SCHEDULE NO. 4</b>		
	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		
<b>GRAND TOTAL [1+2+3+4(a)+4(b)+4 ( c) +4 (d)</b>			

**Name of Bidder:**

**Date:**

**Signature of Bidder:**

**(Printed Name)**

**(Designation)**

**(Common Seal)**



**NEPAL ELECTRICITY AUTHORITY**  
**PROJECT MANAGEMENT DIRECTORATE**  
**New Patan 132/66/11kV GIS Substation**

**Schedule No. 6: Recommended Availability/Optional Spares Parts and recommended Test Equipment in line with technical Specifications**

Item No.	Name & Description of Parts	Name of Original Manufacturer	Part No.	Number of Units in each set	Total No. of Sets to be provided	Unit Price	Total Price	Remarks

Date:

Signature: \_\_\_\_\_  
Printed Name: \_\_\_\_\_  
Designation: \_\_\_\_\_  
Common Seal: \_\_\_\_\_

