NEPAL ELECTRICITY AUTHORITY

(An Undertaking of Government of Nepal)
Project Management Directorate



KHIMTI-BARHABISE-LAPSIPHEDI 400 KV SUBSTATION PROJECT

A component of SASEC Power Transmission and Distribution System Strengthening Project

BIDDING DOCUMENT FOR

Procurement of Plant for

Design, Supply, Installation and Commissioning of 400 kV Gas insulated Substations (GIS) at New Khimti, Barhabise and Lapsiphedi

Single-Stage, Two-Envelope Bidding Procedure

Issued on: 21 May 2019

Invitation for Bids No.: PMD/PTDSSP/KBL-75/76-01 OCB No.: PMD/PTDSSP/KBL-75/76-01 Employer: Nepal Electricity Authority

Country: Nepal

VOLUME -III of III (Revised Bid Price Schedule(BPS) wrt. Amendment no. 3)

May 2019

Khimti-Barhabise-Lapsiphedi 400 kV Substation Project Project Management Directorate Matatirtha, Chandragiri-11, Kathmandu, Nepal Telephone: +977-1-5164096

NEPAL ELECTRICITY AUTHORITY PROJECT MANAGEMENT DIRECTORATE Khimti-Barhabise-Lapsiphedi 400 kV Substation Project

400 kV(GIS)/220kV (GIS) New Khimti ,Barhabise and Lapsiphedi Substations

Schedule No. 5: Grand Summary

S. N.	Description	New Khim	ti Substation	Barhabise	Substation	Lapsepheo	di Substation	Total of all three substations(New Khimti,Barhabise & Lapsiphedi)	
		Total Price Foreign ()*	Total Price Local (NPR)*	Total Price Foreign ()*	Total Price Local (NPR)*	Total Price Foreign ()*	Total Price Local (NPR)*	Total Price Foreign ()*	Total Price Local (NPR)*
1	TOTAL SCHEDULE NO. 1	1	2	1	2	1	2	1	2
	Plant and Equipment including Mandatory Spares to be supplied from abroad, including Type Test Charges for Type Tests to be conducted abroad.								
	Sub-Total 1								
2	TOTAL SCHEDULE NO. 2								
	Plant and Equipment including Mandatory Spares Parts to be supplied from within Nepal including Type Test Charges								
	Sub-Total 2								
3	TOTAL SCHEDULE NO. 3								
	Design Services								
	Sub-Total 3								
4	TOTAL SCHEDULE NO. 4								
	a. Installation & Construction Charges								
	b. Training Charges for Training to be imparted abroad								
	c. Training Charges for Training to be imparted in Nepal								
	d. Maintenance charges								
	e. Type test charges to be conducted abroad								
	Sub-Total 4								
	GRAND TOTAL Excluding Taxes & Customs [1+2+3+4(a)+4(b)+4 (c) +4 (d) +4 (e)]								

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

NEPAL ELECTRICITY AUTHORITY PROJECT MANAGEMENT DIRECTORATE Khimti-Barhabise-Lapsiphedi 400 kV Substation Project

400 kV(GIS)/220kV (GIS) New Khimti Substation

Schedule No. 5: Grand Summary

		New Khimti	Substation
SI. No.	Description	Total Price Foreign ()*	Total Price Local ()*
1	TOTAL SCHEDULE NO. 1	1	2
	Plant and Equipment including Mandatory Spares to be supplied from abroad, including		
	Type Test Charges for Type Tests to be conducted abroad.		
	Sub-Total 1		
2	TOTAL SCHEDULE NO. 2		
	Plant and Equipment including Mandatory Spares Parts to be supplied from within Nepal including Type Test Charges		
	Sub-Total 2		
3	TOTAL SCHEDULE NO. 3		
	Design Services		
	Sub-Total 3		
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		
	e. Type test charges to be conducted abroad		
	Sub-Total 4		
	GRAND TOTAL Excluding Taxes & Customs [1+2+3+4(a)+4(b)+4 (c) +4 (d) + 4 (e)]		

Nai	me of Bidder:		
Sig	nature of Bidder:		
(Pr	inted Name)		
(De	esignation)		
(Co	ommon Seal)		

FC: Foreign Currency LC: Local Currency

400 kV(GIS)/220kV (GIS) New Khimti Substation
Price Schedule No. 1:Plant, and Mandatory Spares Parts to be supplied from abroad (Revised wrt. Amendment no.3)

Price 50	chedule No. 1:Plant, and Mandatory Spares Parts to be supplied from abroad (Re	visea wrt. An	nenament n	0.3)			Total Amount		
Item No.	Description	Country of origin	Estim	ated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Custom, VAT
110.			Quantity	Unit		FC		FC	una otnor taxoo
			Quantity	Onne	Currency#	Unit Rate	Total Amount		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(4)x(7)	(9) =(8)	(10)
A	420kV SF6 Gas Insulated Switchgear and Accessories	ì	`	` '	` '	, ,	, , , , , ,	, , , ,	` '
a)	420kV, 5000A SF6 GIS Bus Bar Module [Module description as per technical specification, Chapter 1- PSR]		2	Sets					
b)	420kV, 4000A SF6 GIS Line Feeder bay Module [Module description as per technical specification, Chapter 1- PSR]		2	Sets					
c)	420kV, 2000A, SF6 GIS Auto Transformer bay Module [Module description as per technical specification, Chapter 1- PSR]		2	Sets					
d)	420kV, SF6 GIS Tie bay Module [Module description as per technical specification, Chapter 1- PSR]								
i)	4000A		1	Sets					
ii)	2000A		1	Sets					
e)	SF6 Gas Insulated Bus Duct (GIB) outside GIS Hall alongwith associated support structure and accessories			00.0					
i)	4000 A , 50kA for 1 sec. Single Phase		300	m					
ii)	2000 A , 50kA for 1 sec. Single Phase		200	m					
f)	400 kV, SF6 to Air Bushing alongwith associated support structure for Connecting GIS to AIS alongwith support structure		200						
i)	4000A, 50kA for 1 sec. Single Phase		6	nos					
ii)	2000A, 50kA for 1 sec. Single Phase		7	nos					
g)	420 kV Auxiliary Bus to connect spare unit of Transformer [Module description as per technical specification, Chapter 1-PSR]		1	Sets					
	Sub Total (A)								
	Out Total (A)								
B)	245 kV SF6 Gas Insulated Switchgear and Accessories								
,	SF6 Gas Insulated Bus Duct (GIB) outside GIS Hall alongwith associated support								
а	Istructure and accessories								
a.1	2000A, 40kA for 1 sec. Single Phase		360	mtr.					
b	220kV, SF6 to Air Bushing alongwith associated support structure for Connecting GIS to AIS alongwith support structure		300	mu.					
b.1	2000A, 40kA for 1 sec. Single Phase		7	nos					
0.1	220kV, SF6 to Cable Bushing alongwith associated support structure for Connecting			1103					
С	GIS to AIS alongwith support structure			1					
c.1	2000A, 40kA for 1 sec. Single Phase		7	nos					
d	245kV, SF6 GIS Bus Bar Module (EXTENSION)[Module description as per technical specification, Chapter 1- PSR]		2	Sets					
е	245kV, SF6 GIS Auto Transformer bay Module [Module description as per technical specification, Chapter 1- PSR]		2	Sets					
f	245 kV Auxiliary Bus to connect spare unit of Transformer [Module description as per Technical specification]		1	Set					
	Sub Total (B)								
	our roun (b)								

400 kV(GIS)/220kV (GIS) New Khimti Substation
Price Schedule No. 1:Plant, and Mandatory Spares Parts to be supplied from abroad (Revised wrt. Amendment no.3)

Item	Description	Country of origin	Estim			to site (Excluding Tax in Nepal)	clearing, forwarding and es and Duties applicable	Total Amount (Excluding Taxes and Duties)	Custom, VAT
			Quantity	Unit		FC		FC	und outer taxes
4.03		(2)	410	(=)			Total Amount	(2) (2)	(1.5)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(4)x(7)	(9) =(8)	(10)
C)	105 MVA,400/ $\sqrt{3}$ /220/ $\sqrt{3}/33$ kV Single Phase Auto Transformer as specified below								
1	105 MVA,400/√3 /220/√3/33 kV Single Phase Auto Transformer outdoor type, complete with all fittings and accessories including Main Control Cabinet, cooling control cabinet, RTCC panel, OLTC, and On line Dissolved Gas (Multi Gas) Analysis and moisture monitoring system, online insulating oil drying system (Cartridge type) with optical temperature sensor,necessary arrangment for Delta formation of LV winding & Neutral Formation and Earthing Arrangement, surge protection device and all fittings & accessories as specified/required for completion of the scope of works as per technical specification (without transformer Oil)		7	Nos.					
2	Insulating oil for 105 MVA,400/ $\sqrt{3}$ /220/ $\sqrt{3}$ /33 kV Single Phase Autotransformer (* 1Lot = Oil for 1 Autotransformers)		7	Lot*					
3	33kV Current transformer (NCT) for autotransformer		2	Nos.					
	Sub Total (C)								
D	LT TRANSFORMER		4	NI.					
1	630 kVA, 33/0.4kV		1	Nos					
	Sub Total (D)								
E)	420KV Outdoor Equipment								
1	336KV Surge Arrester (1-phase)		13	Nos.					
2	420kV BPI(1-Ph)		13	Nos.					
_	Sub Total (E)			. 100.					
F	245KV Outdoor Equipment								
1	216KV Surge Arrester (1-phase)		7	Nos.					
2	245kV BPI(1-Ph)		7	Nos.					
	Sub Total (F)								
G	72.5kV EQUIPMENT								
1	72.5 kV, 600A, 31.5kA Circuit Breaker (3-phase) with support structure			No.					
2	72.5 kV, 600A,31.5kA Isolators with earth switch (3-phase, DBR type)			No.					
3	72.5kV, 600A, 31.5 kA with 120% extended rating CT (1- Phase)			Nos.					
4	72.5kV PT.(1-phase)			Nos.					
5	30kV Surge Arrestors (1-Phase)			Nos.					
6	72.5 kV BPI (1-phase)		3	Nos.					
	Sub Total (G)								
	Provident Handson								
Н	Erection Hardware				 	1			
H.1	400kV One and Half Breaker-type layout for GIS termination arrangement								
1	Insulator strings, Disc Insulators, Hardware, conductor, bus-bar materials, cable trays, Bay MB, clamps, spacers, connectors including equipment connectors, connectors for Transformers, Junction box, earthwire, earthing material risers, buried cable trenches/pipe equipment & lighting, all accessories etc. applicable for the following:								

400 kV(GIS)/220kV (GIS) New Khimti Substation

Price Schedule No. 1:Plant, and Mandatory Spares Parts to be supplied from abroad (Revised wrt. Amendment no.3)

T TICC CC	nedule No. 1:Plant, and Mandatory Spares Parts to be supplied from abroad (Re	VISCU WIL. AII	ienument i	10.3)	CIP Project Site including insurance, clearing, forwarding and		LC: Local Currency		
Item	Description	Country of origin	Estin	nated			clearing, forwarding and es and Duties applicable	Total Amount (Excluding Taxes and Duties)	Custom, VAT
No.						FC		FC	and other taxes
			Quantity	Unit	Currency#	Unit Rate	Total Amount		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(4)x(7)	(9) =(8)	(10)
1.1	Transformer Bay	(0)		bays	(0)	(-)	(0)=(+)×(1)	(8) =(8)	(10)
2	Insulator strings, Disc Insulators, Hardware, conductor, bus-bar materials, cable trays, Bay MB, clamps, spacers, connectors including equipment connectors, Junction box, earthwire, earthing material risers, buried cable trenches/pipe equipment & lighting, all accessories etc. applicable for the following:		_	says					
2.1	Line Bay		2	bays					
H.2	000 LV DM (
H.Z	220 kV DM-type layout for GIS termination arrangement of Transformer								
1	Insulator strings, Disc Insulators, Hardware, conductor, bus-bar materials, cable trays, Bay MB, clamps, spacers, connectors including equipment connectors, connectors for Transformers, Junction box, earthwire, earthing material risers, buried cable trenches/pipe equipment & lighting, all accessories etc. for the following:								
1.1	Transformer Bay		2	bays					
H.3	For spare unit of 400/220/33 kV auto transformer connection through auxiliary buses (tertiary & Neutral auxiliary buses only), Neutral formation and delta formation (for two bank): Required 72.5 kV BPI for tertiary auxiliary bus & delta formation, 36 kV BPI for Neutral formation & Neutral auxiliary bus including Al tube, bus-bar materials, clamps, spacers, connectors, including equipment connectors, support structures, Earthing of spare unit as per technical specification.		1	Lot					
	Sub Total (H)								
	CONTROL RELAY AND PROTECTION PANELS (WITH AUTOMATION)								
1	400kV								
1.1	Circuit Breaker Relay Panel								
a a	CB Relay Panel With Auto Reclose		2	Cata					
b			4						
	CB Relay Panel With out Auto Reclose								
1.2	Line Protection Panel		2	Sets					
1.3	Transformer Protection Panel (For both HV & MV side) as per Specification		2	Sets					
1.4	Bus Bar Protection Panel								
а	400kV (Duplicate Bus Bar Protection)		1	Set					
b	Augmentation of existing 220 kV bus bar protection scheme	·	1	Lot					
2	Other/Common equipments Pertaining to C & R System								
а	Time synchronisation equipment		1	Nos.					
b	Special Relay Test kit		1	Nos.					
3	220kV								
а	CB Relay Panel With out Auto Reclose		2	Sets					
	Sub Total (I)								
J	SUBSTATION AUTOMATION								
1	Complete Substation automation system/ Augumentation Substation automation system- including hardware and software for the substation alongwith associated equipments for the following Main bays to be automated as per Technical								
-	Specification:		_	Nas		-			
а	400 kV System		<u> </u>	Nos.	l	L		1	

400 kV(GIS)/220kV (GIS) New Khimti Substation
Price Schedule No. 1:Plant, and Mandatory Spares Parts to be supplied from abroad (Revised wrt. Amendment no.3)

Item No.	Description	Country of origin	Estim			to site (Excluding Tax in Nepal)	clearing, forwarding and es and Duties applicable	Total Amount (Excluding Taxes and Duties)	Custom, VAT
			Quantity	Unit	Currency#	Unit Rate	Total Amount	FC	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(4)x(7)	(9) =(8)	(10)
b	220 kV System	(-)		Nos.	(-,	(-)	(5) (1)-(1)	(5) (5)	(10)
С	For Auxiliary system			Set					
2	Augumentations/Intregations of Operator Workstations (HMI) and all necessary accessories and software. In the present scope, bidder shall include BCUs required for 400 kV bays including all necessary hardware and software to integrate with the existing Substation Automation System including up-dation of system database, displays, and development of additional displays and reports all complete as per requirement.		1	Lot					
3	Integration of all 400/220kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. all complete as per Technical Specification.		1	Lot					
	Sub Total (J)								
16	Marcal management (MINO) and an								
K	Visual monitoring system (VMS) system								
a)	Visual monitoring system (VMS) as specified/required complete in all respect including HF Cable, Other necessary cabling and power supply system		1	Lot					
	Sub Total (K)								
	· ·								
L	LT Switchgear								
а	400V Main switchboard		1	Set					
b	400V ACDB		1	Set					
С	400V MLDB		1	Set					
d e	400V Emergency LDB 220V DCDB		1	Set Sets					
e	48V/50V DCDB		1	Sets					
	Sub Total (L)			Octo					
М	Batteries								
а	220V								
i	600 AH		2	Nos					
b	48V								
i	600 AH		2	Nos					
	Sub Total (M)								
N	Float Cum Boost Battery Charger								
a	220V Float Cum Boost Battery Charger								
i	80A/80A		2	Nos	 				
b	48V Float Cum Boost Battery Charger			1100					
i	80A/80A		2	Nos					
	Sub Total (N)								
0	Fire Protection System								
а	Portable /Trolley/Wheel mounted extinguishers								
i	9 litre water type		5	Nos	1				
ii 	50 litre foam type		2	Nos					
iii	4.5 kg CO ₂ type		8	Nos					

400 kV(GIS)/220kV (GIS) New Khimti Substation
Price Schedule No. 1:Plant, and Mandatory Spares Parts to be supplied from abroad (Revised wrt. Amendment no.3)

Item	Description	Country of origin	Estim			e including insurance, to site (Excluding Tax in Nepal)	Total Amount (Excluding Taxes and Duties)	Custom, VAT	
			Quantity	Unit	Currency#	Unit Rate	Total Amount	FC	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(4)x(7)	(9) =(8)	(10)
iv	4.5 kg Dry Chemical Power (DCP) type	(0)	5	Nos	(*)	(-7	(6)–(1).(1)	(6) –(6)	(,
b	Smoke detection system		1	Set					
С	Fire detection and Alarm System		1	Set					
d	Hydrant system, complete U/G piping and accessories etc. from existing HVW/Fire			001					
a	Hydrant point from Fire Fighting Pump House			_					
i	400 kV Substation		1	Set					
е	HVW spray system, Hydrant system and complete U/G & O/G piping and								
	accessories etc. out side the pump house for Transformer / Reactor :								
i	105 MVA , 400/220 KV, 1-phase Autotransformer		7	nos					
	Sub Total (O)								
Р	Air conditioning & Ventilation System								
а	High wall type split AC unit of 2 TR capacity for Air conditioning (AC) for LCC room of GIS Hall, Battery Room, Panel room cum administrative building		16	Nos					
b	Ventillation system for 400 kV GIS Hall		1	Lot					
	Sub Total (P)								
Q	Cables along with clamps, glands, lugs and straight joints etc.								
1	220 kV Cable								
1.1	220 kV grade 1 core, 1200sq.mm.XLPE insulated copper cable as per technical		2.40	km					
1.2	specification Cable end termination(s) on Gantry/Tower as per technical specification		12	200					
1.2	Sub Total (Q)		12	nos.					
	Sub Total (Q)								
R	Fabrication, galvanising and supply of STEEL STRUCTURES (400kV Double Dead End Transmission Tower,Column, Gantry structures& Equipment support structures)								
	Lattice/pipe Structure for tower,Colums,beams and equipments including peak								
	plates/pack washers and guest paltes including foundation bolts(nuts, washers, MS plate welded at the bottom)								
а	Lattice stucture & foundation bolts		207	MT					
b	Pipe Structure including Foundation Bolts .		19	MT					
С	Fastners for tower, Columns, beams and equipment support strutures		2	MT					
	Sub Total (R)								
	· ·								
S	Earthing and lightning protection including necesaary connectors/connections, risers etc. complete in all respect (but excluding LM structures for Lightning protection)								
i	Earth Conductor (copper)		1	LS					
ii	Earth Rod (copper clad steel)		1	LS					
iii	Equipment for lightning protection		1	LS					
	Sub Total (S)								
Т	Illumination System								
	Illumination System for GIS Hall and Control Building Complete as per Specification								
а	The state of the state and control building complete as per openitional of		1	LS					

400 kV(GIS)/220kV (GIS) New Khimti Substation

Price Schedule No. 1:Plant, and Mandatory Spares Parts to be supplied from abroad (Revised wrt. Amendment no.3)

Price St	chedule No. 1:Plant, and Mandatory Spares Parts to be supplied from abroad (Re	evised wit. All	nenament n	0.3)			LC: Local Currency			
	Description	Country of					clearing, forwarding and	Total Amount		
		Country of	Estim	ated	transportation	to site (Excluding Tax	es and Duties applicable	(Excluding Taxes and	Custom VAT	
Item	Description	origin				in Nepal)		Duties)	Custom, VAT	
No.	2000.p.io	Quantity Unit		1		FC		FC	and other taxes	
			Quantity	Unit	- "		I=	FC		
					Currency#	Unit Rate	Total Amount			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(4)x(7)	(9) =(8)	(10)	
b	Switchyard lighting		1	LS						
С	Street lighting		1	LS						
	Sub Total (T)									
	DOWER & CONTROL CARLES									
U	POWER & CONTROL CABLES									
а	Power Cables(PVC) - (1.1kV grade)		1	LS						
b	Power Cables (XLPE) - (1.1kV grade)		1	LS						
С	Control Cable (PVC) - (1.1kV grade)		1	LS						
d	Cable glands, lugs & straight through joints for Power & Control cables		1	LS						
	Sub Total (U)									
٧	Communication & Associated System									
	,		ļ				+	+		
а	Interfacing of SAS to Existing Communication & Associated System	<u> </u>	1	Lot						
b	Giga - Ethernet interfaces 10/100/1000 Mbps with Layer-2 switching Card		2	Nos						
U	(Minimum 4 interfaces per Card.)		_	1105						
	Sub Total (V)									
w	EOT Crane									
VV	EOT Grane									
	EOT crane with suitable double Runway rails including trolley runway with									
1	conductors, fixtures, insulations size suitable to operate as and when required,		1	Set						
	complete with all accessories and slings as detailed in the specifications.			001						
	leompiete with an accessories and simgs as actained in the specifications.									
	Sub Total (W)									
Х	Digital Protection Coupler									
1	Digital Protection Coupler		2	Nos						
	Sub Total (X)			1103						
	Sub Total (x)									
Υ	PRE-ENGINEERED BUILDINGS									
	400 kV GIS Building including all supply materials from abroad except civil									
i)	works and for civil works refer schedule 4(a)									
(a)	400 kV GIS Hall		700	Sq. M.						
	AHU/ Panels Room		350				-	-		
(b)		<u> </u>	350	Sq. M.						
	Sub Total (Y)									
z	MANDATORY SPARES *(Break up of Lumpsum quantity shall be as per									
	Annexure-I, Chapter-1, Project Specific Requirement)									
	· · · · · · · · · · · · · · · · · · ·									
1	Gas Insulated Switchgear			L	<u> </u>		<u> </u>	<u> </u>		
а	Mandatory Spares required during O&M of 400kV GIS Substation		1	LS						
2	400/220 kV, Auto Transformer		1	LS						
3	Surge Arrester		1							
			1	10			+	+		
a	336kV Surge Arrester			LS			+	+		
b	216kV Surge Arrester		1	LS						
4	Fire Fighting System		1	LS						
5	Battery Charger		1	LS						
6	Relay & Protection panel		1	LS						
7	Substation Automation System		1	LS						
	Oubstation Automation System	1	_ '		1	1		I	i	

400 kV(GIS)/220kV (GIS) New Khimti Substation
Price Schedule No. 1:Plant, and Mandatory Spares Parts to be supplied from abroad (Revised wrt. Amendment no.3)

FC: Foreign Currency LC: Local Currency

Item No.	Description		Estim				, clearing, forwarding and kes and Duties applicable	Total Amount (Excluding Taxes and Duties)	Custom, VAT
140.			Quantity	Unit		FC		FC	and other taxes
			Quantity		Currency#	Unit Rate	Total Amount		
(1)	(2)	(3)	(4)	(5)	(6)	(6) (7) (8)=(4)x(7)		(9) =(8)	(10)
8	Illumination System		1	LS					
9	LT Switchgear		1	LS					
10	Erection hardware		1	LS					
11	Bus Post Insulators								
а	420kV BPI (1-Ph)		1	nos					
	Sub Total (Z)								
	Grand Total of Schedule I								

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

LC: Local Currency (ALL Price in Local Currency)

Nepal Electricity Authority Project Management Directorate Khimti-Barhabise-Lapsiphedi 400 kV Substation Project

400 kV(GIS)/220kV (GIS) New Khimti Substation

Item No.	Item description	Quantity	Unit	Ex Faxtory	Price (Excluding VAT) in LC	in LC		Total Amount (Excluding Taxes)	VAT and other taxes
				Unit Rate	Amount				
1	2	3	4	5	6 = (3) x (5)	7	8=(3)x(7)	9=6+8	10

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.

Total for Schedule 2 (Total of column 9 to be carried forward to Schdule 5: Grand

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

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

400 kV(GIS)/220kV (GIS) New Khimti Substation

Price Schedule No 3: Design Services

				Unit	Prices	Total	Prices
em No.	Item Description	Estimated		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)

400 kV(GIS)/220kV (GIS) New Khimti Substation Schedule No. 4 (a): Installation and Other Services

FC: Foreign Currency LC: Local Currency

(a): Installation and Construction Charges (Revised wrt. Amendment no. 3)

Item	Description	Country of origin	Type & Designation	Estim	ated			Installation Cha	rges	
No.	Description			Quantity	Unit	Portio	on in Foreign Cu	urrency(FC)	Portion in Nep	alese Currency (in NPR)
				Quantity	Quantity Offic	Currency#	Unit Rate	Total Amount	Unit Rate	Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	(7	(8)	(9)=(5)x(8)	10	(11)=(5)x(10)
	Installation services									
Α	420kV SF6 Gas Insulated Switchgear and Accessories									
a)	420kV, 5000A SF6 GIS Bus Bar Module [Module description as per technical specification, Chapter 1- PSR]			2	Sets			-		
b)	420kV, 4000A SF6 GIS Line Feeder bay Module [Module description as per technical specification, Chapter 1- PSR]			2	Sets			-		
c)	420kV, 2000A, SF6 GIS Auto Transformer bay Module [Module description as per technical specification, Chapter 1- PSR]			2	Sets			-		
d)	420kV, SF6 GIS Tie bay Module [Module description as per technical specification, Chapter 1- PSR]									
i)	4000A			1	Sets			-		
ii)	2000A			1	Sets			-		
e)	SF6 Gas Insulated Bus Duct (GIB) outside GIS Hall alongwith associated support structure and accessories							-		
i)	4000 A, 50kA for 1 sec. Single Phase			300	m			-		
ii)	2000 A, 50kA for 1 sec. Single Phase			200	m			-		
f)	400 kV, SF6 to Air Bushing alongwith associated support structure for Connecting GIS to AIS alongwith support structure									
i)	4000A, 50kA for 1 sec. Single Phase			6	nos					
ii)	2000A, 50kA for 1 sec. Single Phase			7	nos					
g)	420 kV Auxiliary Bus to connect spare unit of Transformer [Module description as per technical specification, Chapter 1-PSR]			1	sets					
	Sub Total (A)							-		
В	245 kV SF6 Gas Insulated Switchgear and Accessories							-		
a)	SF6 Gas Insulated Bus Duct (GIB) outside GIS Hall alongwith associated support									
	structure and accessories									
a.1)	2000A, 40kA for 1 sec. Single Phase			360	mtr.					
b	220kV, SF6 to Air Bushing alongwith associated support structure for Connecting GIS to AIS alongwith support structure									
b.1	2000A, 40kA for 1 sec. Single Phase			7	nos					
С	220kV, SF6 to Cable Bushing alongwith associated support structure for Connecting GIS to AIS alongwith support structure									
c.1	2000A, 40kA for 1 sec. Single Phase			7	nos					
d	245kV, SF6 GIS Bus Bar Module (EXTENSION)[Module description as per technical specification, Chapter 1- PSR]			2	Sets					
е	245kV, SF6 GIS Auto Transformer bay Module [Module description as per technical specification, Chapter 1- PSR]			2	Sets					
f	245 kV Auxiliary Bus to connect spare unit of Transformer [Module description as per Technical specification]			1	Set					
	Sub Total (B)									

(a): Installation and Construction Charges (Revised wrt. Amendment no. 3)

Item	Illation and Construction Charges (Revised wrt. Amendment no. 3)	Country of origin	Type & Designation	Estim	ated			Installation Cha	arges	
No.	Description			Quantity	Unit		n in Foreign C	urrency(FC)	Portion in Nep	alese Currency (in NPR)
				Quantity	Onn	Currency#	Unit Rate	Total Amount	Unit Rate	Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	(7	(8)	(9)=(5)x(8)	10	(11)=(5)x(10)
С	105 MVA,400/ $\sqrt{3}$ /220/ $\sqrt{3}$ /33 kV Single Phase Auto Transformer as specified below							-		
1	105 MVA,400/√3 /220/√3/33 kV Single Phase Auto Transformer outdoor type, complete with all fittings and accessories including Main Control Cabinet, cooling control cabinet, RTCC panel, OLTC, and On line Dissolved Gas (Multi Gas) Analysis and moisture monitoring system, online insulating oil drying system (Cartridge type) with optical temperature sensor, necessary arrangment for Delta formation of LV winding & Neutral Formation and Earthing Arrangement, surge protection device and all fittings & accessories as specified/ required for completion of the scope of works as per technical specification (without transformer Oil)			7	Nos.			-		
2	Insulating oil for 105 MVA,400/ $\sqrt{3}$ /220/ $\sqrt{3}$ /33 kV Single Phase Autotransformer (* 1Lot = Oil for 1 Autotransformers)			7	Lot*			-		
3	33kV Current transformer (NCT) for autotransformer			2	Nos.			-		
	Sub Total (C)							-		
								-		
	LT TRANSFORMER									
1	630 kVA, 33/0.4kV			1	Nos.			-		
	Sub Total (D)							-		
Е	420KV Outdoor Equipment							-		
	336KV Surge Arrester (1-phase)			13	Nos.			-		
	420kV BPI(1-Ph)				Nos.			-		
	Sub Total (E)				1400.			-		
								-		
F	245KV Outdoor Equipment							-		
	216KV Surge Arrester (1-phase)				Nos.			-		
	245kV BPI(1-Ph)			7	Nos.			-		
	Sub Total (F)							-		
	72.5kV EQUIPMENT							-		
1	72.5 kV, 600A, 31.5kA Circuit Breaker (3-phase) with support structure				No.					
2	72.5 kV, 600A,31.5kA Isolators with earth switch (3-phase, DBR type)				No.					
3	72.5kV, 600A, 31.5 kA with 120% extended rating CT (1- Phase)				Nos.					
<u>4</u> 5	72.5kV PT.(1-phase) 30kV Surge Arrestors (1-Phase)				Nos.					
6	72.5 kV BPI (1-phase)				Nos.				1	
0	Sub Total (G)			3	NUS.					
	ous roun(o)									
Н	Erection Hardware							-		
H.1	400kV One and Half Breaker-type layout for GIS termination arrangement							-		
1	Insulator strings, Disc Insulators, Hardware, conductor, bus-bar materials, cable trays, Bay MB, clamps, spacers, connectors including equipment connectors, connectors for Transformers, Junction box, earthwire, earthing material risers, buried cable trenches/pipe equipment & lighting, all accessories etc. applicable for the following:							-		
1 1	Transformer Bay			2	bays			-	 	
	Insulator strings, Disc Insulators, Hardware, conductor, bus-bar materials, cable trays, Bay MB, clamps, spacers, connectors including equipment connectors, Junction box, earthwire, earthing material risers, buried cable trenches/pipe equipment & lighting, all accessories etc. applicable for the following:			2	-ayo			-		
2.1	Line Bay			2	bays			-		

(a): Installation and Construction Charges (Revised wrt. Amendment no. 3)

No.	Description	Country of origin	Designation	Latin	ated			installation Cha	mount Unit Rate Total Charg		
(1)		3	J	Quantity	Unit	Portio	n in Foreign C	urrency(FC)	Portion in Ner	palese Currency (in NPR)	
(1)				Quantity	Offic	Currency#		Total Amount		Total Charges	
(' /	(2)	(3)	(4)	(5)	(6)	(7	(8)	(9)=(5)x(8)	10	(11)=(5)x(10)	
H.2	220 kV DM-type layout for GIS termination arrangement of Transformer							-			
1	Insulator strings, Disc Insulators, Hardware, conductor, bus-bar materials, cable trays, Bay MB, clamps, spacers, connectors including equipment connectors, connectors for Transformers, Junction box, earthwire, earthing material risers, buried cable trenches/pipe equipment & lighting, all accessories etc. for the following:							-			
1.1	Transformer Bay			2	bays			-			
H.3	For spare unit of 400/220/33 kV auto transformer connection through auxiliary buses (tertiary & Neutral auxiliary buses only), Neutral formation and delta formation (for two bank): Required 72.5 kV BPI for tertiary auxiliary bus & delta formation, 36 kV BPI for Neutral formation & Neutral auxiliary bus including AI tube, bus-bar materials, clamps, spacers, connectors, including equipment connectors, support structures, Earthing of spare unit as per technical specification.			1	Lot						
	Sub Total (H)							-			
	CONTROL RELAY AND PROTECTION PANELS (WITH AUTOMATION)										
	400kV					ļ	ļ				
	Circuit Breaker Relay Panel			-	0	 	 				
	CB Relay Panel With Auto Reclose CB Relay Panel With out Auto Reclose			4	Sets						
	Line Protection Panel			2	Sets Sets	 	 		+		
	Transformer Protection Panel (For both HV & MV side) as per Specification				Seis			-			
1.3	Transformer Protection Famer (For Both TTV & MV side) as per specification			2	Sets			-			
	Bus Bar Protection Panel							-			
	400kV (Duplicate Bus Bar Protection)			1	Set			-			
h	Augmentation of existing 220 kV bus bar protection scheme (For 1 Nos. of ICT bays as specified)			1	Lot			-			
	Other/Common equipments Pertaining to C & R System							-			
а	Time synchronisation equipment			1	Nos.			-			
b	Special Relay Test kit			1	Nos.			-			
	220kV										
	CB Relay Panel With out Auto Reclose			2	Sets						
	Sub Total (I)							-			
	OUDOTATION AUTOMATION										
	SUBSTATION AUTOMATION Complete Substation automation system / Augumentation Substation automation system							-			
	Complete Substation automation system/ Augumentation Substation automation system- including hardware and software for the substation alongwith associated equipments for the following Main bays to be automated as per Technical Specification:							-			
	400 kV System			6	Nos.			-			
	220 kV System			2	Nos.			-			
	For Auxiliary system			1	Set			-		·	
2	Augumentations/Intregations of Operator Workstations (HMI) and all necessary accessories and software. In the present scope, bidder shall include BCUs required for 400 kV bays including all necessary hardware and software to integrate with the existing Substation Automation System including up-dation of system database, displays, and development of additional displays and reports alll complete as per requirement.			1	Lot			-			
2	Integration of all 400/220kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. complete as per Technical Specification.			1	Lot			-			
	Sub Total (J)							-			

FC: Foreign Currency

400 kV(GIS)/220kV (GIS) New Khimti Substation Schedule No. 4 (a): Installation and Other Services

LC: Local Currency (a): Installation and Construction Charges (Revised wrt. Amendment no. 3) Country of Type & **Estimated Installation Charges** origin Designation Description No. Portion in Foreign Currency(FC) Portion in Nepalese Currency (in NPR) Quantity Unit **Total Charges** Currency# Unit Rate Total Amount Unit Rate (1) (2) (9)=(5)x(8)10 (11)=(5)x(10) (3) (4) (5) (6) (7 (8) K Visual monitoring system (VMS) system Visual monitoring system (VMS) as specified/required complete in all respect including a) HF Cable, Other necessary cabling and power supply system Lot Sub Total (K) LT Switchgear a 400V Main switchboard Set b 400V ACDB Set c 400V MLDB Set d 400V Emergency LDB Set e 220V DCDB Sets f 48V/50V DCDB Sets Sub Total (L) Batteries M 220V а 600 AH 2 Nos 48V b 600 AH 2 Nos i Sub Total (M) Float Cum Boost Battery Charger 220V Float Cum Boost Battery Charger 80A/80A 2 Nos b 48V Float Cum Boost Battery Charger 80A/80A Nos Fire Protection System a Portable /Trolley/Wheel mounted extinguishers 9 litre water type Nos 5 ii 50 litre foam type 2 Nos 4.5 kg CO₂ type 8 Nos 4.5 kg Dry Chemical Power (DCP) type iv 5 Nos Smoke detection system b Set Fire detection and Alarm System Set С Hydrant system, complete U/G piping and accessories etc. from existing HVW/Fire Hydrant point from Fire Fighting Pump House Set i 400 kV Substation HVW spray system, Hydrant system and complete U/G & O/G piping and accessories etc. out side the pump house for Transformer / Reactor : i 105 MVA , 400/220 KV, 1-phase Autotransformer nos ub Total (O) Air conditioning & Ventilation System High wall type split AC unit of 2 TR capacity for Air conditioning (AC) for LCC room of GIS Hall, Battery Room, Panel room cum administrative 16 Nos Ventillation system for 400 kV GIS Hall Lot

(a): Installation and Construction Charges (Revised wrt. Amendment no. 3)

(a): Insta	allation and Construction Charges (Revised wrt. Amendment no. 3)									
Item		Country of origin	Type & Designation	Estim	ated			Installation Cha	arges	
No.	Description	Origin	Designation	0		Portio	on in Foreign C	urrencv(FC)	Portion in Nep	alese Currency (in NPR)
				Quantity	Unit	Currency#		Total Amount	Unit Rate	Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	(7	(8)	(9)=(5)x(8)	10	(11)=(5)x(10)
	Sub Total (P)							-		
								-		
Q	Cables along with clamps, glands, lugs and straight joints etc.									
1	220 kV Cable									
1.1	220 kV grade 1 core, 1200sq.mm.XLPE insulated copper cable as per technical specification			2.40	km					
1.2	Cable end termination(s) on Gantry/Tower as per technical specification			12	nos					
1.2	Sub Total (Q)			12	1100					
	Fabrication, galvanising and supply of STEEL STRUCTURES (400kV Double									
R	Dead End Transmission Tower, Column, Gantry structures & Equipment support							-		
	structures)									
	Lattice/pipe Structure for tower, Colums, beams and equipments including peak									
	plates/pack washers and guest paltes including foundation bolts(nuts,washers,MS plate									
	welded at the bottom)			007	NAT					
a b	M.S Structural steel including Foundation Bolts . Pipe Structure including Foundation Bolts .			207 19	MT MT			-		
С	Fastners for tower, Columns, beams and equipment support struttures			2	MT			_		
	Sub Total (R)				1411			_		
								-		
	Earthing and lightning protection including necesaary connectors/connections,									
s	risers etc. complete in all respect (but excluding LM structures for Lightning							_		
	protection)									
i	Earth Conductor (copper)			1	LS			-		
ii	Earth Rod (copper clad steel)			1	LS			-		
iii	Equipment for lightning protection			1	LS			-		
	Sub Total (S)							-		
								-		
Т	Illumination System							-		
а	Illumination System for GIS Halland Control Building Complete as per Specification			1	LS			-		
b	Switchyard lighting			1	LS			_		
С	Street lighting			1	LS					
- J	Sub Total (T)							_		
								-		
U	POWER & CONTROL CABLES							-		
а	Power Cables(PVC) - (1.1kV grade)			1	LS			-		
b	Power Cables (XLPE) - (1.1kV grade)			1	LS	<u> </u>		-		·
С	Control Cable (PVC) - (1.1kV grade)			1	LS	ļ		-		
d	Cable glands, lugs & straight through joints for Power & Control cables Sub Total (U)			1	LS			-		
	Jub Total (U)							-		
٧	Communication & Associated System							-		
	Interfacing of SAS to Existing Communication & Associated System			1	Lot	1		-		
	Giga - Ethernet interfaces 10/100/1000 Mbps with Layer-2 switching Card			_				_		
b	(Minimum 4 interfaces per Card.)			2	Nos					
	Sub Total (V)							-		
								-		
W	EOT Crane							-		
	EOT crane with suitable double Runway rails including trolley					1				
1	runway with conductors, fixtures, insulations size suitable to operate as and when required, complete with all accessories			1	Set	1		-		
	and slings as detailed in the specifications.					1				
L	ана отпро во вошнов ин ине эреопновного.	l	!	<u> </u>				4	-	

(a): Installation and Construction Charges (Revised wrt. Amendment no. 3)

Item		Country of origin	Type & Designation	Estim	ated			Installation Cha	mount Unit Rate Total Cha			
No.	Description	origin	Designation			Portio	on in Foreign C	Currency(FC)	Portion in Nen	alese Currency (in NPR)		
				Quantity	Unit	Currency#		Total Amount		Total Charges		
(1)	(2)	(3)	(4)	(5)	(6)	(7	(8)	(9)=(5)x(8)	10	(11)=(5)x(10)		
	Sub Total (W)							-				
	Digital Protection Coupler											
1	Digital Protection Coupler Sub Total (X)			2	Nos			-				
	Sub Total (X)							-				
	Civil Construction Works (As per technical specifications)							_				
	SECTION: A: NEA ASSESSED QUANTITIES											
	Excavation in all types of soil and rock including backfilling disposal etc. for all leads and											
1.0	lifts			12500	Cu.Mtr.			-				
2.0	Providing and laying of Plain Cement Concrete (PCC) (1:4:8)				Cu.Mtr.			-				
3.0	Providing and laying of Plain Cement Concrete (PCC) (1:2:4)			75	Cu.Mtr.			-				
4.0	Providing and laying of Reinforced Cement Concrete Design Mix (M25) including pre cast, shuttering, Grouting of pockets & underpinning but excluding steel reinforcement.			2310	Cu.Mtr.			-				
5.0	Providing and laying Plain Cement Concrete 1:5:10 (1 cement : 5 sand : 10 Stone aggregate)			330	Cu.Mtr.			-				
6.0	Steel Reinforcement (Fe 500)			210	MT			-				
7.0	Miscellaneous Structural steel used for rails , plates for rail fixing, gratings, gratings supports etc for transformer /reactor foundation, cable supportstand earthing cleats , chequered plates, embedments, edge protection angles for cable trenches but excluding the reinforcement steel and steel for lattice and pipe structures which shall be paid seperately.			30	МТ			-				
8.0	Stone filling (40mm) over grating of Transformer /reactor Foundation			420	Cu.Mtr.			-				
9.0	Stone spreading including antiweed treatment in switchyard but excluding PCC.			4200	Sq. Mtr.			-				
10.00	Supplying & laying hume pipe with collarsof grade (NP-3) but excluding reinforcement steel & concrete of bed/support/encasing of hume pipes which shall be paid seperately							-				
i)	250mm dia			25	RM			-				
ii)	300mm dia				RM			-				
iii)	450mm dia				RM			-				
iv)	600mm dia			25	RM			-				
11.00	Concrete road (including all crossings) as per technical specification and approved							-				
a.	drawing but excluding reinforcement & concrete Concrete Road			400	Sq. m.			_				
a.				400	Sq. III.							
12.0	Construction of rail-cum-raod as per technical specification and approved drawing including all items such as excavation, compaction, rolling, watering, WBM, etc but excluding concrete, reinforcement and structural steel which shall be paid seperately							-				
a.	Section having four rails			250	Sq. m.			_				
13.0	Chain link fencing as per technical specification and approved drawing but excluding concrete which shall be paid seperately				RM			-				
14.0	switch yard Gate excluding concrete			2	No			-				
15.0	Dismantling & rerection of existing fence including sorting and stacking of serviceable & non-serviceable materials and disposal of debris as per the direction of engineer-in-charge				RM			-				
16.00	Supplying and erecting dewatering pumps						1	_				
	5 HP			2	Nos.			-				
	0.5 HP				Nos.			-				
17.00	Drain including culverts but excluding concrete ,hume pipes & reinforcement steel which shall be paid seperately							-				
a.	Type AA				RM			-				
b.	Type BB			120	RM			-				

(a): Installation and Construction Charges (Revised wrt. Amendment no. 3)

FC: Foreign Currency LC: Local Currency

Item		Country of origin	Type & Designation	Estim	ated			Installation Cha	arges	
No.	Description			Quantity	Unit		on in Foreign C	urrency(FC)	Portion in Nep	palese Currency (in NPR)
				Quantity	anaty Ome	Currency#	Unit Rate	Total Amount	Unit Rate	Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	(7	(8)	(9)=(5)x(8)	10	(11)=(5)x(10)
c.	Type CC			15	RM			-		
d.	Type DD			15	RM			-		
18.00	External water supply as per technical from borewell to GIS Building including all items like excavation,pipes,fittings,jointings,valves,chambers/manholes etc							-		
	80mm Dia GI Pipe			150	RM			_		
	25mm Dia Gl Pipe				RM				1	
	External sewerage system including all item such as excavation, piping, pipe fittings,			50	KIVI			-	1	
19.00	manholes, gali trap, gali chamber etc.							-		
а	(i) 150 mm Dia.			75	RM			-		
20.0	Stone soling below foundations wherever specified in approved drawings during detailed engineering			90	Cu.Mtr.			-		
21.00	Site levelling							_		
21.00	Earth work in excavation and filling in all types of soils including soft/disintegrated rock				_					
i	with all leads and lifts within sub station boundary			40000	Cu.Mtr.			-		
ii	Earth work in filling with borrowed earth with all leads and lifts including royalty,taxes etc			2000	Cu.Mtr.					
22.00	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, 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 lower level. Item of excavation, PCC (1:2:4 & 1:4:8) shall be measured and paid seperately under respective items of BPS			1000	Cu.Mtr.					
23.0	PRE ENGINEERED BUILDINGS							-		
23.0	400 KV GIS BUILDING									
i)	All civil works related to pre-engineered 400 kV GIS Buliding to be supplied as per schedule 1 including internal cable trench, finishing(external & Internal) 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.									
(a)	GIS Hall			700	Sq. M.					
(b)	AHU/ Panels Room			350						
_ ` /	Geotechnical /Soil Investigation				LS			-		
	Total for Schedule 4(Total of column 9 and 11 to be carried forward to Schedule 5	: Grand Sur	nmary)					_		

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

Date:

Nepal Electricity Authority Project Management Directorate Khimti-Barhabise-Lapsiphedi 400 kV Substation Project

400 kV(GIS)/220kV (GIS) New Khimti Substation Schedule No. 4: Installation and Other Services

(b):Training Charges for training to be imparted abroad (Common for all three substations)

SI. No.	Description	Item for which training is to be imparted.	itraining is to hal		Training duration in days	Currency,	Training charge per Trainee per day	Total Training Charges
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)=(5)x(6)x(8)
	Training to Owners personnel on Design , testing and	i) GIS Equipments and System		4	5			
	Maintenance aspect as per Technical Specification at	ii) Control & Protection and Substation		4	5			
	manufacturer's works	Automation System						
	mandiacturer 5 works	iii) EHV GIS Substation Design		4	5			
	Total for Training Charges							

REMARKS:

1. Training at Manufacturer's works: The Contractor shall include in the training charges payment of per Diem allowance to NEA trainees @ USD 150 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.

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

400 kV(GIS)/220kV (GIS) New Khimti Substation

Schedule No. 4 : Installation and Other Services

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

SI. No.	Description of the Test	Item for which training is to be imparted.	Training duration in days	Currency	Per Day Training Charges for Contractors Trainers	Total Training Charges
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(4)x(6)
		i) Control & Protection	5			
a)	On Job training on operation, maintenance and testing & commissioning aspectat at one Location in Nepal as per Technical Specification	ii) Substation Automation System including integration aspect of existing SCADA (of Siemens suppliedSINAUT Spectrum Software) at Load Dispatch Center	5			
		iii) GIS	5			
		iv) Operation and Maintenance of Transformer & Reactors	5			
	Total for Training Charges					
	Total for Schedule 4 (Total of column 7 to be carried forward to Schedule 5: Grand Summary)					

REMARKS:

(Designation) (Common Seal)

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.

Name of Bidder:	Date:
Signature of Bidder:	
(Printed Name)	

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Khimti-Barhabise-Lapsiphedi 400 kV Substation Project

400 kV(GIS)/220kV (GIS) New Khimti Substation Schedule No. 4 : Installation and Other Services

(d): Maintenance Charges

SI No	Description Description	Unit	Qty.	Total Mair	ntenance Charges
31 140		Offic	Qιy.	Currency	Total Maintenance Charges
1	None	Year			
2	None	Year			
	Total for Schedule 4 (Total of column 5 to be carried forward to	Schedule 5: Gra	and Sum	nmary)	

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

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Khimti-Barhabise-Lapsiphedi 400 kV Substation Project

400 kV(GIS)/220kV (GIS) New Khimti Substation

Schedule No. 4 : Installation and Other Services

(e): Type Test Charges for Type Tests to be conducted abroad.(Common for all three substations) (Revised wrt. Amendment 1)

SI. No.		Description of Tests			
				Currency	Amount
1		2	3	4	5
	400/2	220kV 1-Ph , 53.33 MVA Auto Transformer			
1		Temperature rise test			
2		Measurement of harmonic level in no load current			
3	400/220 kV, 53.33 MVA, 1-Ph Auto	Measurement of acoustic noise level			
4	Transformer	Measurement of Zero seq. reactance			
5		Measurement of power taken by fans and oil pumps			
6		Dynamic Short Circuit Test for only 1-Ph Auto Transformer			
	400/	/220kV 1-Ph , 105 MVA Auto Transformer			
1		Temperature rise test			
2		Measurement of harmonic level in no load current			
3	400/220 kV, 105 MVA, 1-Ph Auto	Measurement of acoustic noise level			
4	Transformer	Measurement of Zero seq. reactance			
5		Measurement of power taken by fans and oil pumps			
6		Dynamic Short Circuit Test for only 1-Ph Auto Transformer			
	Total of Type Tests charges (Total of	f column 5 to be carried forward to Schedule 5: Grand Summary)			
	Total of Type Tests Charges (Total o	ocidinii o to so carried for ward to ochedule o. Orand odininary)			

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

Nepal Electricity Authority

Project Management Directorate
Khimti-Barhabise-Lapsiphedi 400 kV Substation Project

400 kV(GIS)/220kV (GIS) New Khimti 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
	None							

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

NEPAL ELECTRICITY AUTHORITY PROJECT MANAGEMENT DIRECTORATE Khimti-Barhabise-Lapsiphedi 400 kV Substation Project

400 kV(GIS)/220kV (GIS) Barhabise Substation

Schedule No. 5: Grand Summary

		Barhabise Substation				
SI. No.	Description	Total Price	Total Price			
		Foreign ()*	Local ()*			
1	TOTAL SCHEDULE NO. 1	1	2			
	Plant and Equipment including Mandatory Spares to be supplied from abroad, including					
	Type Test Charges for Type Tests to be conducted abroad.					
	Sub-Total 1					
2	TOTAL SCHEDULE NO. 2					
	Plant and Equipment including Mandatory Spares Parts to be supplied from within Nepal					
	including Type Test Charges					
	Sub-Total 2					
3	TOTAL SCHEDULE NO. 3					
	Design Services					
	Sub-Total 3					
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					
	e. Type test charges to be conducted abroad					
	Sub-Total 4					
	GRAND TOTAL Excluding Taxes & Customs [1+2+3+4(a)+4(b)+4 (c) +4 (d) + 4 (e)]					

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

400 kV(GIS)/220kV (GIS) Barhabise Substation

FC: Foreign Currency

Price Sc	hedule No. 1:Plant, and Mandatory Spares Parts to be supplied from abroad (Rev	ised wrt. Amen	dment no. 3	3)				LC: Local Currency	
Item	Description	Country of origin	Estim	nated	CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			(Excluding Taxes and Duties)	Custom, VAT and other
			Quantity	Unit	0	FC Unit Rate	I=	FC	taxes
(4)		(2)	(4)	(=)	Currency#		Total Amount	(0) (0)	(10)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(4)x(7)	(9) =(8)	(10)
Α	420kV SF6 Gas Insulated Switchgear and Accessories								
a)	420kV, 5000A SF6 GIS Bus Bar Module [Module description as per technical specification, Chapter 1- PSR]		2	Sets					
b)	420kV, 4000A SF6 GIS Line Feeder bay Module [Module description as per technical specification, Chapter 1- PSR]		4	Sets					
c)	420kV, 2000A, SF6 GIS Auto Transformer bay Module [Module description as per technical specification, Chapter 1- PSR]		2	Sets					
d)	420kV, 4000A, SF6 GIS Bus Shunt Reactor bay Module [Module description as per technical specification, Chapter 1- PSR]		1	Sets					
e)	420kV, SF6 GIS Tie bay Module [Module description as per technical specification, Chapter 1- PSR]								
i)	4000A		3	Sets					
ii)	2000A		1	Sets					
f)	SF6 Gas Insulated Bus Duct (GIB) outside GIS Hall alongwith associated support structure and accessories								
i)	4000 A, 50kA for 1 sec. Single Phase		750	m					
ii)	2000 A , 50kA for 1 sec. Single Phase		200	m					
g)	400 kV, SF6 to Air Bushing alongwith associated support structure for Connecting GIS to AIS alongwith support structure								
i)	4000A, 50kA for 1 sec. Single Phase		15	nos					
ii)	2000A, 50kA for 1 sec. Single Phase		7	nos					
h)	420 kV Auxiliary Bus to connect spare unit of Transformer [Module description as per technical specification, Chapter 1-PSR]		1	Sets					
	Sub Total (A)								
B)	245 kV SF6 Gas Insulated Switchgear and Accessories								
a)	SF6 Gas Insulated Bus Duct (GIB) outside GIS Hall alongwith associated support structure and accessories								
a.1)	2000A, 40kA for 1 sec. Single Phase		240	mtr.					
b	220kV, SF6 to Air Bushing alongwith associated support structure for Connecting GIS to AIS alongwith support structure								
b.1	2000A, 40kA for 1 sec. Single Phase		7	nos					
С	220kV, SF6 to Cable Bushing alongwith associated support structure for Connecting GIS to AIS alongwith support structure								
c.1	2000A, 40kA for 1 sec. Single Phase		7	nos					
d	245kV, SF6 GIS Bus Bar Module (EXTENSION)[Module description as per technical specification, Chapter 1- PSR]		2	Sets					
е	245kV, SF6 GIS Auto Transformer bay Module [Module description as per technical specification, Chapter 1- PSR]		2	Sets					
f	245 kV Auxiliary Bus to connect spare unit of Transformer [Module description as per Technical specification]		1	Set					
	Sub Total (B)								

Price Schedule No. 1:Plant, and Mandatory Spares Parts to be supplied from abroad (Revised wrt. Amendment no. 3)

Price Sc	hedule No. 1:Plant, and Mandatory Spares Parts to be supplied from abroad (Rev	ised wrt. Amen	dment no. 3)				LC: Local Currency	
		Country of				cluding insurance,			
Item			origin Estimated		and transportation	on to site (Excluding	(Excluding Taxes and	Custom, VAT	
No.	Description	Origin			applicable in Nepal)			Duties)	and other
140.			Quantity	Unit		FC		FC	taxes
			quartity	Onne	Currency#	Unit Rate	Total Amount		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(4)x(7)	(9) =(8)	(10)
С	53.33 MVA,400/√3 /220/√3/33 kV Single Phase Auto Transformer as specified below								
1	53.33 MVA,400/√3 /220/√3/33 kV Single Phase Auto Transformer outdoor type, complete with all fittings and accessories including Main Control Cabinet, cooling control cabinet, RTCC panel, OLTC, and On line Dissolved Gas (Multi Gas) Analysis and moisture monitoring system, online insulating oil drying system (Cartridge type) with optical temperature sensor,necessary arrangment for Delta formation of LV winding & Neutral Formation and Earthing Arrangement, surge protection device and all fittings & accessories as specified/ required for completion of the scope of works as per technical specification (without transformer Oil)		7	Nos.					
2	Insulating oil for 53.33 MVA,400/\d3 /220/\d3/33 kV Single Phase Autotransformer (* 1Lot = Oil for 1 Autotransformers)		7	Lot*					
3	33kV Current transformer (NCT) for autotrasnformer		2	Nos		<u> </u>			
	Sub Total (C)								
D	50MVAR, 420kV, three phase, 50 Hz Bus Shunt Reactor as specified below:								
1	50MVAR, 420kV, three phase, 50 Hz separate winding Shunt Reactor, oil immersed, ONAN cooled, outdoor type complete with all fittings and accessories including Bushing & Current Transformers as detailed in the specifications & each equipped with the following: i) On line insulating oil drying system (Cartridge type) ii) On line Dissolved Gas (Multi Gas) Analysis and moisture monitoring system with optical temperature sensor		1	Nos.					
2	Insulating oil for first filling plus 10% extra to account for spillage etc. during filling for the Shunt Reactor		1	lot					
	Sub Total (D)								
E	LT TRANSFORMER								
1	630 kVA, 33/0.4kV		1	Nos					
	Sub Total (E)								
	420KV Outdoor Equipment								
	336KV Surge Arrester (1-phase)			Nos.					
2	420kV BPI(1-Ph)		19	Nos.					
	Sub Total (F)								
G	245KV Outdoor Equipment								
	216KV Surge Arrester (1-phase)		7	Nos.					
	245kV BPI(1-Ph)			Nos.					
	Sub Total (G)			1405.					
	our rolar(o)								
н	72.5kV EQUIPMENT								
1	72.5 kV, 600A, 31.5kA Circuit Breaker (3-phase) with support structure		1	No.		1			
2	72.5 kV, 600A,31.5kA Isolators with earth switch (3-phase, DBR type)			No.					
3	72.5kV, 600A, 31.5 kA with 120% extended rating CT (1- Phase)			Nos.					
4	72.5kV PT.(1-phase)		3	Nos.					
5	30kV Surge Arrestors (1-Phase)		3	Nos.					
6	72.5 kV BPI (1-phase)		3	Nos.					
	Sub Total (H)								

Price Schedule No. 1:Plant, and Mandatory Spares Parts to be supplied from abroad (Revised wrt. Amendment no. 3)

Price Sc	hedule No. 1:Plant, and Mandatory Spares Parts to be supplied from abroad (Rev	ised wrt. Amen	dment no. 3	3)				LC: Local Currency	
		Country of			CIP Project Site in	ncluding insurance,	clearing, forwarding	Total Amount	
14		Country of	Estim	nated			g Taxes and Duties	(Excluding Taxes and	Custom, VAT
Item	Description	origin				applicable in Nepa	nl)	Duties)	and other
No.	·					FC	'	FC	taxes
			Quantity	Unit	Currency#	Unit Rate	Total Amount		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(4)x(7)	(9) =(8)	(10)
(1)	(2)	(3)	(4)	(3)	(0)	(1)	(0)=(4)^(1)	(9) =(0)	(10)
	Facetion Handware								
!	Erection Hardware								
I.1	400kV One and Half Breaker-type layout for GIS termination arrangement								
	Insulator strings, Disc Insulators, Hardware, conductor, bus-bar materials, cable trays,								
1	Bay MB, clamps, spacers, connectors including equipment connectors, connectors for								
1	Transformers, Junction box, earthwire, earthing material risers, buried cable								
	trenches/pipe equipment & lighting, all accessories etc. applicable for the following:								
	Transformer Bay			bays					
1.2	Reactor Bays		1	bays					
	Insulator strings, Disc Insulators, Hardware, conductor, bus-bar materials, cable trays,								
	Bay MB, clamps, spacers, connectors including equipment connectors, Junction box,								
2	earthwire, earthing material risers, buried cable trenches/pipe equipment & lighting, all								
	accessories etc. applicable for the following:								
2.1	Line Bay		4	bays					
1.2	220 kV DM-type layout for GIS termination arrangement of Transformer								
	220 KV Sin type layout for Gio termination arrangement of Transformer								
	Insulator strings, Disc Insulators, Hardware, conductor, bus-bar materials, cable trays,								
	Bay MB, clamps, spacers, connectors including equipment connectors, connectors for								
1	Transformers, Junction box, earthwire, earthing material risers, buried cable								
	trenches/pipe equipment & lighting, all accessories etc. for the following:								
	3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4,								
1.1	Transformer Bay		2	bays					
	For spare unit of 400/220/33 kV auto transformer connection through auxiliary buses (
	tertiary & Neutral auxiliary buses only), Neutral formation and delta formation (for two								
1.3	bank): Required 72.5 kV BPI for tertiary auxiliary bus & delta formation, 36 kV BPI for		1	Lot					
	Neutral formation & Neutral auxiliary bus including Al tube, bus-bar materials, clamps,								
	spacers, connectors, including equipment connectors, support structures, Earthing of								
	spare unit as per technical specification.								
	Sub Total (I)								
J	CONTROL RELAY AND PROTECTION PANELS (WITH AUTOMATION)								
1	400kV								
1.1	Circuit Breaker Relay Panel		!	_					
а	CB Relay Panel With Auto Reclose		4	0010					
b	CB Relay Panel With out Auto Reclose		7	Sets					
1.2	Line Protection Panel		4	Sets					
	Transformer Protection Panel (For both HV & MV side) as per Specification		2	Sets		1			
1.3									
1.4	Reactor Protection Panel as per specification		1	Sets					
1.5	Bus Bar Protection Panel								
a	400kV (Duplicate Bus Bar Protection)		1	Sets		1			
b	Augmentation of existing 220 kV bus bar protection scheme (For 1 Nos. of ICT bays		1	Lot		1			
	as specified)		<u> </u>						
2	Other/Common equipments Pertaining to C & R System								
а	Time synchronisation equipment		1	Nos.					
b	Special Relay Test kit		1	Nos.					ļ

Price Schedule No. 1:Plant, and Mandatory Spares Parts to be supplied from abroad (Revised wrt. Amendment no. 3)

1 1100 00	nedule No. 1:Plant, and Mandatory Spares Parts to be supplied from abroad (Rev	iseu wit. Ailleil	unitent no. c	"				LC: Local Currency	
Item No.	Description		Estin	nated		on to site (Excluding applicable in Nepa	clearing, forwarding g Taxes and Duties I)	(Excluding Taxes and Duties)	Custom, VAT and other
140.			Quantity	Unit		FC		FC	taxes
			quartery	O m	Currency#	Unit Rate	Total Amount		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(4)x(7)	(9) =(8)	(10)
3	220kV								
а	CB Relay Panel With out Auto Reclose		2	Sets					
	Sub Total (J)								
K	SUBSTATION AUTOMATION								
	Complete Substation automation system/ Augumentation Substation automation								
	system- including hardware and software for the substation alongwith associated								
	equipments for the following Main bays to be automated as per Technical								
	Specification:								
	400 kV System		11	Nos.					
	220 kV System			Nos.					
	For Auxiliary system			Set					
	Augumentations/Intregations of Operator Workstations (HMI) and all necessary								
	accessories and software. In the present scope, bidder shall include BCUs required								
	for 400 kV bays including all necessary hardware and software to integrate with								
	the existing Substation Automation System including up-dation of system database,		1	Lot					
	displays, and development of additional displays and reports all complete as per		1						
	requirement.								
	roquii omoni.								
	Integration of all 400/220kV Bays under present scope with the SCADA of SIEMENS								
	(SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of								
	Hardware, Software, accessories etc. complete as per Technical Specification.		1	Lot					
	Traidware, Gortware, accessories etc. complete as per recrimical opecinication.								
	Sub Total (K)								
	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\								
	Visual monitoring system (VMS) system								
	Visual monitoring system (VMS) as specified/required complete in all respect including								
a)	HF Cable, Other necessary cabling and power supply system		1	Lot					
	O. I. T-4-1 (I.)								
	Sub Total (L)								
	LT Switchgear								
	400V Main switchboard		1	Set					
	400V ACDB		1	Set	1				.
	400V MLDB		1	Set	1				.
	400V Emergency LDB		1	Set	 		1		
	220V DCDB		1	Sets	1				.
	48V/50V DCDB		1	Sets					
	Sub Total (M)								
	Batteries								
	220V		_	ļ					
	600 AH		2	Nos			1		
	48V			ļ.,.					ļ
	600 AH		2	Nos					
	Sub Total (N)								

Price Schedule No. 1:Plant, and Mandatory Spares Parts to be supplied from abroad (Revised wrt. Amendment no. 3)

	nedule No. 1. Flant, and mandatory Spares Farts to be supplied from abroad (Nev	Country of				ncluding insurance,			
Item	Description	origin	Estimated		and transportati	on to site (Excluding	(Excluding Taxes and	Custom, VAT and other	
No.	Description					applicable in Nepa	Duties) FC	taxes	
			Quantity	Unit	FC			FC	taxes
(4)	(0)	(2)	(4)	(5)	Currency#	Unit Rate	Total Amount	(0) (0)	(40)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(4)x(7)	(9) =(8)	(10)
0	Float Cum Boost Battery Charger								
a	220V Float Cum Boost Battery Charger								
i	80A/80A		2	Nos					
b	48V Float Cum Boost Battery Charger		_	1100					
i	80A/80A		2	Nos					
	Sub Total (O)								
	, ,								
Р	Fire Protection System								
а	Portable /Trolley/Wheel mounted extinguishers								
i	9 litre water type		5	Nos					
ii	50 litre foam type		2	Nos					
iii	4.5 kg CO₂ type		8	Nos					
iv	4.5 kg Dry Chemical Power (DCP) type		5	Nos					
b	Smoke detection system		1	Set					
С	Fire detection and Alarm System		1	Set					
d	Hydrant system, complete U/G piping and accessories etc. from existing HVW/Fire								
_ u	Hydrant point from Fire Fighting Pump House								
i	400 kV Substation		1	Set					
f	HVW spray system, Hydrant system and complete U/G & O/G piping and accessories								
	etc. out side the pump house for Transformer / Reactor :		-						
	53.33 MVA , 400/220 KV, 1-phase Autotransformer 50 MVAR , 420 KV, Bus Reactor		7	nos					
	Sub Total (P)		'	Set					
	Sub Total (F)								
Q	Air conditioning & Ventilation System								
- u	All conditioning & ventilation system								
	High wall type split AC unit of 2 TR capacity for Air conditioning (AC) for								
а	LCC room of GIS Hall, Battery Room, Panel room cum administrative		16	Nos					
	building								
	·								
b	Ventillation system for 400 kV GIS Hall		1	Lot					
	Sub Total (Q)								
R	Cables along with clamps, glands, lugs and straight joints etc.								
1	220 kV Cable								
1.1	220 kV grade 1 core, 1200sq.mm.XLPE insulated copper cable as per technical		2.40	km					
4.0	specification		40						
1.2	Cable end termination(s) on Gantry/Tower as per technical specification		12	nos.					
	Sub Total (R)								
	Enhancion aphyonicing and cumply of CTECL CTRUCTURES (400k/ Dank)								
s	Fabrication, galvanising and supply of STEEL STRUCTURES (400kV Double Dead End Transmission Tower, Column, Gantry structures & Equipment support								
3	structures)								
	Lattice/pipe Structure for tower,Colums,beams and equipments including peak					+			
	plates/pack washers and guest paltes including foundation bolts(nuts,washers,MS				1				
	plate welded at the bottom)								
а	Lattice stucture & foundation bolts		274	MT	1				
	Pipe Structure including Foundation Bolts .		27	MT	İ				

Price Schedule No. 1:Plant, and Mandatory Spares Parts to be supplied from abroad (Revised wrt. Amendment no. 3)

Price Sc	dule No. 1:Plant, and Mandatory Spares Parts to be supplied from abroad (Revised wrt. Amendment no. 3)						LC: Local Currency		
		Country of			CIP Project Site in	cluding insurance,	Total Amount		
Item No.	Description	Country of origin	Estim	ated	and transportation	on to site (Excluding applicable in Nepa	(Excluding Taxes and Duties)	Custom, VAT and other	
NO.			Quantity	Unit	FC Currency# Unit Rate Total Amou			FC	taxes
(4)	(2)	(2)	(4)	(5)	(6)		(8)=(4)x(7)	(0) (8)	(40)
(1)	(2)	(3)	(4)	MT	(0)	(7)	(0)=(4)X(1)	(9) =(8)	(10)
C	Fastners for tower,Columns,beams and equipment support struutures Sub Total (S)		3	IVI I					
	Sub Total (5)								
Т	Earthing and lightning protection including necesaary connectors/connections, risers etc. complete in all respect (but excluding LM structures for Lightning protection)								
	Earth Conductor (copper)		1	LS					
	Earth Rod (copper clad steel)		1	LS		+			
	Equipment for lightning protection		1	LS		+			
	Sub Total (T)			LO					
	Sub Total (1)								
U	Illumination Custom								
U I	Illumination System			-	_	1	1		
а	Illumination System for GIS Hall and Control Building Complete as per Specification		1	LS					
	Switchyard lighting		1	LS					
	Street lighting		1	LS					
	Sub Total (U)								
٧	POWER & CONTROL CABLES								
а	Power Cables(PVC) - (1.1kV grade)		1	LS					
b	Power Cables (XLPE) - (1.1kV grade)		1	LS					
С	Control Cable (PVC) - (1.1kV grade)		1	LS					
d	Cable glands, lugs & straight through joints for Power & Control cables		1	LS					
	Sub Total (V)								
	, ,								
W	Communication & Associated System								
	Interfacing of SAS to Existing Communication & Associated System		1	Lot					
	Giga - Ethernet interfaces 10/100/1000 Mbps with Layer-2 switching Card		_						
b	(Minimum 4 interfaces per Card.)		2	Nos					
	Sub Total (W)								
x	EOT Crane								
1	EOT crane with suitable double Runway rails including trolley runway with conductors, fixtures, insulations size suitable to operate as and when required, complete with all accessories and slings as detailed in the specifications.		1	Set					
	Sub Total (X)								
	Digital Protection Coupler								
	Digital Protection Coupler		4	Nos					
	Sub Total (Y)								
Z	PRE-ENGINEERED BUILDINGS								
i)	400 kV GIS Building including all supply materials from abroad except civil works and for civil works refer schedule 4(a)								
(5)			800	Ca 14		+			
(a)	400 kV GIS Hall			Sq. M.	 	+	+		1
(b)	AHU / Panels Room		400	Sq. M.					
	Sub Total (X)								

Price Schedule No. 1:Plant, and Mandatory Spares Parts to be supplied from abroad (Revised wrt. Amendment no. 3)

FC: Foreign Currency LC: Local Currency

Item	Description	Country of origin	Estimated			cluding insurance, on to site (Excludinç applicable in Nepa	Total Amount (Excluding Taxes and Duties)	Custom, VAT and other	
140.			Quantity	Unit		FC		FC	taxes
			quartity		Currency#	Unit Rate	Total Amount		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(4)x(7)	(9) =(8)	(10)
ZA	MANDATORY SPARES *(Break up of Lumpsum quantity shall be as per Annexure-I, Chapter-1, Project Specific Requirement)								
1	Gas Insulated Switchgear								
а	Mandatory Spares required during O&M of 400kV GIS Substation		1	LS					
2	400/220 kV, Auto Transformer		1	LS					
3	50 MVAR, 420kV Bus Reactor		1	LS					
4	Surge Arrester								
а	336kV Surge Arrester		1	LS					
b	216kV Surge Arrester		1	LS					
5	Fire Fighting System		1	LS					
6	Battery Charger		1	LS					
7	Relay & Protection panel		1	LS					
8	Substation Automation System		1	LS					
9	Illumination System		1	LS					
10	LT Switchgear		1	LS					
11	Erection hardware		1	LS					
12	Bus Post Insulators								
а	420kV BPI (1-Ph)		1	nos					
	Sub Total (ZA)								
	Grand Total of Schedule I								

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

400 kV(GIS)/220kV (GIS) Barhabise 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)

Schedul	e No.2: Plant and Equipment including Mandatory Spares Parts to be supplied from within Ne	LC: Local Currer	cy (ALL Price in Local Cur	rency)					
Item No.			Unit		ce (Excluding VAT) in LC	Inland tra	ansportation to site in LC	Total Amount (Excluding Taxes)	VAT and other taxes
				Unit Rate	Unit Rate Amount		Unit Rate Amount		
1	2	3	4	5	6 = (3) x (5)	7	8=(3)x(7)	9=6+8	10
								1	
									-
	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.

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

D	at	e:

400 kV(GIS)/220kV (GIS) Barhabise Substation Price Schedule No 3: Design Services

				Unit	Prices	Total Prices		
Item No.	Item Description	Esti	mated	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)

400 kV(GIS)/220kV (GIS) Barhabise Substation Schedule No. 4 (a): Installation and Other Services

(a): Installation and Construction Charges (Revised wrt. Amendment no. 3)

Item	Description	Country of origin	Type & Designation	Estimated		Installation Charges				
No.				Quantity	Unit	Portion in Foreign Currency(FC) Currency# Unit Rate Total Amount				
(1)	(2)	(3)	(4)	(5)	(6)	(7	(8)	(9)=(5)x(8)	10	Total Charges (11)=(5)x(10)
(-/	Installation services	(-,	(',	(-)	(-,	, ·	(-,	(5) (5)-(5)		(**) (*)-(**)
Α	420kV SF6 Gas Insulated Switchgear and Accessories									
a)	420kV, 5000A SF6 GIS Bus Bar Module [Module description as per technical specification, Chapter 1- PSR]			2	Sets			-		
b)	420kV, 4000A SF6 GIS Line Feeder bay Module [Module description as per technical specification, Chapter 1- PSR]			4	Sets			-		
c)	420kV, 2000A, SF6 GIS Auto Transformer bay Module [Module description as per technical specification, Chapter 1- PSR]			2	Sets			-		
d)	420kV, 4000A, SF6 GIS Bus Shunt Reactor bay Module [Module description as per technical specification, Chapter 1- PSR]			1	Sets			-		
e)	420kV, SF6 GIS Tie bay Module [Module description as per technical specification, Chapter 1- PSR]									
i)	4000A			3	Sets			-		
ii)	2000A			1	Sets			-		
f)	SF6 Gas Insulated Bus Duct (GIB) outside GIS Hall alongwith associated support structure and accessories							-		
i)	4000 A . 50kA for 1 sec. Single Phase			750	m			-		
ii)	2000 A , 50kA for 1 sec. Single Phase			200	m			-		
g)	400 kV, SF6 to Air Bushing alongwith associated support structure for Connecting GIS to AIS alongwith support structure									
i)	4000A, 50kA for 1 sec. Single Phase			15	nos					
ii)	2000A, 50kA for 1 sec. Single Phase			7	nos					
h)	420 kV Auxiliary Bus to connect spare unit of Transformer [Module description as per technical specification, Chapter 1-PSR]]			1	sets					
	Sub Total (A)									
	Sub Total (A)							-		
	OUT IN OTO One browled at Outlinton and Assessmine									
В	245 kV SF6 Gas Insulated Switchgear and Accessories							-		
a)	SF6 Gas Insulated Bus Duct (GIB) outside GIS Hall alongwith associated support structure and accessories									
a.1)	2000A, 40kA for 1 sec. Single Phase			240	mtr.					
b)	220kV, SF6 to Air Bushing alongwith associated support structure for Connecting GIS to AIS alongwith support structure									
b.1)	2000A, 40kA for 1 sec. Single Phase			7	nos					
С	220kV, SF6 to Cable Bushing alongwith associated support structure for Connecting GIS to AIS alongwith support structure									
c.1	2000A, 40kA for 1 sec. Single Phase			7	nos					
d	245kV, SF6 GIS Bus Bar Module (EXTENSION)[Module description as per technical specification, Chapter 1- PSR]			2	Sets					
е	245kV, SF6 GIS Auto Transformer bay Module [Module description as per technical specification, Chapter 1- PSR]			2	Sets					
f	245 kV Auxiliary Bus to connect spare unit of Transformer [Module description as per Technical specification]			1	Set					
	Sub Total (B)									
	Jour Total (D)									
	53.33 MVA,400/√3 /220/√3/33 kV Single Phase Auto Transformer as									
С	specified below							-		

400 kV(GIS)/220kV (GIS) Barhabise Substation Schedule No. 4 (a): Installation and Other Services (a): Installation and Construction Charges (Revised wrt. Amendment no. 3)

Item	Description	Country of origin	Type & Designatio n	Estim	ated			Installation Ch	arges	
No.	Description		- "	0	11:-21	Portion in Foreign Currency(FC)			Portion in Nepale	se Currency (in NPR)
				Quantity	Unit	Currency#		Total Amount	Unit Rate	Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	(7	(8)	(9)=(5)x(8)	10	(11)=(5)x(10)
1	53.33 MVA,400/√3 /220/√3/33 kV Single Phase Auto Transformer outdoor type, complete with all fittings and accessories including Main Control Cabinet, cooling control cabinet, RTCC panel, OLTC, and On line Dissolved Gas (Multi Gas) Analysis and moisture monitoring system, online insulating oil drying system (Cartridge type) with optical temperature sensor,necessary arrangment for Delta formation of LV winding & Neutral Formation and Earthing Arrangement, surge protection device and all fittings & accessories as specified/required for completion of the scope of works as per technical specification (without transformer Oil)			7	Nos.			-		
2	Insulating oil for 53.33 MVA,400/ $\sqrt{3}$ /220/ $\sqrt{3}$ /33 kV Single Phase Autotransformer (* 1Lot = Oil for 1 Autotransformers)			7	Lot*			-		
3	33kV Current transformer (NCT) for autotrasnformer			2	Nos.					
	Sub Total (C)							-		
								-		
D	50MVAR, 420kV, three phase, 50 Hz Bus Shunt Reactor as specified									
	below:									
1	50MVAR, 420kV, three phase, 50 Hz separate winding Shunt Reactor, oil immersed, ONAN cooled, outdoor type complete with all fittings and accessories including Bushing & Current Transformers as detailed in the specifications & each equipped with the following: i) On line insulating oil drying system (Cartridge type) ii) On line Dissolved Gas (Multi Gas) Analysis and moisture monitoring system with optical temperature sensor			1	Nos.			-		
2	Insulating oil for first filling plus 10% extra to account for spillage etc. during filling for the Shunt Reactor			1	lot			-		
	Sub Total (D)							-		
								-		
E	LT TRANSFORMER									
1	630 kVA, 33/0.4kV			1	Nos.			-		
	Sub Total (E)							-		
F	420KV Outdoor Equipment							_		
	336KV Surge Arrester (1-phase)			10	Nos.			-		
	420kV BPI(1-Ph)				Nos.			-		
_	Sub Total (F)				1100.			-		
	\							-		
G	245KV Outdoor Equipment							-		
	216KV Surge Arrester (1-phase)			7	Nos.			=		
2	245kV BPI(1-Ph)			7	Nos.			-		
	Sub Total (G)							-		
								-		
Н	72.5kV EQUIPMENT									
1	72.5 kV, 600A, 31.5kA Circuit Breaker (3-phase) with support structure				No.					
2	72.5 kV, 600A,31.5kA Isolators with earth switch (3-phase, DBR type)				No.					
3	72.5kV, 600A, 31.5 kA with 120% extended rating CT (1- Phase)				Nos.					
4	72.5kV PT.(1-phase)				Nos.					
5	30kV Surge Arrestors (1-Phase)				Nos.					
6	72.5 kV BPI (1-phase)			3	Nos.					
	Sub Total (H)									

(a): Installation and Construction Charges (Revised wrt. Amendment no. 3)

Item	Description	Country of origin	Type & Designatio n	Estima	ated			Installation Ch	arges	
No.				Quantity	Unit	Poi Currency#		n Currency(FC) Total Amount	Portion in Nepale Unit Rate	se Currency (in NPR) Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	(7	(8)	(9)=(5)x(8)	10	(11)=(5)x(10)
ı	Erection Hardware							-		
I.1	400kV One and Half Breaker-type layout for GIS termination arrangement							-		
1	Insulator strings, Disc Insulators, Hardware, conductor, bus-bar materials, cable trays, Bay MB, clamps, spacers, connectors including equipment connectors, connectors for Transformers, Junction box, earthwire, earthing material risers, buried cable trenches/pipe equipment & lighting, all accessories etc. applicable for the following:							-		
	Transformer Bay				bays			-		
1.2	Reactor Bay			1	bays			-		
2	Insulator strings, Disc Insulators, Hardware, conductor, bus-bar materials, cable trays, Bay MB, clamps, spacers, connectors including equipment connectors, Junction box, earthwire, earthing material risers, buried cable trenches/pipe equipment & lighting, all accessories etc. applicable for the following:									
2.1	Line Bay			4	bays			-		
1.2	220 kV DM-type layout for GIS termination arrangement of Transformer							-		
1	Insulator strings, Disc Insulators, Hardware, conductor, bus-bar materials, cable trays, Bay MB, clamps, spacers, connectors including equipment connectors, connectors for Transformers, Junction box, earthwire, earthing material risers, buried cable trenches/pipe equipment & lighting, all accessories etc. for the following:							-		
1.1	Transformer Bay			2	bays			-		
1.3	For spare unit of 400/220/33 kV auto transformer connection through auxiliary buses (tertiary & Neutral auxiliary buses only), Neutral formation and delta formation (for two bank): Required 72.5 kV BPI for tertiary auxiliary bus & delta formation, 36 kV BPI for Neutral formation & Neutral auxiliary bus including Al tube, bus-bar materials, clamps, spacers, connectors, including equipment connectors, support structures, Earthing of spare unit as per technical specification.			1	Lot					
	Sub Total (I)							-		
								-		
	CONTROL RELAY AND PROTECTION PANELS (WITH AUTOMATION)							_		
J										
1	400kV							-		
1.1	Circuit Breaker Relay Panel						1	-		
<u>a</u>	CB Relay Panel With Auto Reclose			4	Sets		-	-		
b	CB Relay Panel With out Auto Reclose			7	Sets		1	-		
1.2	Line Protection Panel			4	Sets		1	-		
1.3	Transformer Protection Panel (For both HV & MV side) as per Specification			2	Sets			-		
1.4	Reactor Protection Panel as per specification			1	Sets			_		
1.5	Bus Bar Protection Panel			<u>'</u>	0013		1	-		
a	400kV (Duplicate Bus Bar Protection)			1	Sets		1	_		
b	Augmentation of existing 220 kV bus bar protection scheme (For 1 Nos. of ICT bays as specified)			1	Lot			-		
2	Other/Common equipments Pertaining to C & R System							-		
а	Time synchronisation equipment			1	Nos.			=		
b	Special Relay Test kit			1	Nos.			-		

400 kV(GIS)/220kV (GIS) Barhabise Substation

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

(a): Installation and Construction Charges (Revised wrt. Amendment no. 3)

(a). Ilist	anation and Construction Charges (Revised Wrt. Amendment no. 3)									
Item No.	Description	Country of origin	Type & Designatio n	Estim	ated			Installation Ch	arges	
NO.				Quantity	Unit	Por Currency#		n Currency(FC) Total Amount	Portion in Nepale Unit Rate	se Currency (in NPR) Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	(7	(8)	(9)=(5)x(8)	10	(11)=(5)x(10)
3	220kV	(0)	(4)	(0)	(0)	(/	(0)	(0)=(0)A(0)	10	(11)=(0)x(10)
a	CB Relay Panel With out Auto Reclose			2	Sets					
a	Sub Total (J)				0013			-		
	oub Total (5)							_		
К	SUBSTATION AUTOMATION							-		
								-		
	Complete Substation automation system/ Augumentation Substation automation									
	system- including hardware and software for the substation alongwith associated equipments for the following Main bays to be automated as per							-		
1	Technical Specification:									
	400 kV System			11	Noo			_		
a					Nos.			-		
b	220 kV System				Nos.		1			
С	For Auxiliary system			1	Set			-		
	Augumentations/Intregations of Operator Workstations (HMI) and all necessary accessories and software. <i>In the present scope, bidder shall include BCUs</i>									
	required for 400 kV bays including all necessary hardware and software to			_						
2	integrate with the existing Substation Automation System including up-dation of			1	Lot			-		
	system database, displays, and development of additional displays and									
	reports alll complete as per requirement.									
	Integration of all 400/220kV Bays under present scope with the SCADA of									
3	SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including			1	Lot			_		
_	supply of Hardware, Software, accessories etc. complete as per Technical			-						
	Specification.									
	Sub Total (K)							-		
								-		
L	Visual monitoring system (VMS) system							-		
	Visual monitoring system (VMS) as specified/required complete in all respect									
a)	including HF Cable, Other necessary cabling and power supply system			1	Lot			-		
<i>'</i>										
	Sub Total (L)							-		
								-		
	LT Switchgear							-		
	400V Main switchboard			1	Set		ļ	-		
	400V ACDB			1	Set		ļ	-		
	400V MLDB			1	Set			-		
	400V Emergency LDB			1	Set			-		
	220V DCDB			1	Sets		1	-		
f	48V/50V DCDB			1	Sets			-		
	Sub Total (M)							-		
								-		
N	Batteries							-		
a	220V			-				-		
i	600 AH			2	Nos			-		
b	48V				L		1	-		
i	600 AH			2	Nos			-		
	Sub Total (N)							-		
								-		
0	Float Cum Boost Battery Charger									
а	220V Float Cum Boost Battery Charger									
i	80A/80A			2	Nos					

Schedule No. 4 (a): Installation and Other Services
(a): Installation and Construction Charges (Revised wrt. Amendment no. 3)

Item	Description	Country of origin	Type & Designatio	Estima	ated			Installation Ch	arges	
No.				Quantity	Unit	Port Currency#		n Currency(FC)	Portion in Nepale Unit Rate	se Currency (in NPR) Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	(7	(8)	(9)=(5)x(8)	10	(11)=(5)x(10)
b	48V Float Cum Boost Battery Charger	` `		1			, ,	, , , , ,		` , ` , ` ,
i	80A/80A			2	Nos					
	Sub Total (O)									
Р	Fire Protection System							-		
а	Portable /Trolley/Wheel mounted extinguishers							-		
i	9 litre water type			5	Nos			-		
ii	50 litre foam type			2	Nos			-		
iii	4.5 kg CO ₂ type			8	Nos			-		
iv	4.5 kg Dry Chemical Power (DCP) type			5	Nos			-		
b	Smoke detection system			1	Set			-		
С	Fire detection and Alarm System			1	Set			-		
	Hydrant system, complete U/G piping and accessories etc. from existing									
d	HVW/Fire Hydrant point from Fire Fighting Pump House	1	1					-		
i	400 kV Substation			1	Set			-		
	HVW spray system, Hydrant system and complete U/G & O/G piping and									
f	accessories etc. out side the pump house for Transformer / Reactor :							-		
i	53.33 MVA , 400/220 KV, 1-phase Autotransformer			7	nos			-		
ii	50 MVAR , 420 KV, Bus Reactor			1	Set			-		
	Sub Total (P)							-		
								-		
Q	Air conditioning & Ventilation System							-		
а	High wall type split AC unit of 2 TR capacity for Air conditioning (AC) for LCC room of GIS Hall, Battery Room, Panel room cum administrative building			16	Nos			-		
b	Ventillation system for 400 kV GIS Hall			1	Lot			-		
	Sub Total (Q)							-		
								-		
R	Cables along with clamps, glands, lugs and straight joints etc.									
1	220 kV Cable									
1.1	220 kV grade 1 core, 1200sq.mm.XLPE insulated copper cable as per technical specification			2.40	km					
1.2	Cable end termination(s) on Gantry/Tower as per technical specification			12	nos					
	Sub Total (R)									
s	Fabrication, galvanising and supply of STEEL STRUCTURES (400kV Double Dead End Transmission Tower,Column, Gantry structures& Equipment support structures)							-		
	Lattice/pipe Structure for tower,Colums,beams and equipments including peak plates/pack washers and guest paltes including foundation bolts(nuts,washers,MS plate welded at the bottom)									
а	Lattice stucture & foundation bolts	1	1	274	MT			-	1	
b	Pipe Structure including Foundation Bolts .	1		27	MT					
С	Fastners for tower, Columns, beams and equipment support strutures	1		3	MT			-		
	Sub Total (S)							-		
								_		

400 kV(GIS)/220kV (GIS) Barhabise Substation Schedule No. 4 (a): Installation and Other Services (a): Installation and Construction Charges (Revised wrt. Amendment no. 3)

Item	Description	Country of origin	Type & Designation	Estima	ated			Installation Ch	arges	
No.				Overetite :	Unit	Por	tion in Foreig	ın Currency(FC)	Portion in Nepale	se Currency (in NPR)
				Quantity	Unit	Currency#		Total Amount	Unit Rate	Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	(7	(8)	(9)=(5)x(8)	10	(11)=(5)x(10)
	Earthing and lightning protection including necesaary									
_	connectors/connections, risers etc. complete in all respect (but									
Т	excluding LM structures for Lightning protection)							-		
i	Earth Conductor (copper)			1	LS			_		
ii	Earth Rod (copper clad steel)			1	LS			-		
iii	Equipment for lightning protection			1	LS			-		
	Sub Total (T)							-		
								-		
U	Illumination System							-		
0	Illumination System for GIS Halland Control Building Complete as per			1	LS					
а	Specification			'				-		
С	Switchyard lighting			1	LS			-		
d	Street lighting			1	LS			-		
	Sub Total (U)							-		
								-		
V	POWER & CONTROL CABLES							=		
а	Power Cables(PVC) - (1.1kV grade)			1	LS			-		
b	Power Cables (XLPE) - (1.1kV grade)			1	LS			-		
C	Control Cable (PVC) - (1.1kV grade)			1	LS			-		
d	Cable glands, lugs & straight through joints for Power & Control cables			1	LS			-		
	Sub Total (V)							-		
101	One control of the O. Annual of the I. Our form							-		
W	Communication & Associated System Interfacing of SAS to Existing Communication & Associated System			1	1 -4			-		
а	Interfacing of SAS to Existing Communication & Associated System			!	Lot			-		
b	Giga - Ethernet interfaces 10/100/1000 Mbps with Layer-2 switching Card (Minimum 4 interfaces per Card.)			2	Nos.			-		
	Sub Total (W)							-		
								-		
Х	EOT Crane							-		
	EOT crane with suitable double Runway rails including trolley runway with							_		
1	conductors, fixtures, insulations size suitable to operate as and when required,			1	Set			_		
•	complete with all accessories and slings as detailed in the specifications.			· '	OCI					
	Sub Total (X)							-		
· ·	Divided Breat and an Occupier							-		
Υ	Digital Protection Coupler				L	-				
1	Digital Protection Coupler			4	Nos			-		
	Sub Total (Y)									
	Obil Construction World (Account to build a new World a N							_		
	Civil Construction Works (As per technical specifications)					 	1			
	SECTION: A: NEA ASSESSED QUANTITIES					 	1	-		
1.0	Excavation in all types of soil and rock including backfilling disposal etc. for all			13750	Cu.Mtr.			-		
2.0	leads and lifts			000	C. Ma	 		_		
2.0	Providing and laying of Plain Cement Concrete (PCC) (1:4:8) Providing and laying of Plain Cement Concrete (PCC) (1:2:4)				Cu.Mtr. Cu.Mtr.	1	1	-		
3.0	Providing and laying of Plain Cement Concrete (PCC) (1:2:4) Providing and laying of Reinforced Cement Concrete Design Mix (M25)			83	Gu.WIT.	 		-		
4.0	Providing and laying of Reinforced Cement Concrete Design Mix (M25) including pre cast, shuttering, Grouting of pockets & underpinning but excluding steel reinforcement.			4235	Cu.Mtr.			-		

400 kV(GIS)/220kV (GIS) Barhabise Substation Schedule No. 4 (a): Installation and Other Services (a): Installation and Construction Charges (Revised wrt. Amendment no. 3)

Item	Illation and Construction Charges (Revised wrt. Amendment no. 3) Description	Country of origin	Type & Designation	Estim	ated			Installation Cha	arges	
No.	2000 paid			Quantity	Unit	Po Currency#		gn Currency(FC) Total Amount	Portion in Nepale Unit Rate	se Currency (in NPR) Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	(7	(8)	(9)=(5)x(8)	10	(11)=(5)x(10)
	Providing and laying Plain Cement Concrete 1:5:10 (1 cement : 5 sand : 10	(3)	(4)	` '	 	\'	(0)	1, 1, 1,	10	(11)=(0)x(10)
5.0	Stone aggregate)			605	Cu.Mtr.			=		
6.0	Steel Reinforcement (Fe 500)			385	MT			-		
7.0	Miscellaneous Structural steel used for rails, plates for rail fixing, gratings, gratings supports etc for transformer /reactor foundation,cable supportstand earthing cleats, chequered plates, embedments, edge protection angles for cable trenches but excluding the reinforcement steel and steel for lattice and pipe structures which shall be paid seperately.			55	МТ			-		
8.0	Stone filling (40mm) over grating of Transformer /reactor Foundation			770	Cu.Mtr.			-		
9.0	Stone spreading including antiweed treatment in switchyard but excluding PCC.			7700	Sq. Mtr.			-		
10.00	Supplying & laying hume pipe with collarsof grade (NP-3) but excluding reinforcement steel & concrete of bed/support/encasing of hume pipes which shall be paid seperately							-		
i)	250mm dia				RM			-		
ii)	300mm dia				RM			-		
iii)	450mm dia				RM			-		
iv)	600mm dia		ļ	25	RM			-		
11.00	Concrete road (including all crossings) as per technical specification and approved drawing but ecluding reinforcement & concrete							-		
a.	Concrete Road			600	Sq. m.			-		
12.0	Construction of rail-cum-raod as per technical specification and approved drawing including all items such as excavation, compaction, rolling, watering, WBM, etc but excluding concrete, reinforcement and structural steel which shall be paid seperately							-		
a.	Section having four rails			350	Sq. m.			-		
13.0	Chain link fencing as per technical specification and approved drawing but excluding concrete which shall be paid seperately			836	RM			-		
14.0	switch yard Gate excluding concrete			2	No					
15.0	Dismantling & rerection of existing fence including sorting and stacking of serviceable & non-serviceable materials and disposal of debris as per the direction of engineer-in-charge			55	RM			-		
	Supplying and erecting dewatering pumps							-		
	5 HP				Nos.			-		
b.	0.5 HP			4	Nos.	1		-		
17.00	Drain including culverts but excluding concrete ,hume pipes & reinforcement steel which shall be paid seperately							-		
	Type AA			1100				-		
	Type BB				RM	1		-		
	Type CC				RM			-		
d.	Type DD			28	RM	1		-		
18.00	External water supply as per technical from borewell to GIS Building including all items like excavation,pipes,fittings,jointings,valves,chambers/manholes etc							-		
	80mm Dia GI Pipe				RM			-	<u> </u>	
b.	25mm Dia GI Pipe			50	RM			-		
19.00	External sewerage system including all item such as excavation, piping, pipe fittings, manholes, gali trap, gali chamber etc.							-	_	
а	(i) 150 mm Dia.			138	RM			-		

400 kV(GIS)/220kV (GIS) Barhabise Substation Schedule No. 4 (a): Installation and Other Services (a): Installation and Construction Charges (Revised wrt. Amendment no. 3)

FC: Foreign Currency LC: Local Currency

Item No.	Description	Country of origin	Type & Designatio n	Estima	ated			Installation Cha	arges	
140.				Quantity	Unit			n Currency(FC)		se Currency (in NPR)
				,		Currency#		Total Amount	Unit Rate	Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	(7	(8)	(9)=(5)x(8)	10	(11)=(5)x(10)
	Stone soling below foundations wherever specified in approved drawings during detailed engineering			165	Cu.Mtr.			-		
21	Site levelling							-		
i	Earth work in excavation and filling in all types of soils including soft/disintegrated rock with all leads and lifts within sub station boundary			60000	Cu.Mtr.			-		
ii	Earth work in filling with borrowed earth with all leads and lifts including royalty,taxes etc			2000	Cu.Mtr.					
	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, 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 lower level. Item of excavation, PCC (1:2:4 & 1:4:8) shall be measured and paid seperately under respective items of BPS			2000	Cu.Mtr.					
23	PRE ENGINEERED BUILDINGS									
i)	400 KV GIS BUILDING All civil works related to pre-engineered 400 kV GIS Buliding to be supplied as per schedule 1 including internal cable trench, finishing(external & Internal) 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.									
(a)	GIS Hall			800	Sq. M.					
(b)	AHU/ Panels Room			400						
(- /	Geotechnical /Soil Investigation				LS			-		
	Total for Schedule 4(Total of column 9 and 11 to be carried forward to Sch	edule 5: Gran	nd Summarv					-		

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

400 kV(GIS)/220kV (GIS) Barhabise Substation Schedule No. 4 : Installation and Other Services

(b):Training Charges for training to be imparted abroad (Common for all three substations)

SI. No.	Description	Item for which training is to be imparted.	Country where training is to be imparted	Nos. of Trainee	Training duration in days		Training charge per Trainee per day	Total Training Charges
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)=(5)x(6)x(8)
Α	None							
	Total for Training Charges							-

REMARKS:

(Common Seal)

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.

Name of Bidder:	Date:
Signature of Bidder:	
(Printed Name)	
(Designation)	

400 kV(GIS)/220kV (GIS) Barhabise Substation

Schedule No. 4: Installation and Other Services

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

SI. No.	Description of the Test	Item for which training is to be imparted.	Training duration in days	Currency	Per Day Training Charges for Contractors Trainers	Total Training Charges
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(4)x(6)
	None					
	Total for Training Charges					-
Total fo	or Schedule 4 (Total of column 7 to be carried forward to Schedule 5: Grand	Summary)				

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

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Khimti-Barhabise-Lapsiphedi 400 kV Substation Project

400 kV(GIS)/220kV (GIS) Barhabise Substation Schedule No. 4 : Installation and Other Services

(d): Maintenance Charges

SI No	Description		Qtv.	Total	Maintenance Charges
31 140	Description	Unit	Qty.	Currency	Total Maintenance Charges
1	None	Year			
2	None	Year			
	Total for Schedule 4 (Total of column 5 to be carried forward to Schedule 9				

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

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Khimti-Barhabise-Lapsiphedi 400 kV Substation Project

400 kV(GIS)/220kV (GIS) Barhabise Substation

(Common Seal)

Schedule No. 4: Installation and Other Services

(e): Type Test Charges for Type Tests to be conducted abroad

SI. No.	Description of Tests	Testing Location	TEST CHARGES		
			Currency	Amount	
1	2	3	4	5	
	None				
	None				
	Total of Type Tests charges (Total of column 5 to be carried forward to Schedule 5: Grand Summary)				

Name of Bidder:	
Signature of Bidder:	Date:
(Printed Name)	
(Designation)	

Nepal Electricity Authority

Project Management Directorate
Khimti-Barhabise-Lapsiphedi 400 kV Substation Project

400 kV(GIS)/220kV (GIS) Barhabise 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
	None							

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

NEPAL ELECTRICITY AUTHORITY PROJECT MANAGEMENT DIRECTORATE Khimti-Barhabise-Lapsiphedi 400 kV Substation Project

400 kV(GIS)/220kV (GIS) Lapsiphedi Substation

Schedule No. 5: Grand Summary

		Lapsephedi	Substation
SI. No.	Description	Total Price	Total Price
		Foreign ()*	Local ()*
1	TOTAL SCHEDULE NO. 1	1	2
	Plant and Equipment including Mandatory Spares to be supplied from abroad, including		
	Type Test Charges for Type Tests to be conducted abroad.		
	Sub-Total 1		
2	TOTAL SCHEDULE NO. 2		
	Plant and Equipment including Mandatory Spares Parts to be supplied from within Nepal		
	including Type Test Charges		
	Sub-Total 2		
3	TOTAL SCHEDULE NO. 3		
	Design Services		
	Sub-Total 3		
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		
	e. Type test charges to be conducted abroad		
	Sub-Total 4		
	GRAND TOTAL Excluding Taxes & Customs [1+2+3+4(a)+4(b)+4 (c) +4 (d) + 4 (e)]		

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

400 kV(GIS)/220kV (GIS) Lapsiphedi Substation
Price Schedule No. 1:Plant, and Mandatory Spares Parts to be supplied from abroad (Revised wrt. Amendment no. 3)

Price 50	chedule No. 1:Plant, and Mandatory Spares Parts to be supplied from abroad (Revise	a wrt. Amena	nent no. 3)					LC: Local Currency	
Item No.	Description	Country of origin	Estim	ated		on to site (Excluding applicable in Nepa	I)	Total Amount (Excluding Taxes and Duties)	Custom, VAT and other
110.			Quantity	Unit		FC		FC	taxes
			Quantity	Offic	Currency#	Unit Rate	Total Amount(USD)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(4)x(7)	(9) =(8)	(10)
Α	420kV SF6 Gas Insulated Switchgear and Accessories								
a)	420kV, 5000A SF6 GIS Bus Bar Module [Module description as per technical specification, Chapter 1- PSR]		2	Sets					
b)	420kV, 4000A SF6 GIS Line Feeder bay Module [Module description as per technical specification, Chapter 1- PSR]		4	Sets					
c)	420kV, 2000A, SF6 GIS Auto Transformer bay Module [Module description as per technical specification, Chapter 1- PSR]		1	Sets					
d)	420kV, SF6 GIS Tie bay Module [Module description as per technical specification, Chapter 1- PSR]								
i)	4000A		2	Sets					
ii)	2000A		1	Sets					
e)	SF6 Gas Insulated Bus Duct (GIB) outside GIS Hall alongwith associated support structure and accessories								
i)	4000 A, 50kA for 1 sec. Single Phase		600	m					
ii)	2000 A, 50kA for 1 sec. Single Phase		200	m					
f)	400 kV, SF6 to Air Bushing alongwith associated support structure for Connecting GIS to AIS alongwith support structure								
i)	4000A, 50kA for 1 sec. Single Phase		12	nos					
ii)	2000A, 50kA for 1 sec. Single Phase		4	nos					
g)	420 kV Auxiliary Bus to connect spare unit of Transformer [Module description as per technical specification, Chapter 1-PSR]		1	Sets					
	Sub Total (A)								
B)	245 kV SF6 Gas Insulated Switchgear and Accessories								
a)	SF6 Gas Insulated Bus Duct (GIB) outside GIS Hall alongwith associated support								
"	structure and accessories								
a.1)	2000A, 40kA for 1 sec. Single Phase		240	mtr.					
b	220kV, SF6 to Air Bushing alongwith associated support structure for Connecting GIS to AIS alongwith support structure								
b.1	2000A, 40kA for 1 sec. Single Phase		4	nos					
С	220kV, SF6 to Cable Bushing alongwith associated support structure for Connecting GIS to AIS alongwith support structure								
c.1	2000A, 40kA for 1 sec. Single Phase		4	nos					
d	245kV, SF6 GIS Bus Bar Module (EXTENSION)[Module description as per technical specification, Chapter 1- PSR]		2	Sets					
е	245kV, SF6 GIS Auto Transformer bay Module [Module description as per technical specification, Chapter 1- PSR]		1	Sets					
f	245 kV Auxiliary Bus to connect spare unit of Transformer [Module description as per Technical specification]		1	Set					
	Sub Total (B)								

Item No.	Description	Country of origin	Estin			on to site (Excluding applicable in Nepal		Total Amount (Excluding Taxes and Duties) FC	Custom, VAT and other
			Quantity	Unit	Common or off	FC			taxes
(1)	(2)	(3)	(4)	(5)	Currency# (6)	Unit Rate (7)	Total Amount(USD) (8)=(4)x(7)	(9) =(8)	(10)
	· ·	(3)	(+)	(3)	(0)	(1)	(0)=(4)*(1)	(3) =(0)	(10)
С	105 MVA,400/ $\sqrt{3}$ /220/ $\sqrt{3}$ /33 kV Single Phase Auto Transformer as specified below								
1	105 MVA,400/\daystyle3 /220/\daystyle3/33 kV Single Phase Auto Transformer outdoor type, complete with all fittings and accessories including Main Control Cabinet, cooling control cabinet, RTCC panel, OLTC, and On line Dissolved Gas (Multi Gas) Analysis and moisture monitoring system, online insulating oil drying system (Cartridge type) with optical temperature sensor,necessary arrangment for Delta formation of LV winding & Neutral Formation and Earthing Arrangement, surge protection device and all fittings & accessories as specified/ required for completion of the scope of works as per technical specification (without transformer Oil)		4	Nos.					
2	Insulating oil for 105 MVA,400/√3 /220/√3/33 kV Single Phase Autotransformer (* 1Lot		4	Lot*					
3	= Oil for 1 Autotransformers) 33kV Current transformer (NCT) for autotrasnformer		1	Nos					+
3	Sub Total (C)			1403					
D	LT TRANSFORMER								
1	630 kVA, 33/0.4kV		1	Nos					
	Sub Total (D)								
E	420KV Outdoor Equipment								
1	336KV Surge Arrester (1-phase)		16	Nos.					
2	420kV BPI(1-Ph)		16	Nos.					
	Sub Total (E)								
_	Outline Out I am Emilion and								
F	245KV Outdoor Equipment		4	Nine					
1	216KV Surge Arrester (1-phase) 245kV BPI(1-Ph)		4	Nos.					4
2	Sub Total (F)		4	Nos.					
	Sub Total (F)								
G	72.5kV EQUIPMENT								
1	72.5 kV, 600A, 31.5kA Circuit Breaker (3-phase) with support structure		1	No.					+
2	72.5 kV, 600A, 31.5kA Circuit Breaker (3-phase) with support structure 72.5 kV, 600A,31.5kA Isolators with earth switch (3-phase, DBR type)			No.					
3	72.5kV, 600A, 31.5 kA with 120% extended rating CT (1- Phase)			Nos.					
4	72.5kV PT.(1-phase)			Nos.					
5	30kV Surge Arrestors (1-Phase)			Nos.					
6	72.5 kV BPI (1-phase)			Nos.					
	Sub Total (G)								
Н	Erection Hardware							·	
H.1	400kV One and Half Breaker-type layout for GIS termination arrangement								
1	Insulator strings, Disc Insulators, Hardware, conductor, bus-bar materials, cable trays, Bay MB, clamps, spacers, connectors including equipment connectors, connectors for Transformers, Junction box, earthwire, earthing material risers, buried cable trenches/pipe equipment & lighting, all accessories etc. applicable for the following:								
1.1	Transformer Bay		1	bays					
le l	Transiumer bay			bays					

Price Sc	hedule No. 1:Plant, and Mandatory Spares Parts to be supplied from abroad (Revise	a wrt. Amend	ment no. 3)					LC: Local Currency	
		Country of				ncluding insurance,		Total Amount	
Item		origin	Estim	ated	and transportat	ion to site (Excluding		(Excluding Taxes	Custom, VAT
No.	Description	Origin				applicable in Nepa	l)	and Duties)	and other
140.			Quantity	Unit		FC		FC	taxes
			Quantity	Onn	Currency#	Unit Rate	Total Amount(USD)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(4)x(7)	(9) =(8)	(10)
2	Insulator strings, Disc Insulators, Hardware, conductor, bus-bar materials, cable trays, Bay MB, clamps, spacers, connectors including equipment connectors, Junction box, earthwire, earthing material risers, buried cable trenches/pipe equipment & lighting, all accessories etc. applicable for the following:								
2.1	Line Bay		4	bays					
H.2	220 kV DM-type layout for GIS termination arrangement of Transformer								
1	Insulator strings, Disc Insulators, Hardware, conductor, bus-bar materials, cable trays, Bay MB, clamps, spacers, connectors including equipment connectors, connectors for Transformers, Junction box, earthwire, earthing material risers, buried cable trenches/pipe equipment & lighting, all accessories etc. for the following:								
1.1	Transformer Bay		1	bays					
H.3	For spare unit of 400/220/33 kV auto transformer connection through auxiliary buses (tertiary & Neutral auxiliary buses only), Neutral formation and delta formation (for one bank): Required 72.5 kV BPI for tertiary auxiliary bus & delta formation, 36 kV BPI for Neutral formation & Neutral auxiliary bus including Al tube,bus-bar materials, clamps, spacers, connectors, including equipment connectors, support structures, Earthing of spare unit as per technical specification.		1	Lot					
	Sub Total (H)								
	CONTROL RELAY AND PROTECTION PANELS (WITH AUTOMATION)								
1	400kV								
1.1	Circuit Breaker Relay Panel								
а	CB Relay Panel With Auto Reclose		4	Sets					
b	CB Relay Panel With out Auto Reclose		4						
1.2	Line Protection Panel		4	Sets					
1.3	Transformer Protection Panel (For both HV & MV side) as per Specification		1	Sets					
1.4	Bus Bar Protection Panel								
а	400kV (Duplicate Bus Bar Protection)		1	Set					
b	Augmentation of existing 220 kV bus bar protection scheme (For 1 Nos. of ICT bays as specified)		1	Lot					
2	Other/Common equipments Pertaining to C & R System								
а	Time synchronisation equipment		1	Nos.					
b	Special Relay Test kit		1	Nos.					
3	220kV								
а	CB Relay Panel With out Auto Reclose		1	Sets					
	Sub Total (I)								
J	SUBSTATION AUTOMATION								ļ
1	Complete Substation automation system/ Augumentation Substation automation system-including hardware and software for the substation alongwith associated equipments for the following Main bays to be automated as per Technical Specification:								
a	400 kV System		q	Nos.					
b	220 kV System			Nos.					1
	For Auxiliary system			Set					
_									

Country Coun	-	lule No. 1:Plant, and Mandatory Spares Parts to be supplied from abroad (Revised	wit. Amendi	110111 110. 3)					LC: Local Currency			
No. Comment				Estin	nated				Total Amount (Excluding Taxes	Custom, VAT		
(1) (2) (3) (4) (5) (6) (7) (9144)Amount(USD) Augumentations/interpations of Operator Workstations/PMI) and all necessary accessories and software. In the present scape, thicke's real in ProLete BCUS required for 400 kV bays including all necessary hardware and software to integrate with the existing Substation Automation System including purposes of a special explaints, and development of additional displays and reports all completes as per displays, and development of additional displays and reports all completes as per special integration of all 400/2008 kbys under present accessories after control and social and special control displays and reports all completes as per Signature and social and social and special control displays and reports all completes as per Signature and social and social and social and special control displays and reports all completes as per Signature and Si		Description	origin					·			and Duties)	and other
Augmentational interpolation of Operator Workstations (MM) and all necessary accessories and software. In the present seque, bidder shall an elected ECUs required for 47.00 M Vays including all necessary instrument and software to integrate with the existing Substation Automation System including up-ation of system disabases, displays, and development of adultional discholar displays and reports all complete as per rectification of site part and professor all complete as per rectification of 14.00 and Automation System including up-ation of system disabases, displays, and development of adultional displays and reports all complete as per rectification. Subtracted (4) K Visual monitoring system (VMS) systems and profess all complete in all respect including and professor and				Quantity	Unit	FC			FC	taxes		
Augumentational/interpations of Operator Vioristations (HNII) and all necessary a corossories and software. In the present sope, brider shall include BCUs required for 400 kV bys including all necessary hardware and software to integrate with the existing substation allocations bystem including up-tation of system debates, and personal of additional displays and reports all complete as per form of the system of the sys				Quantity	Onit							
a cocessories and software. In the present scope, builder shall include BCUs required for five May build including all recossary nativement and software and soft		(2)	(3)	(4)	(5)	(6)	(7)	(8)=(4)x(7)	(9) =(8)	(10)		
2 or 400 KV bays including all necessary hardware and advance to integrate with the existing Substation Automation System including byte-distion of system debates, and development of additional displays and reports all complete as per requirement. Integration of all 40/220 KV Bays ander present acops with the SCADO of SIEMENS integrated including spepty of Hardware. Sub Total (1) K Visual monitoring system (VMS) system Visual monitoring system (VMS) as specified/required complete in all respect including in Fic Cable, Other necessary catching and power supply system Visual monitoring system (VMS) as specified/required complete in all respect including in Fic Cable, Other necessary catching and power supply system 1 Lot L L IT Switchger L L IT Switchger 2 400 W MLDB 3 400 W MLDB 4 400 W ALDB 5 5 1 5 5 5 1 5 1 5 5 1 5 5 1 5 5 1 5 5 1 5 5 1 5 5 1 5 5 1 5 5 1 5 1 5 5 1 5 5 1 5 5 1 5 5 1 5 5 1 5 5 1 5 5 1 5 5 1 5 5 1 5 1												
### Assisting Substation Automation System including up-dation of system database, displays, and development of additional database and reports approximate, integration of all 400/220k/ Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Rathmand uncluding supply of Hardware, Software, accessories etc. complete as per Technical Specification. I												
sexting substation Automation System microlarity ign-easin databases, idiploys, and development of additional displays and represent scope with the SCADA of SIEMENS integration of all ADDIZEANY Bays under present scope with the SCADA of SIEMENS Software, accessories etc. complete as per Technical Specification. K Visual monitoring system (VMS) system Visual monitoring system (VMS) as specification specification. I Lot L I Switchper a 4007 Main swirchboard b 4007 Main swirchboard c 4007 Main swirchboard a 4007 Main swirchboard b 4007 Main swirchboard c 5000 MLDB c 6000 MLDB d 6000 MLDB d 6000 MLDB d 71 Set d 8000 MLDB d				1	Lot							
requirement. Integration of all 400/220KV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. complete as per Technical Specification. K Visual monitoring system (VMS) as specified required complete in all respect including Visual monitoring system (VMS) as specified required complete in all respect including In Floration (Nother necessary cabling and power supply system L L IT Switchgear J Lot Sub Total (K) L L IT Switchgear J Set					Lot							
Integration of all 400/220KV Bays under present scope with the SCADA of SIEMENS (SINNAUT Spectrum) at Load Dispatch Center, Karhamadi including supply of Hardware, Software, accessories etc. complete as per Technical Specification. K Visual monitoring system (VMS) system Visual monitoring system (VMS) as specified/required complete in all respect including a) HF Cable, Other necessary cabling and power supply system 1 Lot L LT Switchgear 1 Lot L LT Switchgear 2 MOV Main switchboard 1 Set 1												
SinNAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. complete as per Technical Specification.												
Software, accessories etc. complete as per Technical Specification.												
Sub Total (J)				1	Lot							
No.	Soft	itware, accessories etc. complete as per Technical Specification.										
No.	_	- 1/D										
Visual monitoring system (VMS) as specified/required complete in all respect including 1	oub	n Total (J)										
Visual monitoring system (VMS) as specified/required complete in all respect including 1	/ic:	ual manitaring system (VMS) system										
A								-	-	 		
Sub Total (K)				1	Lot							
L LT Switchgear	יר כ	Cable, Other necessary cabling and power supply system		'	LOI							
L L T Switchgear	Sub	h Total (K)										
A 400 Main switchboard												
A 400V Main switchboard 1 Set	T S	Switchgear										
D				1	Set							
d 400V Emergency LDB				1								
d 400V Emergency LDB				1								
M Batteries				1	Set							
Sub Total (L)				1	Sets							
M Batteries	18V/	//50V DCDB		1	Sets							
a 220V	Sub	b Total (L)										
a 220V												
i 600 AH												
b 48V												
1				2	Nos							
Sub Total (M)					NI.							
N Float Cum Boost Battery Charger				2	NOS							
a 220V Float Cum Boost Battery Charger i 80A/80A 2 Nos b 48V Float Cum Boost Battery Charger	oub	D Total (W)										
a 220V Float Cum Boost Battery Charger i 80A/80A 2 Nos b 48V Float Cum Boost Battery Charger	los	at Cum Boost Battery Charger										
BOA/80A										 		
b 48V Float Cum Boost Battery Charger i 80A/80A Sub Total (N) O Fire Protection System a Portable /Trolley/Wheel mounted extinguishers i 9 litre water type ii 50 litre foam type iii 4.5 kg CO ₂ type iv 4.5 kg Dry Chemical Power (DCP) type b Smoke detection system c Fire detection and Alarm System				2	Nos					†		
i 80A/80A 2 Nos					1403			<u> </u>		1		
Sub Total (N) Image: Control of the protection System				2	Nos							
O Fire Protection System Image: Control of the protection of th				_								
a Portable /Trolley/Wheel mounted extinguishers 5 Nos i 9 litre water type 5 Nos ii 50 litre foam type 2 Nos iii 4.5 kg CO ₂ type 8 Nos iv 4.5 kg Dry Chemical Power (DCP) type 5 Nos b Smoke detection system 1 Set c Fire detection and Alarm System 1 Set												
a Portable /Trolley/Wheel mounted extinguishers 5 Nos i 9 litre water type 5 Nos ii 50 litre foam type 2 Nos iii 4.5 kg CO ₂ type 8 Nos iv 4.5 kg Dry Chemical Power (DCP) type 5 Nos b Smoke detection system 1 Set c Fire detection and Alarm System 1 Set	ire	e Protection System										
ii 50 litre foam type 2 Nos iii 4.5 kg CO ₂ type 8 Nos iv 4.5 kg Dry Chemical Power (DCP) type 5 Nos b Smoke detection system 1 Set c Fire detection and Alarm System 1 Set	orta	rtable /Trolley/Wheel mounted extinguishers										
iii 4.5 kg CO ₂ type 8 Nos iv 4.5 kg Dry Chemical Power (DCP) type 5 Nos b Smoke detection system 1 Set c Fire detection and Alarm System 1 Set) litr	tre water type		5	Nos							
iv 4.5 kg Dry Chemical Power (DCP) type 5 Nos b Smoke detection system 1 Set c Fire detection and Alarm System 1 Set	50 li	litre foam type		2	Nos							
b Smoke detection system 1 Set c Fire detection and Alarm System 1 Set	1.5 k	kg CO ₂ type		8	Nos							
b Smoke detection system 1 Set c Fire detection and Alarm System 1 Set	1.5 k	kg Dry Chemical Power (DCP) type								1		
c Fire detection and Alarm System 1 Set								1		1		
				1								
J Hydrant system, complete U/G piping and accessories etc. from existing HVW/Fire		drant system, complete U/G piping and accessories etc. from existing HVW/Fire										
Hydrant point from Fire Fighting Pump House	- lydr	drant point from Fire Fighting Pump House		<u> </u>				<u> </u>		<u> </u>		
i 400 kV Substation 1 Set	100	0 kV Substation		1	Set							

11100 00	nedule No. 1.Flant, and Mandatory Spares Farts to be supplied from abroad (Nevise	I WILL FUITORIA	111011111101101		OID Desired Oile in	ata di Para da ana ana an	. La carles ou Camara and Process	LC: Local Currency	
		Country of					clearing, forwarding	Total Amount	
Item		origin	Estim	nated	and transportati	on to site (Excluding	(Excluding Taxes	Custom, VAT	
No.	Description	Origin			applicable in Nepal)			and Duties)	and other
NO.			0	1111		FC		FC	taxes
			Quantity	Unit	Currency#	Unit Rate	Total Amount(USD)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(4)x(7)	(9) =(8)	(10)
(1)		(3)	(4)	(3)	(0)	(1)	(0)=(4)x(1)	(9) =(0)	(10)
е	HVW spray system, Hydrant system and complete U/G & O/G piping and accessories								
	etc. out side the pump house for Transformer / Reactor :								
i	105 MVA , 400/220 KV, 1-phase Autotransformer		4	Nos					
	Sub Total (O)								
Р	Air conditioning & Ventilation System								
-	This conditioning a voluntation dystem								
	Ulinh well to a colit AC writ of ATD connects for Air conditioning (AC) for								
	High wall type split AC unit of 2 TR capacity for Air conditioning (AC) for		40	N1					
а	LCC room of GIS Hall, Battery Room, Panel room cum administrative		16	Nos					
	building								
b	Ventillation system for 400 kV GIS Hall		1	Lot					
	Sub Total (P)								
Q	Cables along with clamps, glands, lugs and straight joints etc.								
1	220 kV Cable		1						
1.1	220 kV grade 1 core, 1200sq.mm.XLPE insulated copper cable as per technical		1.50	km					
	specification			KIII					
1.2	Cable end termination(s) on Gantry/Tower as per technical specification		6	nos.					
	Sub Total (Q)								
	Fabrication, galvanising and supply of STEEL STRUCTURES (400kV Double Dead								
_									
R	End Transmission Tower, Column, Gantry structures & Equipment support								
	structures)								
	Lattice/pipe Structure for tower, Colums, beams and equipments including peak								
	plates/pack washers and guest paltes including foundation bolts(nuts, washers, MS plate								
	welded at the bottom)								
а	Lattice stucture & foundation bolts		274	MT					
b	Pipe Structure including Foundation Bolts .		27	MT					
С	Fastners for tower, Columns, beams and equipment support structures		3	MT					
C			3	IVI I					
	Sub Total (R)								
	Earthing and lightning protection including necesaary connectors/connections,								
S	risers etc. complete in all respect (but excluding LM structures for Lightning								
1	protection)								
i	Earth Conductor (copper)		1	LS					
ii	Earth Rod (copper clad steel)		1	LS		 			
		-	1			+			-
iii	Equipment for lightning protection		1	LS					
	Sub Total (S)								
Т	Illumination System								
	Illumination System for GIS Hall and Control Building Complete as per Specification								
а	,		1	LS					
b	Switchyard lighting		1	LS					
С	Street lighting		1	LS					
- C			'	LO					
	Sub Total (T)								
U	POWER & CONTROL CABLES								
а	Power Cables(PVC) - (1.1kV grade)		1	LS					
b	Power Cables (XLPE) - (1.1kV grade)		1	LS		1			1
С	Control Cable (PVC) - (1.1kV grade)		1	LS					
d	Cable glands, lugs & straight through joints for Power & Control cables	1	 	LS		 			
u	Toable glands, rugs a straight through joints for Fower a Control Cables	<u> </u>	<u> </u>	LO		1	l .	l	

FC: Foreign Currency LC: Local Currency

Price So	hedule No. 1:Plant, and Mandatory Spares Parts to be supplied from abroad (Revise	•		LC: Local Currency					
Item No.	Description	Country of origin	Estim	nated	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	
140.			Quantity	Unit		FC		FC	taxes
			Quantity	Onne	Currency#	Unit Rate	Total Amount(USD)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(4)x(7)	(9) =(8)	(10)
· ,	Sub Total (U)	, ,	, ,	\	,		() () ()	() ()	
٧	Communication & Associated System								
a	Interfacing of SAS to Existing Communication & Associated System		1	Lot					
	Giga - Ethernet interfaces 10/100/1000 Mbps with Layer-2 switching Card								
b	(Minimum 4 interfaces per Card.)		2	Nos.					
	Sub Total (V)								
w	EOT Crane								
	EOT crane with suitable double Runway rails including trolley runway with conductors,								
1	fixtures, insulations size suitable to operate as and when required, complete with all		1	Set					
•	accessories and slings as detailed in the specifications.			001					
	Sub Total (W)								
Х	Digital Protection Coupler								
1	Digital Protection Coupler		4	Nos					
•	Sub Total (X)		·	1400					
Y	PRE-ENGINEERED BUILDINGS								
	400 kV GIS Building including all supply materials from abroad except civil								-
i)	works and for civil works refer schedule 4(a)								
(0)	400 kV GIS Hall		800	Sq. M.					1
(a)	AHU / Panels Room		400	Sq. M.					+
(b)	Sub Total (Y)		400	Sq. IVI.					
	Sub Total (1)								
	MAND ATORY CRARES */Dreads up of Luminous supplifits about to account American								
Z	MANDATORY SPARES *(Break up of Lumpsum quantity shall be as per Annexure-I,								
	Chapter-1, Project Specific Requirement) Gas Insulated Switchgear								
1	Mandatory Spares required during O&M of 400kV GIS Substation		1	LS					
2 2	400/220 kV, Auto Transformer		1	LS					+
3	Surge Arrester		'	LO					+
	336kV Surge Arrester		1	LS					
a b	216kV Surge Arrester		1	LS	1				+
<u>4</u>	Fire Fighting System	1	1	LS	1	1			
5	Battery Charger		1	LS	1				+
6	Relay & Protection panel		1	LS		-	+		+
7	Substation Automation System		1	LS		-			+
8			1	LS		-	+		+
9	Illumination System		1	LS		 	+		+
	LT Switchgear		1	LS					<u> </u>
10	Erection hardware		1	LS					<u> </u>
11	Bus Post Insulators		4		1				
а	420kV BPI (1-Ph)		1	nos					
	Sub Total (Z)								
	Grand Total of Schedule I								

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

400 kV(GIS)/220kV (GIS) Lapsiphedi Substation

	e No.2: Plant and Equipment including Mandatory Spares Parts to be supplied from with		LC: Local Currency (ALL Price in	Local Currency)					
Item No.	Item description	Quantity	Unit		ce (Excluding VAT) in LC	Inlan	nd transportation to site	Total Amount (Excluding Taxes)	VAT and other taxes
				Unit Rate	Amount	Unit Rate	Amount		
1	2	3	4	5	$6 = (3) \times (5)$	7	8=(3)x(7)	9=6+8	10
	Total for Sahadula 2 (Total of salurum 0 to be sounded formed to Sahdula 5. Cuand								1
	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.

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

Date:

400 kV(GIS)/220kV (GIS) Lapsiphedi Substation Price Schedule No 3: Design Services

				Unit	Prices	Total Pric	es
Item No.	Item Description	Esti	mated	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)

400 kV(GIS)/220kV (GIS) Lapsiphedi Substation Schedule No. 4 (a): Installation and Other Services

(a): Installation and Construction Charges (Revised wrt. Amendment no. 3)

Item	Providen	Country of origin	Type & Designation	Estimated		Installation Charges						
No.	Description			Ouantitu	Unit	Portion	in Foreign Cu	rrency(FC)	Portion in Nepalese	Currency (in NPR)		
				Quantity	Unit	Currency#	Unit Rate	Total Amount	Unit Rate	Total Charges		
(1)	(2)	(3)	(4)	(5)	(6)	(7	(8)	(9)=(5)x(8)	10	(11)=(5)x(10)		
	Installation services											
Α	420kV SF6 Gas Insulated Switchgear and Accessories											
- \	420kV, 5000A SF6 GIS Bus Bar Module [Module description as per technical				0-4-							
a)	specification, Chapter 1- PSR]			2	Sets			-				
LA	420kV, 4000A SF6 GIS Line Feeder bay Module [Module description as per technical			4	0-4-							
b)	specification, Chapter 1- PSR]			4	Sets			-				
c)	420kV, 2000A, SF6 GIS Auto Transformer bay Module [Module description as per			1	Sets							
C)	technical specification, Chapter 1- PSR]			1	500			_				
d)	420kV, SF6 GIS Tie bay Module [Module description as per technical specification,											
u)	Chapter 1- PSR]											
i)	4000A			2	Sets			-				
ii)	2000A			1	Sets			-				
e)	SF6 Gas Insulated Bus Duct (GIB) outside GIS Hall alongwith associated support							_				
٥)	structure and accessories											
i)	4000 A , 50kA for 1 sec. Single Phase			600	m			-				
ii)	2000 A, 50kA for 1 sec. Single Phase			200	m			-				
f)	400 kV, SF6 to Air Bushing alongwith associated support structure for Connecting GIS to											
- '/	AIS alongwith support structure											
i)	4000A, 50kA for 1 sec. Single Phase			12	nos							
ii)	2000A, 50kA for 1 sec. Single Phase			4	nos							
g)	420 kV Auxiliary Bus to connect spare unit of Transformer [Module description as per technical specification, Chapter 1-PSR]]			1	sets							
	Sub Total (A)							-				
В	245 kV SF6 Gas Insulated Switchgear and Accessories							-				
a)	SF6 Gas Insulated Bus Duct (GIB) outside GIS Hall alongwith associated support											
	structure and accessories											
a.1	2000A, 40kA for 1 sec. Single Phase			240	mtr.							
b	220kV, SF6 to Air Bushing alongwith associated support structure for Connecting GIS to											
	AIS alongwith support structure											
b.1	2000A, 40kA for 1 sec. Single Phase			4	nos							
С	220kV, SF6 to Cable Bushing alongwith associated support structure for Connecting GIS											
	to AIS alongwith support structure											
c.1	2000A, 40kA for 1 sec. Single Phase			4	nos							
d	245kV, SF6 GIS Bus Bar Module (EXTENSION)[Module description as per technical			2	Sets							
	specification, Chapter 1- PSR]				0010							
е	245kV, SF6 GIS Auto Transformer bay Module [Module			1	Sets							
	description as per technical specification, Chapter 1- PSR]				0010							
f	245 kV Auxiliary Bus to connect spare unit of Transformer [Module			1	Set							
	description as per Technical specification]											
	Sub Total (B)											

(a): Installation and Construction Charges (Revised wrt. Amendment no. 3)

Item	nation and construction charges (kevised wit. Americane it no. 3)	Country of origin	Type & Designation	Estim	ated			Installation	Charges	
No.	Description		Ĭ	Quantity	Unit	Portion	in Foreign Cu	rrency(FC)	Portion in Nepalese	Currency (in NPR)
				Quantity	Onne	Currency#	Unit Rate	Total Amount	Unit Rate	Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	(7	(8)	(9)=(5)x(8)	10	(11)=(5)x(10)
С	105 MVA,400/√3 /220/√3/33 kV Single Phase Auto Transformer as specified below							-		
	105 MVA,400/√3 /220/√3/33 kV Single Phase Auto Transformer outdoor type, complete with all fittings and accessories including Main Control Cabinet, cooling control cabinet, RTCC panel, OLTC, and On line Dissolved Gas (Multi Gas) Analysis and moisture monitoring system, online insulating oil drying system (Cartridge type) with optical temperature sensor,necessary arrangment for Delta formation of LV winding & Neutral Formation and Earthing Arrangement, surge protection device and all fittings & accessories as specified/required for completion of the scope of works as per technical specification (without transformer Oil)			4	Nos.			-		
2	Insulating oil for 105 MVA,400/ $\sqrt{3}$ /220/ $\sqrt{3}$ /33 kV Single Phase Autotransformer (* 1Lot = Oil for 1 Autotransformers)			4	Lot*			-		
3	33kV Current transformer (NCT) for autotrasnformer			1	Nos.					
	Sub Total (C)							-		
								-		
	LT TRANSFORMER									
	630 kVA, 33/0.4kV			1	Nos.			-		
	Sub Total (D)							-		
E	420KV Outdoor Equipment									
	336KV Surge Arrester (1-phase)			16	Nos.			-		
	420kV BPI(1-Ph)			16	Nos.			-		
	Sub Total (E)			10	1403.			-		
								-		
F	245KV Outdoor Equipment							-		
	216KV Surge Arrester (1-phase)			4	Nos.			-		
2	245kV BPI(1-Ph)			4	Nos.			-		
	Sub Total (F)							-		
								-		
G	72.5kV EQUIPMENT							-		
1	72.5 kV, 600A, 31.5kA Circuit Breaker (3-phase) with support structure				No.					
2	72.5 kV, 600A,31.5kA Isolators with earth switch (3-phase, DBR type)				No.					
3	72.5kV, 600A, 31.5 kA with 120% extended rating CT (1- Phase)				Nos.					
4	72.5kV PT.(1-phase)				Nos.					
5	30kV Surge Arrestors (1-Phase)				Nos.					
6	72.5 kV BPI (1-phase) Sub Total (G)			3	Nos.					
	oud Total (G)									
н	Erection Hardware							_		
	400kV One and Half Breaker-type layout for GIS termination arrangement							-		
1	Insulator strings, Disc Insulators, Hardware, conductor, bus-bar materials, cable trays, Bay MB, clamps, spacers, connectors including equipment connectors, connectors for Transformers, Junction box, earthwire, earthing material risers, buried cable trenches/pipe equipment & lighting, all accessories etc. applicable for the following:							-		
1.1	Transformer Bay			1	bays					
2	Insulator strings, Disc Insulators, Hardware, conductor, bus-bar materials, cable trays, Bay MB, clamps, spacers, connectors including equipment connectors, Junction box, earthwire, earthing material risers, buried cable trenches/pipe equipment & lighting, all accessories etc. applicable for the following:							-		
2.1	Line Bay			4	bays]	-		

(a): Installation and Construction Charges (Revised wrt. Amendment no. 3)

Item	2	Country of origin	Type & Designation	Estim	ated			Installation	Charges	
No.	Description			Quantity	Unit		in Foreign Cu		Portion in Nepalese	
						Currency#		Total Amount	Unit Rate	Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	(7	(8)	(9)=(5)x(8)	10	(11)=(5)x(10)
H.2	220 kV DM-type layout for GIS termination arrangement of Transformer							-		
1	Insulator strings, Disc Insulators, Hardware, conductor, bus-bar materials, cable trays, Bay MB, clamps, spacers, connectors including equipment connectors, connectors for Transformers, Junction box, earthwire, earthing material risers, buried cable trenches/pipe equipment & lighting, all accessories etc. for the following:							-		
4.4					h					
1.1	Transformer Bay			1	bays			-		
Н.3	For spare unit of 400/220/33 kV auto transformer connection through auxiliary buses (tertiary & Neutral auxiliary buses only), Neutral formation and delta formation (for one bank): Required 72.5 kV BPI for tertiary auxiliary bus & delta formation, 36 kV BPI for Neutral formation & Neutral auxiliary bus including AI tube, bus-bar materials, clamps, spacers, connectors, including equipment connectors, support structures, Earthing of spare unit as per technical specification.			1	Lot					
	Sub Total (H)							-		
								-		
ı	CONTROL RELAY AND PROTECTION PANELS (WITH AUTOMATION)							-		
1	400kV							-		
1.1	Circuit Breaker Relay Panel				-			-		
a b	CB Relay Panel With Auto Reclose CB Relay Panel With out Auto Reclose			4	Sets Sets					
1.2	Line Protection Panel			4	Sets					
1.2	Transformer Protection Panel (For both HV & MV side) as per Specification			4	Seis			-		
1.3	Transformer Protection Paner (1 or both 11 v & MV side) as per specification			1	Sets			-		
1.4	Bus Bar Protection Panel							_		
a	400kV (Duplicate Bus Bar Protection)			1	Set			-		
b	Augmentation of existing 220 kV bus bar protection scheme (For 1 Nos. of ICT bays as specified)			1	Lot			-		
2	Other/Common equipments Pertaining to C & R System							-		
а	Time synchronisation equipment			1	Nos.			-		
b	Special Relay Test kit			1	Nos.			-		
3	220kV									
а	CB Relay Panel With out Auto Reclose			1	Sets					
	Sub Total (I)							-		
J	SUBSTATION AUTOMATION							-		
1	Complete Substation automation system/ Augumentation Substation automation system-including hardware and software for the substation alongwith associated equipments for the following Main bays to be automated as per Technical Specification:							-		
а	400 kV System			9	Nos.			-		
b	220 kV System			2	Nos.			-		
С	For Auxiliary system			1	Set			-		
2	Augumentations/Intregations of Operator Workstations (HMI) and all necessary accessories and software. In the present scope, bidder shall include BCUs required for 400 kV bays including all necessary hardware and software to integrate with the existing Substation Automation System including up-dation of system database, displays, and development of additional displays and reports all complete as per requirement.			1	Lot			-		
3	Integration of all 400/220kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. complete as per Technical Specification.			1	Lot			-		
	Sub Total (J)							-		
	, ,							_		

(a): Installation and Construction Charges (Revised wrt. Amendment no. 3)

Item	Description	Country of origin	Type & Designation	Estim	ated			Installation (
No.	Description			Quantity	Unit	Portion	in Foreign Cu	rrency(FC)	Portion in Nepales	e Currency (in NPR)
				Quantity	Unit	Currency#	Unit Rate	Total Amount	Unit Rate	Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	(7	(8)	(9)=(5)x(8)	10	(11)=(5)x(10)
	Visual monitoring system (VMS) system	(-)		(-)			(-)	-		(1.7) (0)(10)
	Visual monitoring system (VMS) as specified/required complete in all respect including									
	HF Cable, Other necessary cabling and power supply system			1	Lot			_		
a)	The Gable, Other recessary cabling and power supply system			'	Lot			_		
	Sub Total (K)							_		
	Sub Foldi (K)									
	170 % 1							-		
	LT Switchgear							-		
	400V Main switchboard			1	Set			-		
	400V ACDB			1	Set			-		
	400V MLDB			1	Set			-		
	400V Emergency LDB			1	Set			-		
	220V DCDB			1	Sets			-		
	48V/50V DCDB			1	Sets			-		
	Sub Total (L)							-		
								-		
М	Batteries							-		
а	220V							-		
	600 AH			2	Nos			-		
b	48V							-		
i	600 AH			2	Nos			-		
	Sub Total (M)							-		
								_		
N	Float Cum Boost Battery Charger									
	220V Float Cum Boost Battery Charger									
	80A/80A			2	Nos					
					INOS					-
	48V Float Cum Boost Battery Charger			_						
	80A/80A			2	Nos					
	Sub Total (N)									
0	Fire Protection System							-		
	Portable /Trolley/Wheel mounted extinguishers							-		
	9 litre water type			5	Nos			-		
	50 litre foam type			2	Nos			-		
iii	4.5 kg CO ₂ type			8	Nos			-		
iv	4.5 kg Dry Chemical Power (DCP) type			5	Nos			-		
	Smoke detection system			1	Set			_		
	Fire detection and Alarm System			1	Set			-		
	Hydrant system, complete U/G piping and accessories etc. from existing HVW/Fire			 	561					1
d	Hydrant point from Fire Fighting Pump House		ĺ					-		
	400 kV Substation			1	Set			_		1
	HVW spray system, Hydrant system and complete U/G & O/G piping and accessories			 '	061			<u> </u>		
	etc. out side the pump house for Transformer / Reactor :		ĺ					-		
	105 MVA , 400/220 KV, 1-phase Autotransformer		 	4	nos			_		+
	Sub Total (O)			4	1105			-		
	oub Total (O)							-		
	At the top of the control of the con									
Р	Air conditioning & Ventilation System		-	1				-		
			1					ĺ		
	High wall type split AC unit of 2 TR capacity for Air conditioning (AC) for		1					ĺ		
	LCC room of GIS Hall, Battery Room, Panel room cum administrative		ĺ	16	Nos			-		
	building		ĺ					1		
	Ventillation system for 400 kV GIS Hall			1	Lot			-		
	Sub Total (P)							-		
								-		
	Cables along with clamps, glands, lugs and straight joints etc.									

(a): Installation and Construction Charges (Revised wrt. Amendment no. 3)

Item	Description	Country of origin	Type & Designation	Estim	ated			Installation	Charges	
No.	Description		, in the second	Quantity	Unit		in Foreign Cι		Portion in Nepalese	
				- Lucinary		Currency#	Unit Rate	Total Amount	Unit Rate	Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	(7	(8)	(9)=(5)x(8)	10	(11)=(5)x(10)
1	220 kV Cable									
1.1	220 kV grade 1 core, 1200sq.mm.XLPE insulated copper cable as per technical specification			1.50	km					
1.0	Cable end termination(s) on Gantry/Tower as per technical specification			6	non					
1.2	Sub Total (Q)			U	nos					
	Sub Total (4)									
	Fabrication, galvanising and supply of STEEL STRUCTURES (400kV Double Dead									
R	End Transmission Tower, Column, Gantry structures & Equipment support									
ĸ	structures)							-		
	Lattice/pipe Structure for tower,Colums,beams and equipments including peak									
	plates/pack washers and guest paltes including foundation bolts(nuts,washers,MS plate									
	welded at the bottom)									
а	Lattice stucture & foundation bolts			274	MT			_		
b	Pipe Structure including Foundation Bolts .			27	MT					
С	Fastners for tower, Columns, beams and equipment support strutures		İ	3	MT		1	_		
	Sub Total (R)							-		
								_		
	Earthing and lightning protection including necesaary connectors/connections,									
s	risers etc. complete in all respect (but excluding LM structures for Lightning							_		
3	protection)							_		
<u> </u>	Earth Conductor (copper)			1	LS			-		
<u>ii</u>	Earth Rod (copper clad steel)			1	LS		-	-		
iii	Equipment for lightning protection			1	LS			-		
	Sub Total (S)							-		
-	Warning-tion Court on							-		
T	Illumination System							_		
а	Illumination System for GIS Hall and Control Building Complete as per Specification			1	LS			-		
С	Switchyard lighting			1	LS			_		
d	Street lighting			1	LS			-		
	Sub Total (T)							_		
								_		
U	POWER & CONTROL CABLES							_		
a	Power Cables(PVC) - (1.1kV grade)			1	LS			-		
b	Power Cables (XLPE) - (1.1kV grade)			1	LS			_		
С	Control Cable (PVC) - (1.1kV grade)			1	LS			-		
d	Cable glands, lugs & straight through joints for Power & Control cables			1	LS			-		
	Sub Total (U)							-		
								-		
٧	Communication & Associated System							-		
а	Interfacing of SAS to Existing Communication & Associated System			1	Lot			-		
h	Giga - Ethernet interfaces 10/100/1000 Mbps with Layer-2 switching Card			2	Noo					
b	(Minimum 4 interfaces per Card.)		<u> </u>		Nos.		<u> </u>		<u> </u>	
	Sub Total (V)							-		
								-		
W	EOT Crane		1					-	l	
	EOT crane with suitable double Runway rails including trolley runway with conductors,	_								
1	fixtures, insulations size suitable to operate as and when required, complete with all		1	1	Set		1	-		
	accessories and slings as detailed in the specifications.									
	Sub Total (W)							-		
								-		
Χ	Digital Protection Coupler							-		
1	Digital Protection Coupler			4	Nos			-		
	Sub Total (V)							-		

(a): Installation and Construction Charges (Revised wrt. Amendment no. 3)

Item	Illation and Construction Charges (Revised wrt. Amendment no. 3)	Country of origin	Type & Designation	Estim	nated			Installation					
No.	Description	Origin	Designation		I	Portion in Foreign Currency(FC) Portion in Nepalese Currency (i							
140.				Quantity	Unit	Currency#		Total Amount					
(1)	(2)	(3)	(4)	(5)	(6)	(7	(8)						
(1)	\- /	(=)	(-/	(-)	(-)	(-	(5)	(5) (5)-(5)		(11) (5)-(15)			
	Civil Construction Works (As per technical specifications)							-					
	SECTION: A: NEA ASSESSED QUANTITIES							-					
1.0	Excavation in all types of soil and rock including backfilling disposal etc. for all leads and lifts			12500	Cu.Mtr.			-					
2.0	Providing and laying of Plain Cement Concrete (PCC) (1:4:8)			800	Cu.Mtr.			-					
3.0	Providing and laying of Plain Cement Concrete (PCC) (1:2:4)			75	Cu.Mtr.			-					
4.0	Providing and laying of Reinforced Cement Concrete Design Mix (M25) including pre cast, shuttering, Grouting of pockets & underpinning but excluding steel reinforcement.			3080	Cu.Mtr.			-					
5.0	Providing and laying Plain Cement Concrete 1:5:10 (1 cement : 5 sand : 10 Stone aggregate)			440	Cu.Mtr.			-					
6.0	Steel Reinforcement (Fe 500)			280	MT			-					
7.0	Miscellaneous Structural steel used for rails , plates for rail fixing, gratings, gratings supports etc for transformer /reactor foundation, cable supportstand earthing cleats , chequered plates, embedments, edge protection angles for cable trenches but excluding the reinforcement steel and steel for lattice and pipe structures which shall be paid seperately.				MT			-					
8.0	Stone filling (40mm) over grating of Transformer /reactor Foundation			420	Cu.Mtr.			-					
9.0	Stone spreading including antiweed treatment in switchyard but excluding PCC.			5600	Sq. Mtr.			-					
10.00	Supplying & laying hume pipe with collarsof grade (NP-3) but excluding reinforcement steel & concrete of bed/support/encasing of hume pipes which shall be paid seperately							-					
i)	250mm dia			25	RM			-					
ii)	300mm dia				RM			-					
iii)	450mm dia				RM			-					
iv)	600mm dia			25	RM			-					
11.00	Concrete road (including all crossings) as per technical specification and approved drawing but ecluding reinforcement & concrete							-					
a.	Concrete Road			600	Sq. m.			-					
12.0	Construction of rail-cum-raod as per technical specification and approved drawing including all items such as excavation, compaction, rolling, watering, WBM, etc but excluding concrete, reinforcement and structural steel which shall be paid seperately							-					
a.	Section having four rails			250	Sq. m.			-					
13.0	Chain link fencing as per technical specification and approved drawing but excluding concrete which shall be paid seperately			600	RM			-					
14.0	switch yard Gate excluding concrete			2	No			-					
15.0	Dismantling & rerection of existing fence including sorting and stacking of serviceable & non-serviceable materials and disposal of debris as per the direction of engineer-incharge			30	RM			-					
16.00	Supplying and erecting dewatering pumps							-					
a.	5 HP			2	Nos.			-					
b.	0.5 HP			4	Nos.			-					
17.00	Drain including culverts but excluding concrete ,hume pipes & reinforcement steel which shall be paid seperately							-					
a.	Type AA			800				-					
b.	Type BB				RM			-					
C.	Type CC				RM			-					
d.	Type DD			20	RM		ļ	-		1			
18.00	External water supply as per technical from borewell to GIS Building including all items like excavation,pipes,fittings,jointings,valves,chambers/manholes etc							-					
a.	80mm Dia GI Pipe				RM			-					
b.	25mm Dia GI Pipe			50	RM			-					

(a): Installation and Construction Charges (Revised wrt. Amendment no. 3)

FC: Foreign Currency LC: Local Currency

Item	Description	Country of origin	Type & Designation	Estim	ated			Installation	Charges	
No.	Description			Quantity	Unit	Portion	in Foreign C	urrency(FC)	Portion in Nepalese	Currency (in NPR)
				Quantity	Onne	Currency#	Unit Rate	Total Amount	Unit Rate	Total Charges
(1)	(2)	(3)	(4)	(5)	(6)	(7	(8)	(9)=(5)x(8)	10	(11)=(5)x(10)
19.00	External sewerage system including all item such as excavation, piping, pipe fittings, manholes, gali trap, gali chamber etc.							-		
а	(i) 150 mm Dia.			100	RM			-		
20.0	Stone soling below foundations wherever specified in approved drawings during detailed engineering			90	Cu.Mtr.			-		
21	Site levelling							-		
i	Earth work in excavation and filling in all types of soils including soft/disintegrated rock with all leads and lifts within sub station boundary			60000	Cu.Mtr.			-		
ii	Earth work in filling with borrowed earth with all leads and lifts including royalty,taxes etc			2000	Cu.Mtr.					
22	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, 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 lower level. Item of excavation, PCC (1:2:4 & 1:4:8) shall be measured and paid seperately under respective items of BPS			2000	Cu.Mtr.					
23	PRE ENGINEERED BUILDINGS									
i)	400 KV GIS BUILDING All civil works related to pre-engineered 400 kV GIS Buliding to be supplied as per schedule 1 including internal cable trench, finishing(external & Internal) 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.									
(a)	GIS Hall			800	Sq. M.					
(b)	AHU/ Panels Room			400	Sq. M.					
24	Geotechnical /Soil Investigation			1	LS			-		
	Total for Schedule 4(Total of column 9 and 11 to be carried forward to Schedule 5:	Grand Summar	·v)					-		

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

400 kV(GIS)/220kV (GIS) Lapsiphedi Substation Schedule No. 4 : Installation and Other Services

(b):Training Charges for training to be imparted abroad (Common for all three substations)

SI. No.	Description	Item for which training is to be imparted.	Country where training is to be imparted	Nos. of Trainee	Training duration in days		Training charge per Trainee per day	Total Training Charges
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)=(5)x(6)x(8)
	None							
	Total for Training Charges							-

REMARKS:

(Common Seal)

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.

Name of Bidder:	Date:
Signature of Bidder:	
(Printed Name)	
(Designation)	

400 kV(GIS)/220kV (GIS) Lapsiphedi Substation

Schedule No. 4: Installation and Other Services

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

SI. No.	Description of the Test	Item for which training is to be imparted.	Training duration in days	Currency	Per Day Training Charges for Contractors Trainers	Total Training Charges	
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(4)x(6)	
	None						
	Total for Training Charges					-	
Total for Schedule 4 (Total of column 7 to be carried forward to Schedule 5: Grand Summary							

REMARKS:

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

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Khimti-Barhabise-Lapsiphedi 400 kV Substation Project

400 kV(GIS)/220kV (GIS) Lapsiphedi Substation Schedule No. 4 : Installation and Other Services

(d): Maintenance Charges

			Qty.	Total Maintenance Charges		
SI No	Description	Unit		Currency	Total Maintenance Charges	
1	None	Year				
2	None	Year				
	Total for Schedule 4 (Total of column 5 to be carried forward to Schedule 5: Grand Sumi					

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

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Khimti-Barhabise-Lapsiphedi 400 kV Substation Project

400 kV(GIS)/220kV (GIS) Lapsiphedi Substation

Schedule No. 4: Installation and Other Services

(e): Type Test Charges for Type Tests to be conducted abroad.

SI. No.	Description of Tests	Testing Location	TEST CHARGES		
			Currency	Amount	
1	2	3	4	5	
	None				
	None				
	Total of Type Tests charges (Total of column 5 to be carried forward to Schedule 5: Grand Summary)				

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

Nepal Electricity Authority

Project Management Directorate

Khimti-Barhabise-Lapsiphedi 400 kV Substation Project

400 kV(GIS)/220kV (GIS) Lapsiphedi Substation

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

ltem No.	Name & Description of Parts	Name of Original	Part No.	Number of Units in	Total No. of Sets to	Unit Price	Total Price	Remarks
		Manufacturer		each set	be provided			
	None							

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