

# Nepal Electricity Authority

(A Government of Nepal Undertaking)

## Transmission Directorate



### NEPAL-INDIA ELECTRICITY TRANSMISSION AND TRADE PROJECT

ICB No: NIETTP/W/ICB-4/SS

**Bidding Document**  
**for**  
**Procurement of Plant Design, Supply and Installation of**  
**220/132 kV Dhalkebar Substation**

**(Single Stage Bidding)**

**Volume III of III**

**Schedule of Rates and Prices**

**November, 2017**

**Procurement of Plant Design, Supply and Installation of 220/132 kV Dhalkebar Substation**

**(Schedule of Rates and Prices)**

Contract ID Number: NIETTP/W/ICB-4/SS

**Price Schedule No. 5. Grand Summary ( Schedule Nos. 1 to 4)**

Sl. No.	Description	Total Price <sup>#</sup>	
		Foreign Currency Portion	Local Currency Portion
(1)	(2)	(3)	(4)
1.	<b>Total Schedule No. 1. Plant, and Mandatory Spares Parts to be supplied from abroad</b>		
2.	<b>Total Schedule No. 2. Plant, and Mandatory Spares Parts to be supplied from within the Employer's country</b>		
3	<b>Total Schedule No. 3. Design Services</b>	<b>Price to be included in the "Supply, Installation Charges and Civil works" Schedules</b>	
4.	<b>Schedule No. 4. Installation Services</b>		
Part A:	Local Transportation, Insurance and other Incidental services (including port clearance etc.)		
Part - B:	Installation Charges and		
Part- C:	Civil Works		
	<b>Total Schedule No. 4. Installation Services</b>		
<b>GRAND TOTAL excluding VAT (to Bid Form)</b>			
Provisional Sum for the Insurance of Installation All Risks Insurance of the works/ goods already completed/supplied at Site by Employer . The contractor shall cover the mentioned insurance and same amount shall be reimbursed to the contractor upon the submission of the actual invoice and insurance policy.			NPR 4,000,000

**Date:**

**Place:**

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

**Note:**

# Specify currency in accordance with specifications in Bid Data Sheet under ITB 18.1. Create and use as many columns for Foreign Currency requirement as there are foreign currencies.

**Procurement of Plant Design, Supply and Installation of 220/132 kV Dhalkebar Substation  
(Schedule of Rates and Prices)**

Contract ID Number: NIETTP/W/ICB-4/SS

Bidder's Name & Address:

**Schedule No. 1 : Plant (including Mandatory Spare Parts) Supplied from abroad**

Sl. No.	Item Description	Country of Origin	Unit	Qty.	Unit Price		Total Price
					Currency#	CIP Boarder	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8) = (5) x(7)
<b>1.0</b>	630 kVA,33/0.400 kV	1	No				
<b>2.0</b>	36kV Horn Gap Fuse (3-Phase)	1	No				
<b>3.0</b>	Air conditioning System for Control room cum administrative building						
a	High wall type split AC unit of 2 TR capacity	12	Nos				
<b>4.0</b>	<b>Illumination System</b>						
a	Illumination System for 220kV switchyard panel room	3	Sets				
b	Control room cum administrative building and Fire fighting pump House & water tank illumination	1	LS				
c	Switchyard lighting	1	LS				
d	Street lighting	1	LS				
<b>5.0</b>	<b>Air conditioning System</b>						
a	Air conditioning for S/Y panel room 220/132kV						
i	220KV	3	Sets				
	<b>Total of Schedule No. 1</b>						

# Specify currency in accordance with specifications in Bid Data Sheet under ITB 18.1. Create and use as many columns

Date:

Place:

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Common Seal:

**Procurement of Plant Design, Supply and Installation of 220/132 kV Dhalkebar Substation  
(Schedule of Rates and Prices)**

**Contract ID Number: NIETTP/W/ICB-4/SS**

**Bidder's Name & Address:**

**Schedule No. 2 : Plant (including Mandatory Spare Parts) Supplied from within Employer's country**

Sl. No.	Item Description	Unit	Qty.	EXW Unit Price NRs	EXW Total Price NRs
(1)	(2)	(3)	(4)	(5)	(6) = (5) x(4)
<b>1.0</b>	630 kVA,33/0.400 kV	1	No		
<b>2.0</b>	36kV Horn Gap Fuse (3-Phase)	1	No		
<b>3.0</b>	Air conditioning System for Control room cum administrative building				
a	High wall type split AC unit of 2 TR capacity	12	Nos		
<b>4.0</b>	<b>Illumination System</b>				
a	Illumination System for 220kV switchyard panel room	3	Sets		
b	Control room cum administrative building and Fire fighting pump House & water tank illumination	1	LS		
c	Switchyard lighting	1	LS		
d	Street lighting	1	LS		
<b>5.0</b>	<b>Air conditioning System</b>				
a	Air conditioning for S/Y panel room 220/132kV				
i	220KV	3	Sets		
	<b>Total of Schedule No. 2</b>				

# Specify currency in accordance with specifications in Bid Data Sheet under ITB 18.1.

**Date:**

**Place:**

\_\_\_\_\_

\_\_\_\_\_

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**Common Seal:**

**Procurement of Plant Design, Supply and Installation of 220/132 kV Dhalkebar Substation**

**(Schedule of Rates and Prices)**

Contract ID Number: NIETTP/W/ICB-4/SS

**Price Schedule No. 3: Design Services**

The scope of the Contract covers the detail design of the substations as well. The price of the detail design is deemed to have been covered in the prices of the other schedules. So the contractor shall not be required to show the breakdown of the prices in this schedule. Accordingly no separate payment be made for the design Services.

Item	Description	Qty.	Unit Price <sup>#</sup>		Total Price <sup>#</sup>	
			Local Currency Portion	Foreign Currency Portion (optional)	LocalCurrency Portion	Foreign currency Portion(optional)
(1)	(2)	(3)	(4)	(5)	(7)=(4)x(3)	(8)=(5)x(3)
	NA					
<b>TOTAL</b>						

Date:

Place:

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

**Procurement of Plant Design, Supply and Installation of 220/132 kv Dhalkebar Substation  
(Schedule of Rates and Prices)**

Contract ID Number: NIETTP/W/ICB-4/SS

**Schedule No. 4. Installation Services**

Part - A: Local Transportation, Insurance and other Incidental services (including port clearance etc.)

Sl. No.	Item Description	Qty.	Unit	Unit Price (NRS)	Total Price (NRS)
(1)	(2)	(3)	(4)	(5)	(6) = (5) x(3)
1.0	630 kVA,33/0.400 kv	1	No		
2.0	36kV Horn Gap Fuse (3-Phase)	1	No		
3.0	Air conditioning System for Control room cum administrative building				
a	High wall type split AC unit of 2 TR capacity	12	Nos		
4.0	<b>Illumination System</b>				
a	Illumination System for 220kV switchyard panel room	3	Sets		
b	Control room cum administrative building and Fire fighting pump House & water tank illumination	1	LS		
c	Switchyard lighting	1	LS		
d	Street lighting	1	LS		
5.0	<b>Air conditioning System</b>				
a	Air conditioning for S/Y panel room 220/132kV				
i	220KV	3	Sets		
	<b>Total of Schedule No. 4A</b>				

# Specify currency in accordance with specifications in Bid Data Sheet under ITB 18.1. Create and use as many columns for Foreign Currency requirement as there are foreign currencies.

Date:

Place:

Signature:

Printed Name:

Designation:

Common Seal:

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**Procurement of Plant Design, Supply and Installation of 220/132 kV Dhalkebar Substation  
(Schedule of Rates and Prices)**

Contract ID Number: NIETTP/W/ICB-4/SS

Schedule No. 4. Installation Services

ETC : Erection, Testing & Commissioning

Part - B: Installation Charges

TC : Testing & Commissioning

Sl. No.	Item Description	ETC/TC	Unit	Qty.	Unit Price <sup>#</sup>		Total Price <sup>#</sup>	
					Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion	Local Currency Portion
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(5)x(6)	(9)=(5)x(7)
	<b>Part-A: EMPLOYER ASSESSED QUANTITIES</b>							
<b>A</b>	<b>LT TRANSFORMER ( Ref. Volume-II, Section-VI, Chapter 7)</b>							
<b>1.0</b>	630 kVA,33/0.400 kV	ETC	No	1				
<b>B</b>	<b>245 kV equipment (Ref. Volume-II, Section-VI, Chapter 3)</b>							
<b>1.0</b>	<b>245 kV Circuit Breakers (3-Phase) with support structure</b>							
a	1600A, 40KA	TC	Nos	11				
b	2500A, 40KA	TC	No	1				
<b>2.0</b>	<b>245kV Isolator (3-phase)-Double Break</b>							
a	1600A, 40 KA, Isolator with one E/S	TC	Nos	11				
b	1600A, 40 KA, Isolator with two E/s	TC	Nos	11				
c	1600 A, 40KA, Tandem Isolator without E/S	TC	Nos	21				
d	2500A, 40 KA, Isolator with two E/s	TC	Nos	2				
<b>3.0</b>	<b>245 kV Current Transformer (1-Phase)</b>							
a	1600A, 40KA with 120% extended current rating	TC	Nos	33				
b	1600 A, 40KA with 150% extended current	TC	Nos	3				
<b>4.0</b>	<b>245 kV Capacitive Voltage Transformer (1- Phase)</b>							
a	4400 pF	TC	Nos.	30				
<b>5.0</b>	<b>216 kV Surge Arrestors (1-phase)</b>	TC	Nos.	30				
<b>6.0</b>	<b>245 kV Bust Post Insulator</b>	TC	Nos	152				
<b>C</b>	<b>145 kV equipment (Ref. Volume-II, Section-VI, Chapter 3)</b>							
<b>1.0</b>	<b>145 kV Circuit Breaker (3-Phase) with support structure</b>							
a	1250A, 31.5 kA	TC	Nos	2				
<b>2.0</b>	<b>145kV Isolator (3-phase)-HDB</b>							

Sl. No.	Item Description	ETC/TC	Unit	Qty.	Unit Price <sup>#</sup>		Total Price <sup>#</sup>	
					Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion	Local Currency Portion
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(5)x(6)	(9)=(5)x(7)
a	1250A, 31.5 KA, Isolator with one E/S	TC	Nos	4				
b	1250 A, 31.5KA, Isolator without E/S	TC	Nos	6				
<b>3.0</b>	<b>145 kV Current Transformer (1- Phase)</b>							
a	800A, 31.5 kA with 120% extended rating	TC	Nos	6				
<b>4.0</b>	<b>145 kV Surge Arrestors</b>							
a	120 kV Surge Arrestors (1- Phase)	TC	Nos	12				
5.0	145kV Bus post insulator	TC	Nos	48				
<b>D</b>	<b>36 kV equipment (Ref. Volume-II, Section-VI, Chapter 3)</b>							
<b>1.0</b>	<b>36 kV Isolator (3-phase)-HDB</b>							
a	1250A, 25 KA, Isolator with one E/S	ETC	No	1				
<b>2.0</b>	<b>30 kV Surge Arrestors (1-Phase)</b>	ETC	Nos	3				
<b>3.0</b>	<b>36kV Horn Gap Fuse (3-Phase)</b>	ETC	No	1				
<b>E</b>	<b>RELAY PANELS (WITH AUTOMATION) (Ref. Volume-II, Section-VI, Chapter 14)</b>							
<b>1.0</b>	<b>220 kV</b>							
a	Circuit Breaker Relay Panel							
i	With Auto Reclose	TC	Nos	8				
ii	With out Auto Reclose	TC	Nos	4				
b	Line Protection Panel	TC	Nos	8				
c	Transformer Protection Panel (For both HV & MV side)	TC	Nos	2				
d	Bus Bar Protection Panel	TC	Nos	1				
<b>2.0</b>	<b>132 kV</b>							
a	Circuit Breaker Relay Panel							
i	With out Auto Reclose	TC	Nos	2				
b	Augmentation of existing bus bar protection scheme.(No. of bays as specified)	TC	Nos	2				
<b>F</b>	<b>COMMON EQUIPMENTS (Ref. Volume-II, Section-VI, Chapter 2 &amp; 14)</b>							
<b>1.0</b>	<b>Special Relay Test kit</b>		No	0				
<b>G</b>	<b>SUBSTATION AUTOMATION (Ref. Volume-II, Section-VI, Chapter 16)</b>							



Sl. No.	Item Description	ETC/TC	Unit	Qty.	Unit Price <sup>#</sup>		Total Price <sup>#</sup>	
					Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion	Local Currency Portion
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(5)x(6)	(9)=(5)x(7)
1	Complete Substation automation system/ Augumentation Substation automation system- including hardware and software for the substation & remote control stations alongwith associated equipments as per Technical Specification.							
a	Main bays to be automated							
i	220 kV system	ETC	Bay Nos	12				
ii	132 kV System	ETC	Bay Nos	2				
<b>H</b>	<b>PLCC (Ref. Volume-II, Section-VI, Chapter 17)</b>							
a	Digital Protection Coupler	ETC	Nos	6				
b	PBAX with following configuration as per TS							
i)	2 wire subscriber interface card with capacity 32 local subscribers (along with 32 nos. Instruments)	ETC	Set	1				
ii)	4 wire E & M interface card with capacity 8 nos. trunks (For PLCC)							
iii)	E-1 interface with 2 trunks G-703							
iv)	2 wire interface with 1 trunk (For PSTN)							
c	Testing & Maintenance equipment (print test kit only)	ETC	Set	1				
<b>I</b>	<b>LT Switchgear (Ref. Volume-II, Section-VI,Chapter 4)</b>							
a	400V Main switchboard	TC	Set	1				
b	400V ACDB	TC	Set	1				
c	400V MLDB	TC	Set	1				
d	400V Emergency LDB	TC	Set	1				
e	220V DCDB	TC	Sets	2				
f	48/50V DCDB	TC	Sets	2				
g	Adapter Panel as per TS Section Project	TC	Set	1				
<b>J</b>	<b>Batteries (Ref. Volume-II, Section-VI, Chapter 5)</b>							
a	220V							
i	600 AH	TC	Nos	2				
b	48V							
i	600 AH	TC	Nos	2				
<b>K</b>	<b>Float Cum Boost Battery Charger (Ref. Volume-II, Section-VI, Chapter 5)</b>							
a	220V Float Cum Boost Battery Charger							

Sl. No.	Item Description	ETC/TC	Unit	Qty.	Unit Price <sup>#</sup>		Total Price <sup>#</sup>	
					Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion	Local Currency Portion
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(5)x(6)	(9)=(5)x(7)
i	80A/80A	TC	Nos	2				
b	48V Float Cum Boost Battery Charger							
ii	60A/60A	TC	Nos	2				
<b>L</b>	<b>Fire Protection System (Ref. Volume-II, Section-VI, Chapter 8)</b>							
a	Portable /Trolley/Wheel mounted extinguishers							
i	9 litre water type	ETC	Nos	5				
ii	50 litre foam type	ETC	Nos	2				
iii	4.5 kg CO2 type	ETC	Nos	8				
iv	4.5 kg Dry Chemical Power (DCP) type	ETC	Nos	5				
b	Smoke detection system	ETC	Set	1				
c	Fire detection and Alarm System	ETC	Set	1				
<b>M</b>	<b>Cables along with clamps, glands, lugs and straight joints etc. (Ref. Volume-II, Section-VI, Chapter 9)</b>							
a	33kV HT Cable alongwith accessories	ETC	KM	0				
b	Power Cables - (1.1kV grade)							
i	3.5Cx300 sqmm (XLPE) cable for filter Machine along with termination arrangement as per TS	ETC	KM	1				
<b>M.1</b>	<b>132kV XLPE Power cable for connectivity of 132kV Hetauda(old) D/C line from dead end tower to its 132kV bays</b>							
i	132kV, XLPE insulated, 1CX1200sqmm size copper cable as per technical specification.	Completed	Mtrs	0				
ii	Cable termination as per technical specification and interconnection with overhead transmission for cable at sl.no. i above (excluding terminating structure)	Completed	Nos.	0				
<b>N</b>	<b>Air conditioning System for Control room cum administrative building (Ref. Volume-II, Section-VI, Chapter 10)</b>							
a	High wall type split AC unit of 2 TR capacity	ETC	Nos	12				

Sl. No.	Item Description	ETC/TC	Unit	Qty.	Unit Price <sup>#</sup>		Total Price <sup>#</sup>	
					Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion	Local Currency Portion
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(5)x(6)	(9)=(5)x(7)
<b>O</b>	<b>PIPE AND LATTICE STEEL STRUCTURES (Tower,Gantry structures&amp; Equipment support Structures) (Tower,Gantry structures&amp; Equipment support Structures) (Ref. Volume-II, Section-VI, Chapter 12)</b>							
<b>O.1</b>	<b>Supply,fabrication,galvanisation of M S Structures</b>							
a	MS Structural steel including Foundation Bolts	E	MT	33				
b	Fastners and step bolts.(Nuts,Bolts & Washers)	E	MT	1				
<b>P</b>	<b>Transmission Equipment (Ref. Volume-II, Section-VI, Chapter 16 &amp; 17)</b>							
<b>P.1</b>	<b>SDH Equipment ( STM - 1 upgradable to STM-4 ADM, upto two directions)</b>							
a	Base Equipment (Common cards, Cross-connect/control cards, Optical base card, Power supply cards, power cabling, other hardware & accessories including sub-racks, patch cords, DDF etc. fully equipped excluding (b) and (c) below)	ETC	No.	1				
b	<b>Optical Interface/SFP## for</b>							
i	Optical Line Interface card (to support minimum 150 kms)***	ETC	No.	2				
ii	Optical Line Interface card (to support minimum 175 kms)***	ETC	No.	2				
c	<b>Tributary Cards</b>							
i	E1 Interface card (Minimum 16 interfaces per card )	ETC	No.	2				
ii	Ethernet interfaces 10/100 Mbps with Layer-2 switching(Minimum 4 interfaces per card.)	ETC	No.	2				
<b>Q</b>	<b>Termination Equipment (Ref. Volume-II, Section-VI, Chapter 16 &amp; 17)</b>							
a	<b>Drop/Insert Multiplexer Base Equipment (Common cards, Power supply cards, power cabling, other hardware &amp; accessories including sub-racks, etc. fully equipped excluding subscriber line interface cards)</b>	ETC	No.	2				
b	<b>Subscriber Line Interface Cards</b>							

Sl. No.	Item Description	ETC/TC	Unit	Qty.	Unit Price <sup>#</sup>		Total Price <sup>#</sup>	
					Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion	Local Currency Portion
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(5)x(6)	(9)=(5)x(7)
i	2 wire (sub/sub) voice channel cards (min 8 channels per card)	ETC	No.	2				
ii	4 wire (E&M) voice channel cards (min 8 channels per card)	ETC	No.	2				
iii	Asynchronous Sub Channels data cards (minimum 4 channels per card)	ETC	No.	2				
iv	Synchronous data card (NX64kbps)	ETC	No.	1				
<b>R</b>	<b>Equipment Cabinets(Ref. Volume-II, Section-VI, Chapter 16 &amp; 17)</b>							
a	For Drop/Insert Multiplexer	ETC	No.	1				
b	For SDH Equipment	ETC	No.	1				
<b>S</b>	<b>Main Distribution Frame (100 pairs) (Ref. Volume-II, Section-VI, Chapter 16 &amp; 17)</b>	ETC	No.	1				
<b>T</b>	<b>FODP (Ref. Volume-II, Section-VI, Chapter 16 &amp; 17)</b>							
a	FODP (minimum 72 Fibres) : Indoor Type, rack mounted with FCPC coupling and pig tails	ETC	No.	1				
<b>U</b>	<b>Fibre Optic approach cable (Ref. Volume-II, Section-VI, Chapter 17)</b>							
a	36 Fibre (DWSM -G.652D)	ETC	Km.	1				
b	Installation hardware set for above 36 Fibre, Fibre Optic Approach Cable	ETC	Set	1				
	<b>Sub-Total Part-A</b>							
	<b>Part-B : CONTRACTOR ASSESSED QUANTITIES</b>							
<b>A</b>	<b>Erection Hardware (Ref. Volume-II, Section-VI, Chapter 11)</b>							
	Insulator strings, Disc Insulators, Hardware, conductor, Al tube, bus-bar materials, cable trays, Bay MB, clamps, spacers, connectors including equipment connectors, Junction box, earthwire, buried cable trenches/pipe equipment,equipment for lightening protection, earthing materials riser, auxilliary earth mat (excl. main earth mat), earth electrode (16mm dia. & 3 mtr. long Copper clad steel rod)all accessories etc. for the following:							
a	220 kV Layout (DMT Layout)							

Sl. No.	Item Description	ETC/TC	Unit	Qty.	Unit Price <sup>#</sup>		Total Price <sup>#</sup>	
					Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion	Local Currency Portion
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(5)x(6)	(9)=(5)x(7)
i	Line Bay	ETC	Set	8				
ii	Transformer Bay	ETC	Set	2				
iii	TBC Bay	ETC	Set	1				
iv	BC bay	ETC	Set	1				
v	Bus work (Three Bays)	ETC	Set	6				
b	132 kV (Double Main Layout)							
i	Transformer Bay	ETC	Set	2				
ii	Bus work (For one bays)	ETC	Set	2				
c	Earthing and lightning protection including necessary connectors/connections, risers etc. complete in all respect							
i	Earth Conductor (copper) - main earth mat	ETC	Metre	10,000				
ii	Earth Rod (copper clad steel)	ETC	LS	1				
iii	Equipment for lightning protection	ETC	LS	1				
d	Interconnection arrangement of 132kV cable termination yard with dead end tower and 132kV bay of 132kV Hetauda(old) D/C lines along with provision of spare 132kV cable connectivity as per technical specification	Completed	Set	0				
<b>B</b>	<b>Fire Protection System (Ref. Volume-II, Section-VI, Chapter 8)</b>							
a	Pumping arrangement for HVW system & hydrant system, complete with all piping, valves, fittings, etc. inside pump house							
i	220/132kV (New) Substation	ETC	Set	1				
b	Hydrant system, complete U/G piping and accessories etc. outside the Pump House.							
i	220/132kV (New) Substation	ETC	Set	1				
c	HVW spray system, Hydrant system and complete U/G & O/G piping and accessories etc. outside the pump house for Transformer / Reactor :							
	<b>Transformer</b>							
i	160MVA , 220/132 KV, 3-phase Autotransformer	ETC	Sets	2				
<b>C</b>	<b>llumination System (Ref. Volume-II, Section-VI, Chapter 6)</b>							

Sl. No.	Item Description	ETC/TC	Unit	Qty.	Unit Price <sup>#</sup>		Total Price <sup>#</sup>	
					Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion	Local Currency Portion
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(5)x(6)	(9)=(5)x(7)
a	Illumination System for 220kV switchyard panel room	ETC	Sets	3				
b	Control room cum administrative building and Fire fighting pump house & water tank illumination	ETC	LS	1				
c	Switchyard lighting	ETC	LS	1				
d	Street lighting	ETC	LS	1				
<b>D</b>	<b>Air conditioning System (Ref. Volume-II, Section-VI, Chapter 10)</b>							
a	Air conditioning for 220kV S/Y panel room 220/132kV	ETC	Sets	3				
<b>E</b>	<b>SUBSTATION AUTOMATION (Ref. Volume-II, Section-VI, Chapter 16)</b>							
a	Integration of all 220/132/33kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.	ETC	LS	1				
<b>F</b>	<b>POWER &amp; CONTROL CABLES (Ref. Volume-II, Section-VI, Chapter 9)</b>							
a	Power Cables(PVC) - (1.1kV grade)		LS	0				
b	Power Cables (XLPE) - (1.1kV grade)	ETC	LS	1				
c	Control Cable (PVC) - (1.1kV grade)	ETC	LS	1				
d	Cable glands, lugs & straight through joints for Power & Control cables	ETC	LS	1				
<b>G</b>	<b>132KV XLPE Cable</b>							
i	Miscellaneous installation materials for cable jointing, bonding, link boxes, earthing material, Earth Continuity Cable, cable markers and all other materials etc required as per technical specification and as per statutory requirements	Completed	LS	0				
	<b>Sub-Total Part-B</b>							
	<b>Total of Schedule No. 4B</b>							

# Specify currency in accordance with specifications in Bid Data Sheet under ITB 18.1. Create and use as many columns for Foreign Currency requirement as there are foreign currencies.

Sl. No.	Item Description	ETC/TC	Unit	Qty.	Unit Price <sup>#</sup>		Total Price <sup>#</sup>	
					Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion	Local Currency Portion
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(5)x(6)	(9)=(5)x(7)

Date:

Place:

Signature:

Printed Name:

Designation:

Common Seal:

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**Procurement of Plant Design, Supply and Installation of 220/132 kV Dhalkebar Substation  
(Schedule of Rates and Prices)**

Contract ID Number: NIETTP/W/ICB-4/SS

Schedule No. 4. Installation Services

Part - C: Civil Works

Sl. No.	Item Description	Unit	Qty.	Unit Price <sup>#</sup>		Total Price <sup>#</sup>		Remarks
				Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion	Local Currency Portion	
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(4)x(5)	(8)=(4)x(6)	
	<b>SECTION - I : EMPLOYER ASSESSED QUANTITIES</b>							
1.0	Excavation in all types of soil and rock including backfilling disposal etc. for all leads and lifts	Cu.Mtr.	532.00					
2.0	Providing and laying of Plain Cement Concrete (PCC) (1:4:8)	Cu.Mtr.	697.00					
3.0	Providing and laying of Plain Cement Concrete (PCC) (1:2:4)	Cu.Mtr.	196.00					
4.0	Providing and laying of Reinforced Cement Concrete Design Mix (M25) including pre cast, shuttering, Grouting of pockets & underpinning but excluding steel reinforcement.	Cu.Mtr.	712.00					
5.0	Providing and laying Plain Cement Concrete 1:5:10 (1 cement : 5 sand : 10 Stone aggregate)	Cu.Mtr.	2,110.00					
6.0	Steel Reinforcement (Fe 500)	MT	30.00					
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	54.00					
8.0	Stone filling (40mm) over grating of Transformer /reactor Foundation	Cu.Mtr.	20.00					
9.0	Stone spreading including antiweed treatment in switchyard but excluding PCC.	Sq. Mtr.	28,100.00					
10.00	Supplying & laying hume pipe with collars of grade (NP-3) but excluding reinforcement steel & concrete of bed/support/encasing of hume pipes which shall be paid seperately							
i)	250mm dia	RM	125.00					
ii)	300mm dia	RM	147.50					
iii)	450mm dia	RM	20.00					
iv)	600mm dia	RM	10.00					



Sl. No.	Item Description	Unit	Qty.	Unit Price <sup>#</sup>		Total Price <sup>#</sup>		Remarks
				Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion	Local Currency Portion	
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(4)x(5)	(8)=(4)x(6)	
11.00	Concrete road (including all crossings) as per technical specification and approved drawing but excluding reinforcement & concrete							
a.	Concrete Road	Sq. m.	0.00					Completed
12.0	Construction of Black Top (Bituminous/asphaltic) road as per Specification and approved drawing, all Complete <b>but excluding WBM work.</b>							
i)	Black top/bituminous (asphaltic) Road	Sq. m.	3,850.00					
13.0	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 two rails	Sq. m.	0.00					Completed
14.0	Chain link fencing as per technical specification and approved drawing but excluding concrete which shall be paid seperately	RM	180.00					
15.0	switch yard Gate excluding concrete	No	1.00					
16.0	Rain water Harvesting as per technical specification and approved drawing excluding reinforcement & concrete which shall be paid seperately	No	0.00					
17.0	Dismantling 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	135.00					
18.00	Supplying and erecting dewatering pumps							
a.	5 HP	Nos.	2.00					
b.	0.5 HP	Nos.	4.00					
19.00	Drain including culverts but excluding concrete, hume pipes & reinforcement steel which shall be paid seperately							
a.	Type AA (300mm wide x Depth up to 600mm)	RM	900.00					
b.	Type BB (450 wide x Depth From 600 to 900mm)	RM	300.00					
c.	Type CC (600 wide x Depth From 900 to 1200mm)	RM	600.00					
d.	Type DD (750 wide x Depth From 1200 to 1500mm)	RM	50.00					

Sl. No.	Item Description	Unit	Qty.	Unit Price <sup>#</sup>		Total Price <sup>#</sup>		Remarks
				Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion	Local Currency Portion	
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(4)x(5)	(8)=(4)x(6)	
20.00	External water supply as per technical from borewell to Fire water Tank, control room Building including all items like excavation, pipes, fittings, jointings, valves, chambers/manholes etc							
a.	80mm Dia GI Pipe	RM	100.00					
b.	25mm Dia GI Pipe	RM	100.00					
21.00	External sewerage system including all item such as excavation, piping, pipe fittings, manholes, gali trap, gali chamber etc.							
a.	(i) 250 mm Dia.	RM	50.00					
b.	(i) 150 mm Dia.	RM	50.00					
23.0	Stone soling below foundations wherever specified in approved drawings during detailed engineering	Cu.Mtr.	20.00					
24.0	2.5 cm premix carpet surfacing with 2.25cum and 1.12 cum of stone chipping of 13.2 mm and 11.2 mm size respectively per 100sqm and 52kg and 56kg of hot bitumen per cum of stone chipping of 13.2 mm and 11.2 mm size respectively, including a tack coat with hot straight run bitumen@0.50Kg/sqm, including consolidation with road roller of 6 to 9 tonne capacity etc. complete with paving Asphalt of suitable grade heated and then mixed with solvent at the rate of 70 grams per kg of asphalt or with paving Asphalt of suitable grade with no solvent ( <b>For strengthening of existing roads only</b> )	Sq. m.	500.00					

Sl. No.	Item Description	Unit	Qty.	Unit Price <sup>#</sup>		Total Price <sup>#</sup>		Remarks
				Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion	Local Currency Portion	
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(4)x(5)	(8)=(4)x(6)	
25.0	Construction of granular sub-base of WBM by providing close graded crushed material conforming to specification, mixing in a mechanical mix plant at optimum moisture content (OMC), carriage of mixed material by tippers to work site, for all leads & lifts, spreading in uniform layer of specified thickness with motor grader on prepared surface and compacting with vibratory poervr roller to acheive the desire density, compete as per specification and directions of NEA/Consultant WITH MATERIAL CONFORMING TO suitable Grade(size range 75mm to 0.075 mm) <b>(For strengthening of existing / others new roads)</b>	Cu.Mtr.	545.00					
26	<b>132kV XLPE Power cable for connectivity of 132kV Hetauda(old) D/C line from dead end tower to its 132kV bays</b>							
i	Laying & Jointing etc for 7 nos,1C, 1200 sqmm size cables alongwith all necessary installation material as per Technical specification	Route Mtrs	0.00					Completed
ii	Construction of buried cable trench for 132kV XLPE Cable including road crossing: All civil works alongwith back filling, restoration etc (as per specification) excavation, PCC, sand filling, brick laying, PVC warning tapes, RCC hume pipes(NPs) for road crossing along with collars and jointing of suitable dia etc. required to complete buried cable trench shall be deemed to be included in the item of work.	Meter	0.00					Completed
27	<b>Site levelling</b>							
a)	Earth work in cutting & Filling with all leads & lift in Sub-station boundary	Cu.Mtr.	2,500.00					
	<b>SECTION: 2 : CONTRACTOR ASSESSED QUANTITIES</b>							

Sl. No.	Item Description	Unit	Qty.	Unit Price <sup>#</sup>		Total Price <sup>#</sup>		Remarks
				Foreign Currency Portion	Local Currency Portion	Foreign Currency Portion	Local Currency Portion	
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(4)x(5)	(8)=(4)x(6)	
2.10 & 2.20	All civil works <b>incl. external finishing</b> as per technical specification and approved drawing and including Misc. structural steel ( items like excavation, PCC, RCC, reinforcement, and miscellaneous steel used for cable trenches inside building if any shall be measured and paid as per rate of SECTION: 1 : EMPLOYER ASSESSED QUANTITIES.							
i	Balance work of Control room cum administrative building (Double story) of size as per TS. <b>Major balance work enlised separetely.</b>	LS	1.00					
ii	FFPH building including fire water tank of size as per TS. <b>Major balance work enlised separetely.</b>	LS	1.00					
iii	Switch yard Panel Room (9.0 M X 3.9 M). <b>Major balance work enlised separetely.</b>	Sets	3.00					
iv	Switch yard Panel Room (6.0 M X 3.9 M).	Set	0.00					
v	Car Parking shed (for 10 cars)	LS	1.00					
2.3	Septic tank as per specification and approved design according to International/British standards and soak pit as per approved drawing excluding concrete & reinforcement	Lot.	1.00					
2.3	Geotechnical /Soil Investigation	LS	1.00					
	<b>Sub-Total Part -C</b>							

# Specify currency in accordance with specifications in Bid Data Sheet under ITB 18.1. Create and use as many columns for Foreign Currency requirement as there are foreign currencies.

Date:  
Place:

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