

NEPAL ELECTRICITY AUTHORITY

(An Undertaking of Government of Nepal)
Project Management Directorate



SASEC: Power System Expansion Project KALIGANDAKI TRANSMISSION CORRIDOR PROJECT

BIDDING DOCUMENT FOR

Procurement of Plant for Kushma – New Butwal 220 kV Transmission Line
(Design, Supply and Install)

Single-Stage, Two-Envelope
Bidding Procedure

Issued on:
Invitation for Bids No.: ICB-PMD-KGTCP-072/73-04
ICB No.: ICB-PMD-KGTCP-072/73-04
Employer: Nepal Electricity Authority
Country: Nepal

VOLUME –III OF III

July 2016

Kaligandaki Transmission Corridor Project
Project Management Directorate
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NEPAL ELECTRICITY AUTHORITY
PROJECT MANAGEMENT DIRECTORATE
Kushma - New Butwal 220 kV Transmission Line

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)	Custom, VAT and other taxes
		Unit	Quantity	FC			FC	LC
				Currency#	Unit Rate	Amount		
1	2	4	5	6	7	8 = (7) x (5)	9=8	10
1.1	Design, fabrication & supply of following types of towers & tower extension parts complete with stubs, step bolts, hangers, D-shackles, bolts & nuts etc but excluding tower accessories such as danger plates, number plates, phase plates, anti-climbing devices							
1.1.1	Tension Tower DA							
a)	Basic tower	Nos.	28					
a) (i)	Stubs	Nos.	112					
a) (ii)	Basic tower body	Nos.	28					
b)	-4.5 m Leg Extension	Nos.	2					
c)	-3 m Leg Extension	Nos.	6					
d)	-1.5 m Leg Extension	Nos.	6					
e)	+/- 0 m Leg Extension	Nos.	74					
f)	+1.5 m Leg Extension	Nos.	6					
g)	+3 m Leg Extension	Nos.	18					
h)	+4.5 m Leg Extension	Nos.	4					
i)	+6 m Leg Extension	Nos.	12					
j)	+7.5 m Leg Extension	Nos.	6					
k)	+9 m Leg Extension	Nos.	10					
l)	+18 m Leg Extension	Nos.	8					
m)	+25 m Leg Extension	Nos.	8					

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		Unit	Quantity	FC			FC	LC
				Currency#	Unit Rate	Amount		
1	2	4	5	6	7	8 = (7) x (5)	9=8	10
1.1.2	Tension Tower DB							
a)	Basic tower	Nos.	82					
a) (i)	Stubs	Nos.	328					
a) (ii)	Basic tower body	Nos.	82					
b)	-4.5 m Leg Extension	Nos.	10					
c)	-3 m Leg Extension	Nos.	24					
d)	-1.5 m Leg Extension	Nos.	32					
e)	+/- 0 m Leg Extension	Nos.	180					
f)	+1.5 m Leg Extension	Nos.	40					
g)	+3 m Leg Extension	Nos.	42					
h)	+4.5 m Leg Extension	Nos.	20					
i)	+6 m Leg Extension	Nos.	40					
j)	+7.5 m Leg Extension	Nos.	12					
k)	+9 m Leg Extension	Nos.	24					
1.1.3	Tension Tower DC							
a)	Basic tower	Nos.	66					
a) (i)	Stubs	Nos.	264					
a) (ii)	Basic tower body	Nos.	66					
b)	-4.5 m Leg Extension	Nos.	12					
c)	-3 m Leg Extension	Nos.	16					

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		Unit	Quantity	FC			FC	LC
				Currency#	Unit Rate	Amount		
1	2	4	5	6	7	8 = (7) x (5)	9=8	10
d)	-1.5 m Leg Extension	Nos.	24					
e)	+/- 0 m Leg Extension	Nos.	152					
f)	+1.5 m Leg Extension	Nos.	20					
g)	+3 m Leg Extension	Nos.	40					
h)	+4.5 m Leg Extension	Nos.	12					
i)	+6 m Leg Extension	Nos.	28					
j)	+7.5 m Leg Extension	Nos.	10					
k)	+9 m Leg Extension	Nos.	22					
1.1.4	Tension Tower DD							
a)	Basic tower	Nos.	71					
a) (i)	Stubs	Nos.	284					
a) (ii)	Basic tower body	Nos.	71					
b)	-4.5 m Leg Extension	Nos.	12					
c)	-3 m Leg Extension	Nos.	22					
d)	-1.5 m Leg Extension	Nos.	44					
e)	+/- 0 m Leg Extension	Nos.	162					
f)	+1.5 m Leg Extension	Nos.	22					
g)	+3 m Leg Extension	Nos.	26					
h)	+4.5 m Leg Extension	Nos.	16					
i)	+6 m Leg Extension	Nos.	20					

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		Unit	Quantity	FC			FC	LC
				Currency#	Unit Rate	Amount		
1	2	4	5	6	7	8 = (7) x (5)	9=8	10
j)	+7.5 m Leg Extension	Nos.	12					
k)	+9 m Leg Extension	Nos.	28					
l)	+18 m Leg Extension	Nos.	12					
m)	+25 m Leg Extension	Nos.	24					
1.1.5	Tension Tower DD Special							
a)	Basic tower	Nos.	6					
a) (i)	Stubs	Nos.	24					
a) (ii)	Basic tower body	Nos.	6					
b)	-4.5 m Leg Extension	Nos.	2					
c)	-3 m Leg Extension	Nos.	2					
d)	-1.5 m Leg Extension	Nos.	2					
e)	+/- 0 m Leg Extension	Nos.	12					
f)	+1.5 m Leg Extension	Nos.	2					
g)	+3 m Leg Extension	Nos.	2					
h)	+4.5 m Leg Extension	Nos.	2					
i)	+6 m Leg Extension	Nos.	2					
j)	+7.5 m Leg Extension	Nos.	2					
k)	+9 m Leg Extension	Nos.	2					
l)	+18 m Leg Extension	Nos.	4					
m)	+25 m Leg Extension	Nos.	4					

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Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)	Custom, VAT and other taxes
		Unit	Quantity	FC			FC	LC
				Currency#	Unit Rate	Amount		
1	2	4	5	6	7	8 = (7) x (5)	9=8	10
2	Supply of Earthing of towers							
i.	Pipe Type	Nos.	115					
ii.	Counterpoise Type	Nos.	138					
3	Supply of following tower accessories							
i.	Danger Plate	Nos.	253					
ii.	Number Plate	Nos.	253					
iii.	Phase Plate (Set of three)	Sets	506					
iv.	Circuit Plate(Set of two)	Sets	253					
v.	Anti climbing device	Nos.	253					
vi.	Bird guard (set of three)	Sets	56					
4	Supply of following Line Materials							
4.1	Conductor							
	HTLS Conductor (Eq to ACSR ZEBRA)	KM	1062					
4.2	GS Earthwire							
	7/3.66mm Earthwire	KM	89					

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Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)	Custom, VAT and other taxes
		Unit	Quantity	FC			FC	LC
				Currency#	Unit Rate	Amount		
1	2	4	5	6	7	8 = (7) x (5)	9=8	10
4.3	Insulators *							
A.	Option-1: Composite Insulators							
(i)	120kN Composite Long Rod Insulator	Nos	404					
(ii)	160kN Composite Long Rod Insulator	Nos	5466					
	OR							
B	Option-2: Disc Insulators							
(i)	120kN Disc Insulator	Nos	6464					
(ii)	160kN Disc Insulator	Nos	92922					
4.4	Hardware Fittings							
i)	Single "I" Suspension Insulator String (except clamps)	Sets	170					
ii)	Single 'I' Suspension PILOT String (except clamps)	Sets	234					
iii)	Double Tension Insulator String (except clamps)	Sets	2733					
4.5	Clamps for Hardware Fittings suitable for HTLS Conductor							
i)	Suspension Clamp suitable for suspension insulator strings	Sets	340					
ii)	Suspension Clamp suitable for Pilot suspension insulator strings	Sets	468					
iii)	Dead end clamp for tension insulator strings	Sets	5466					
4.6	HTLS Conductor Accessories							

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		Unit	Quantity	FC			FC	LC
				Currency#	Unit Rate	Amount		
1	2	4	5	6	7	8 = (7) x (5)	9=8	10
i)	Mid span compression joint for HTLS conductor	Nos	655					
ii)	Repair Sleeve for HTLS conductor	Nos	197					
iii)	Rigid Spacer for twin bundle HTLS conductor	Nos	4091					
iv)	Vibration Damper for HTLS Conductor	Nos	11587					
v)	Bundle Spacer for twin bundle HTLS conductor	Nos	10775					
vi)	Spacer Damper for twin bundle HTLS conductor {as an alternative to item nos. iv) & v)}	Nos	10775					
4.7	Earthwire Accessories							
i)	Mid span compression joint for 7/3.35mm GS earthwire	Nos	49					
ii)	Flexible Copper Bond for 7/3.35mm GS Earthwire	Nos	966					
iii)	Vibration Damper for for 7/3.35mm GS Earthwire	Nos	1931					
iv)	Earthwire Suspension Clamp	Nos	57					
v)	Earthwire Tension Clamp	Nos	913					
4.8	Fibre Cable & Accessories							
4.8.1	OPGW cable & Accessories							
i)	24 Fibre (DWDM) OPGW fibre optic cable	km	88					
ii)	Installation Hardware set for above 24 Fibre OPGW Fibre Optic cabling including all cable fittings & accessories as per below :	Sets	88					

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Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)	Custom, VAT and other taxes
		Unit	Quantity	FC			FC	LC
				Currency#	Unit Rate	Amount		
1	2	4	5	6	7	8 = (7) x (5)	9=8	10
iii)	Joint Box	No.	28					

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Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)	Custom, VAT and other taxes
		Unit	Quantity	FC			FC	LC
				Currency#	Unit Rate	Amount		
1	2	4	5	6	7	8 = (7) x (5)	9=8	10
4.8.2	FODP							
i)	FODP 48F : Indoor Type, rack mounted with FCPC coupling and pig tails (5 mtrs each).	No.	2					
4.8.3	Fibre Optic approach cable							
i)	24 Fibre (DWSM)	Km.	1					
ii)	Installation hardware set for above 24 Fibre, Fibre Optic Approach Cable	Set	1					
4.9	Mandatory Spares of OPGW Cabling							
4.9.1	OPGW cable & Accessories							
i)	24 Fibre (DWSM) OPGW fibre optic cable	Km.	5					
ii)	Installation Hardware set for above 24 Fibre OPGW Fibre Optic cabling including all cable fittings & accessories as per below :	Sets	5					
iii)	Joint Box (24 fibre)	No.	2					
4.9.2	Fibre Optic approach cable							
i)	24 Fibre (DWSM)	Km.	1					
ii)	Installation hardware set for above 24 Fibre, Approach Fibre Optic Cable	Set	1					
5.0	Supply of following softwares							

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		Unit	Quantity	FC			FC	LC
				Currency#	Unit Rate	Amount		
1	2	4	5	6	7	8 = (7) x (5)	9=8	10
i)	PLS-CADD (multiuser license for 10 users)	Set	1					
ii)	PLS-TOWER (multiuser license for 10 users)	Set	1					
	TOTAL (Total of column 9 to be carried forward to Schedule							

Note : 1) Bidder is required to quote prices in this Schedule for all the individual items/sub-items.

2.) The Prices of equipments are inclusive of type test charges except.towers, conductors and earthwires.

3.) BOQ given above is indicative only based on the scope of work as given in Employer's Requirements. The quantities mentioned above may

Specify currency in accordance with BDS ITB Clause 32.1, Part-I of

* Bidders should quote for one of the options for insulators.

Name of Bidder:

Date:

Signature of Bidder:

(Printed Name)

(Designation)

(Common Seal)

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

Item No.	Item Description	Unit	Quantity	Ex Factory Price (Excluding VAT)		Inland Transportation up to Site		Total Amount (Excluding Taxes)
				Unit Rate	Amount	Unit Rate	Amount	
1	2	3	4	5	6	7	8	9
1.1	Design, fabrication & supply of following types of towers & tower extension parts complete with stubs, step bolts, hangers, D-shackles, bolts & nuts etc but excluding tower accessories such as danger plates, number plates, phase plates, anti-climbing devices							
1.1.1	Tension Tower DA							
a)	Basic tower	Nos.	28					
a) (i)	Stubs	Nos.	112					
a) (ii)	Basic tower body	Nos.	28					
b)	-4.5 m Leg Extension	Nos.	2					
c)	-3 m Leg Extension	Nos.	6					
d)	-1.5 m Leg Extension	Nos.	6					
e)	+/- 0 m Leg Extension	Nos.	74					
f)	+1.5 m Leg Extension	Nos.	6					
g)	+3 m Leg Extension	Nos.	18					
h)	+4.5 m Leg Extension	Nos.	4					
i)	+6 m Leg Extension	Nos.	12					
j)	+7.5 m Leg Extension	Nos.	6					
k)	+9 m Leg Extension	Nos.	10					
l)	+18 m Leg Extension	Nos.	8					
m)	+25 m Leg Extension	Nos.	8					
1.1.2	Tension Tower DB							
a)	Basic tower	Nos.	82					
a) (i)	Stubs	Nos.	328					
a) (ii)	Basic tower body	Nos.	82					
b)	-4.5 m Leg Extension	Nos.	10					
c)	-3 m Leg Extension	Nos.	24					
d)	-1.5 m Leg Extension	Nos.	32					
e)	+/- 0 m Leg Extension	Nos.	180					
f)	+1.5 m Leg Extension	Nos.	40					
g)	+3 m Leg Extension	Nos.	42					
h)	+4.5 m Leg Extension	Nos.	20					
i)	+6 m Leg Extension	Nos.	40					
j)	+7.5 m Leg Extension	Nos.	12					
k)	+9 m Leg Extension	Nos.	24					

Item No.	Item Description	Unit	Quantity	Ex Factory Price (Excluding VAT)		Inland Transportation up to Site		Total Amount (Excluding Taxes)
				Unit Rate	Amount	Unit Rate	Amount	
1.1.3	Tension Tower DC							
a)	Basic tower	Nos.	66					
a) (i)	Stubs	Nos.	264					
a) (ii)	Basic tower body	Nos.	66					
b)	-4.5 m Leg Extension	Nos.	12					
c)	-3 m Leg Extension	Nos.	16					
d)	-1.5 m Leg Extension	Nos.	24					
e)	+/- 0 m Leg Extension	Nos.	152					
f)	+1.5 m Leg Extension	Nos.	20					
g)	+3 m Leg Extension	Nos.	40					
h)	+4.5 m Leg Extension	Nos.	12					
i)	+6 m Leg Extension	Nos.	28					
j)	+7.5 m Leg Extension	Nos.	10					
k)	+9 m Leg Extension	Nos.	22					
1.1.4	Tension Tower DD							
a)	Basic tower	Nos.	71					
a) (i)	Stubs	Nos.	284					
a) (ii)	Basic tower body	Nos.	71					
b)	-4.5 m Leg Extension	Nos.	12					
c)	-3 m Leg Extension	Nos.	22					
d)	-1.5 m Leg Extension	Nos.	44					
e)	+/- 0 m Leg Extension	Nos.	162					
f)	+1.5 m Leg Extension	Nos.	22					
g)	+3 m Leg Extension	Nos.	26					
h)	+4.5 m Leg Extension	Nos.	16					
i)	+6 m Leg Extension	Nos.	20					
j)	+7.5 m Leg Extension	Nos.	12					
k)	+9 m Leg Extension	Nos.	28					
l)	+18 m Leg Extension	Nos.	12					
m)	+25 m Leg Extension	Nos.	24					
1.1.5	Tension Tower DD Special							
a)	Basic tower	Nos.	6					
a) (i)	Stubs	Nos.	24					
a) (ii)	Basic tower body	Nos.	6					
b)	-4.5 m Leg Extension	Nos.	2					
c)	-3 m Leg Extension	Nos.	2					
d)	-1.5 m Leg Extension	Nos.	2					
e)	+/- 0 m Leg Extension	Nos.	12					
f)	+1.5 m Leg Extension	Nos.	2					

Item No.	Item Description	Unit	Quantity	Ex Factory Price (Excluding VAT)		Inland Transportation up to Site		Total Amount (Excluding Taxes)
				Unit Rate	Amount	Unit Rate	Amount	
g)	+3 m Leg Extension	Nos.	2					
h)	+4.5 m Leg Extension	Nos.	2					
i)	+6 m Leg Extension	Nos.	2					
j)	+7.5 m Leg Extension	Nos.	2					
k)	+9 m Leg Extension	Nos.	2					
l)	+18 m Leg Extension	Nos.	4					
m)	+25 m Leg Extension	Nos.	4					
2	Supply of Earthing of towers							
i.	Pipe Type	Nos.	115					
ii.	Counterpoise Type	Nos.	138					
3	Supply of following tower accessories							
i.	Danger Plate	Nos.	253					
ii.	Number Plate	Nos.	253					
iii.	Phase Plate (Set of three)	Sets	506					
iv.	Circuit Plate(Set of two)	Sets	253					
v.	Anti climbing device	Nos.	253					
vi.	Bird guard (set of three)	Sets	56					
4	Supply of following Line Materials							
4.1	Conductor							
0	HTLS Conductor (Eq to ACSR ZEBRA)	KM	1062					
4.2	GS Earthwire							
0	7/3.66mm Earthwire	KM	89					
4.3	Insulators *							
A.	Option-1: Composite Insulators							
(i)	120kN Composite Long Rod Insulator	Nos	404					
(ii)	160kN Composite Long Rod Insulator	Nos	5466					
	OR							
B	Option-2: Disc Insulators							
(i)	120kN Disc Insulator	Nos	6464					
(ii)	160kN Disc Insulator	Nos	92922					
4.4	Hardware Fittings							
i)	Single "I" Suspension Insulator String (except clamps)	Sets	170					
ii)	Single 'I' Suspension PILOT String (except clamps)	Sets	234					
iii)	Double Tension Insulator String (except clamps)	Sets	2733					

Item No.	Item Description	Unit	Quantity	Ex Factory Price (Excluding VAT)		Inland Transportation up to Site		Total Amount (Excluding Taxes)
				Unit Rate	Amount	Unit Rate	Amount	
4.5	Clamps for Hardware Fittings suitable for HTLS Conductor							
i)	Suspension Clamp suitable for suspension insulator strings	Sets	340					
ii)	Suspension Clamp suitable for Pilot suspension insulator strings	Sets	468					
iii)	Dead end clamp for tension insulator strings	Sets	5466					
4.6	HTLS Conductor Accessories							
i)	Mid span compression joint for HTLS conductor	Nos	655					
ii)	Repair Sleeve for HTLS conductor	Nos	197					
iii)	Rigid Spacer for twin bundle HTLS conductor	Nos	4091					
iv)	Vibration Damper for HTLS Conductor	Nos	11587					
v)	Bundle Spacer for twin bundle HTLS conductor	Nos	10775					
vi)	Spacer Damper for twin bundle HTLS conductor {as an alternative to item nos. iv) & v)}	Nos	10775					
4.7	Earthwire Accessories							
i)	Mid span compression joint for 7/3.35mm GS earthwire	Nos	49					
ii)	Flexible Copper Bond for 7/3.35mm GS Earthwire	Nos	966					
iii)	Vibration Damper for 7/3.35mm GS Earthwire	Nos	1931					
iv)	Earthwire Suspension Clamp	Nos	57					
v)	Earthwire Tension Clamp	Nos	913					
4.8	Fibre Cable & Accessories							
4.8.1	OPGW cable & Accessories							
i)	24 Fibre (DWSM) OPGW fibre optic cable	km	88					
ii)	Installation Hardware set for above 24 Fibre OPGW Fibre Optic cabling including all cable fittings & accessories as per below :	Sets	88					
iii)	Joint Box	No.	28					
4.8.2	FODP							
i)	FODP 48F : Indoor Type, rack mounted with FCPC coupling and pig tails (5 mtrs each).	No.	2					
4.8.3	Fibre Optic approach cable							
i)	24 Fibre (DWSM)	Km.	1					
ii)	Installation hardware set for above 24 Fibre, Fibre Optic Approach Cable	Set	1					

Item No.	Item Description	Unit	Quantity	Ex Factory Price (Excluding VAT)		Inland Transportation up to Site		Total Amount (Excluding Taxes)
				Unit Rate	Amount	Unit Rate	Amount	
4.9	Mandatory Spares of OPGW Cabling							
4.9.1	OPGW cable & Accessories							
i)	24 Fibre (DWSM) OPGW fibre optic cable	Km.	5					
ii)	Installation Hardware set for above 24 Fibre OPGW Fibre Optic cabling including all cable fittings & accessories as per below :	Sets	5					
iii)	Joint Box (24 fibre)	No.	2					
4.9.2	Fibre Optic approach cable							
i)	24 Fibre (DWSM)	Km.	1					
ii)	Installation hardware set for above 24 Fibre, Approach Fibre Optic Cable	Set	1					
5.0	Supply of following softwares							
i)	PLS-CADD (multiuser license for 10 users)	Set	1					
ii)	PLS-TOWER (multiuser license for 10 users)	Set	1					
	Total Ex-works Price (Total of column 9 to be carried forward to Schedule No. 5A: Grand Summary)							

- Note :**
- 1) Bidder is required to quote prices in this Schedule for all the individual items/sub-items.
 - 2.) The Prices of equipment are inclusive of type test charges except towers, conductors and earthwires.
 - 3.) BOQ given above is indicative only based on the scope of work as given in Employer's Requirements. The quantities mentioned above may undergo change during detailed engineering to meet the functional requirement and scope of work defined in Employer's Requirements.
 - 4) For Bought out items, all applicable taxes, duties and levies except Octroi/Entry tax are to be included in the Ex Works Price (Col 7.)
- # Specify currency in accordance with BDS ITB Clause 32.1, Part-I of the Bidding Documents.
- * Bidders should quote for one of the options for insulators.

NEPAL ELECTRICITY AUTHORITY
PROJECT MANAGEMENT DIRECTORATE
Kushma - New Butwal 220 kV Transmission Line

Schedule 3: Design Services

Item No.	Item Description	Estimated		Unit Prices		Total Prices	
		Quantity	Unit	Local Currency portion	Foreign Currency Portion	LC	FC
				NRs	Currency		
1	2	3	4	5	6	7=3x5	8=3x6
1	Type DA, DB/DBE, DC/DCE, DD/DDE and special towers	1	Lot				
	Total (Total of column 7 and 8 to be carried forward to Schedule No. 5: Grand Summary)						

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

Date:

NEPAL ELECTRICITY AUTHORITY
PROJECT MANAGEMENT DIRECTORATE
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Schedule No. 4: Installation Services
(a): Installation and Construction Charges

Sl. No.	Item Description	Unit	Qty.	Installation Charges				
				Portion in Foreign Currency			Portion in Nepal Currency (in NRs)	
				Currency*	Unit Rate	Total Charges	Unit Rate	Total Charges
(1)	(2)	(4)	(5)	(6)	(7)	(8)=(5)X(7)	(9)	(10)=(5)X(9)
1	Survey							
i)	Detailed survey including route alignment, profiling, tower spotting	KM	17					
ii)	Check Survey including tower spotting	KM	88					
2	Detailed soil Investigation							
i)	All kind of soil except FR & HR	Loc.	40					
ii)	Fissured/soft rock	Loc.	25					
iii)	Hard rock	Loc.	15					
3	Benching							
i)	All kind of soil except FR & HR	Cum.	14700					
ii)	Fissured Rock	Cum.	9900					
iii)	Hard Rock	Cum.	4400					
4	Work associated with tower foundations.							
4.1	Tension Tower DA							
a)	Foundation for -4.5m, -3m, -1.5m, +/- 0m Extension							
i)	Dry Foundation	Nos.	1					
ii)	Wet Foundation	Nos.	1					
iii)	Partially Submerged Foundation	Nos.						
iv)	Fully Submerged Foundation	Nos.	1					
v)	Wet Black Cotton	Nos.	1					
vi)	Dry Fissured Rock	Nos.	2					
vii)	Wet Fissured Rock	Nos.	1					
viii)	Submerged Fissured Rock	Nos.						
ix)	Hard Rock	Nos.	2					
x)	Sandy Soil Foundation	Nos.	1					

Sl. No.	Item Description	Unit	Qty.	Portion in Foreign Currency			Portion in Nepal Currency (in NRs)	
				Currency*	Unit Rate	Total Charges	Unit Rate	Total Charges
(1)	(2)	(4)	(5)	(6)	(7)	(8)=(5)X(7)	(9)	(10)=(5)X(9)
b)	Foundation for +1.5m, +3m, +4.5m +6m, +7.5m, +9m Extension							
i)	Dry Foundation	Nos.	3					
ii)	Wet Foundation	Nos.						
iii)	Partially Submerged Foundation	Nos.						
iv)	Fully Submerged Foundation	Nos.	3					
v)	Wet Black Cotton	Nos.	1					
vi)	Dry Fissured Rock	Nos.	3					
vii)	Wet Fissured Rock	Nos.	1					
viii)	Submerged Fissured Rock	Nos.						
ix)	Hard Rock	Nos.	3					
x)	Sandy Soil Foundation	Nos.						
c)	Foundation for +18m, +25m Extension							
i)	Dry Foundation	Nos.	1					
ii)	Wet Foundation	Nos.						
iii)	Partially Submerged Foundation	Nos.						
iv)	Fully Submerged Foundation	Nos.	1					
v)	Wet Black Cotton	Nos.						
vi)	Dry Fissured Rock	Nos.						
vii)	Wet Fissured Rock	Nos.						
viii)	Submerged Fissured Rock	Nos.	2					
ix)	Hard Rock	Nos.						
x)	Sandy Soil Foundation	Nos.						
4.2	Tension Tower DB							
a)	Foundation for -4.5m, -3m, -1.5m, +/- 0m Extension							
i)	Dry Foundation	Nos.	4					
ii)	Wet Foundation	Nos.	2					
iii)	Partially Submerged Foundation	Nos.	2					
iv)	Fully Submerged Foundation	Nos.	6					
v)	Wet Black Cotton	Nos.	4					
vi)	Dry Fissured Rock	Nos.	6					
vii)	Wet Fissured Rock	Nos.	5					
viii)	Submerged Fissured Rock	Nos.	3					
ix)	Hard Rock	Nos.	6					
x)	Sandy Soil Foundation	Nos.	2					
b)	Foundation for +1.5m, +3m, +4.5m +6m, +7.5m, +9m Extension							
i)	Dry Foundation	Nos.	5					
ii)	Wet Foundation	Nos.	4					

SI. No.	Item Description	Unit	Qty.	Portion in Foreign Currency			Portion in Nepal Currency (in NRs)	
				Currency*	Unit Rate	Total Charges	Unit Rate	Total Charges
(1)	(2)	(4)	(5)	(6)	(7)	(8)=(5)X(7)	(9)	(10)=(5)X(9)
iii)	Partially Submerged Foundation	Nos.	1					
iv)	Fully Submerged Foundation	Nos.	5					
v)	Wet Black Cotton	Nos.	5					
vi)	Dry Fissured Rock	Nos.	6					
vii)	Wet Fissured Rock	Nos.	5					
viii)	Submerged Fissured Rock	Nos.	3					
ix)	Hard Rock	Nos.	6					
x)	Sandy Soil Foundation	Nos.	2					
4.3	Tension Tower DC							
a)	Foundation for -4.5m, -3m, -1.5m, +/- 0m Extension							
i)	Dry Foundation	Nos.	3					
ii)	Wet Foundation	Nos.	2					
iii)	Partially Submerged Foundation	Nos.	2					
iv)	Fully Submerged Foundation	Nos.	5					
v)	Wet Black Cotton	Nos.	4					
vi)	Dry Fissured Rock	Nos.	6					
vii)	Wet Fissured Rock	Nos.	2					
viii)	Submerged Fissured Rock	Nos.	2					
ix)	Hard Rock	Nos.	5					
x)	Sandy Soil Foundation	Nos.	2					
b)	Foundation for +1.5m, +3m, +4.5m +6m, +7.5m, +9m Extension							
i)	Dry Foundation	Nos.	4					
ii)	Wet Foundation	Nos.	2					
iii)	Partially Submerged Foundation	Nos.	2					
iv)	Fully Submerged Foundation	Nos.	4					
v)	Wet Black Cotton	Nos.	3					
vi)	Dry Fissured Rock	Nos.	5					
vii)	Wet Fissured Rock	Nos.	2					
viii)	Submerged Fissured Rock	Nos.	3					
ix)	Hard Rock	Nos.	5					
x)	Sandy Soil Foundation	Nos.	1					
4.4	Tension Tower DD							
a)	Foundation for -4.5m, -3m, -1.5m, +/- 0m Extension							
i)	Dry Foundation	Nos.	3					
ii)	Wet Foundation	Nos.	2					
iii)	Partially Submerged Foundation	Nos.	2					
iv)	Fully Submerged Foundation	Nos.	4					
v)	Wet Black Cotton	Nos.	4					

Sl. No.	Item Description	Unit	Qty.	Portion in Foreign Currency			Portion in Nepal Currency (in NRs)	
				Currency*	Unit Rate	Total Charges	Unit Rate	Total Charges
(1)	(2)	(4)	(5)	(6)	(7)	(8)=(5)X(7)	(9)	(10)=(5)X(9)
vi)	Dry Fissured Rock	Nos.	4					
vii)	Wet Fissured Rock	Nos.	4					
viii)	Submerged Fissured Rock	Nos.	2					
ix)	Hard Rock	Nos.	4					
x)	Sandy Soil Foundation	Nos.	2					
b)	Foundation for +1.5m, +3m, +4.5m +6m, +7.5m, +9m Extension							
i)	Dry Foundation	Nos.	3					
ii)	Wet Foundation	Nos.	3					
iii)	Partially Submerged Foundation	Nos.	2					
iv)	Fully Submerged Foundation	Nos.	4					
v)	Wet Black Cotton	Nos.	1					
vi)	Dry Fissured Rock	Nos.	6					
vii)	Wet Fissured Rock	Nos.	2					
viii)	Submerged Fissured Rock	Nos.	3					
ix)	Hard Rock	Nos.	6					
x)	Sandy Soil Foundation	Nos.	3					
c)	Foundation for +18m, +25m Extension							
i)	Dry Foundation	Nos.	1					
ii)	Wet Foundation	Nos.						
iii)	Partially Submerged Foundation	Nos.						
iv)	Fully Submerged Foundation	Nos.	1					
v)	Wet Black Cotton	Nos.	2					
vi)	Dry Fissured Rock	Nos.	2					
vii)	Wet Fissured Rock	Nos.	1					
viii)	Submerged Fissured Rock	Nos.	1					
ix)	Hard Rock	Nos.	1					
x)	Sandy Soil Foundation	Nos.						
4.5	Tension Tower DD Special							
a)	Foundation for -4.5m, -3m, -1.5m, +/- 0m Extension							
i)	Dry Foundation	Nos.	1					
ii)	Wet Foundation	Nos.						
iii)	Partially Submerged Foundation	Nos.						
iv)	Fully Submerged Foundation	Nos.						
v)	Wet Black Cotton	Nos.						
vi)	Dry Fissured Rock	Nos.						
vii)	Wet Fissured Rock	Nos.	1					
viii)	Submerged Fissured Rock	Nos.						
ix)	Hard Rock	Nos.						
x)	Sandy Soil Foundation	Nos.						

Sl. No.	Item Description	Unit	Qty.	Portion in Foreign Currency			Portion in Nepal Currency (in NRs)	
				Currency*	Unit Rate	Total Charges	Unit Rate	Total Charges
(1)	(2)	(4)	(5)	(6)	(7)	(8)=(5)X(7)	(9)	(10)=(5)X(9)
b)	Foundation for +1.5m, +3m, +4.5m +6m, +7.5m, +9m Extension							
i)	Dry Foundation	Nos.						
ii)	Wet Foundation	Nos.						
iii)	Partially Submerged Foundation	Nos.	1					
iv)	Fully Submerged Foundation	Nos.						
v)	Wet Black Cotton	Nos.						
vi)	Dry Fissured Rock	Nos.						
vii)	Wet Fissured Rock	Nos.						
viii)	Submerged Fissured Rock	Nos.						
ix)	Hard Rock	Nos.						
x)	Sandy Soil Foundation	Nos.	1					
c)	Foundation for +18m, +25m Extension							
i)	Dry Foundation	Nos.	1					
ii)	Wet Foundation	Nos.						
iii)	Partially Submerged Foundation	Nos.						
iv)	Fully Submerged Foundation	Nos.						
v)	Wet Black Cotton	Nos.						
vi)	Dry Fissured Rock	Nos.	1					
vii)	Wet Fissured Rock	Nos.						
viii)	Submerged Fissured Rock	Nos.						
ix)	Hard Rock	Nos.						
x)	Sandy Soil Foundation	Nos.						
5	Erection of following types of towers & tower extension parts complete with stubs, step bolts, hangers, D-shackles, bolts & nuts etc, tack welding and supply and application of enamel & zinc rich paint but excluding tower accessories such as danger plates, number plates, phase plates, anti-climbing devices							
5.1	Tension Tower DA							
a)	Basic tower	Nos.	28					
b)	-4.5 m Leg Extension	Nos.	2					
c)	-3 m Leg Extension	Nos.	6					
d)	-1.5 m Leg Extension	Nos.	6					
e)	+/- 0 m Leg Extension	Nos.	74					
f)	+1.5 m Leg Extension	Nos.	6					
g)	+3 m Leg Extension	Nos.	18					
h)	+4.5 m Leg Extension	Nos.	4					
i)	+6 m Leg Extension	Nos.	12					
j)	+7.5 m Leg Extension	Nos.	6					

Sl. No.	Item Description	Unit	Qty.	Portion in Foreign Currency			Portion in Nepal Currency (in NRs)	
				Currency*	Unit Rate	Total Charges	Unit Rate	Total Charges
(1)	(2)	(4)	(5)	(6)	(7)	(8)=(5)X(7)	(9)	(10)=(5)X(9)
k)	+9 m Leg Extension	Nos.	10					
l)	+18 m Leg Extension	Nos.	8					
m)	+25 m Leg Extension	Nos.	8					
5.2	Tension Tower DB							
a)	Basic tower	Nos.	82					
b)	-4.5 m Leg Extension	Nos.	10					
c)	-3 m Leg Extension	Nos.	24					
d)	-1.5 m Leg Extension	Nos.	32					
e)	+/- 0 m Leg Extension	Nos.	180					
f)	+1.5 m Leg Extension	Nos.	40					
g)	+3 m Leg Extension	Nos.	42					
h)	+4.5 m Leg Extension	Nos.	20					
i)	+6 m Leg Extension	Nos.	40					
j)	+7.5 m Leg Extension	Nos.	12					
k)	+9 m Leg Extension	Nos.	24					
5.3	Tension Tower DC							
a)	Basic tower	Nos.	66					
b)	-4.5 m Leg Extension	Nos.	12					
c)	-3 m Leg Extension	Nos.	16					
d)	-1.5 m Leg Extension	Nos.	24					
e)	+/- 0 m Leg Extension	Nos.	152					
f)	+1.5 m Leg Extension	Nos.	20					
g)	+3 m Leg Extension	Nos.	40					
h)	+4.5 m Leg Extension	Nos.	12					
i)	+6 m Leg Extension	Nos.	28					
j)	+7.5 m Leg Extension	Nos.	10					
k)	+9 m Leg Extension	Nos.	22					
5.4	Tension Tower DD							
a)	Basic tower	Nos.	71					
b)	-4.5 m Leg Extension	Nos.	12					
c)	-3 m Leg Extension	Nos.	22					
d)	-1.5 m Leg Extension	Nos.	44					
e)	+/- 0 m Leg Extension	Nos.	162					
f)	+1.5 m Leg Extension	Nos.	22					
g)	+3 m Leg Extension	Nos.	26					
h)	+4.5 m Leg Extension	Nos.	16					
i)	+6 m Leg Extension	Nos.	20					
j)	+7.5 m Leg Extension	Nos.	12					
k)	+9 m Leg Extension	Nos.	28					

Sl. No.	Item Description	Unit	Qty.	Portion in Foreign Currency			Portion in Nepal Currency (in NRs)	
				Currency*	Unit Rate	Total Charges	Unit Rate	Total Charges
(1)	(2)	(4)	(5)	(6)	(7)	(8)=(5)X(7)	(9)	(10)=(5)X(9)
l)	+18 m Leg Extension	Nos.	12					
m)	+25 m Leg Extension	Nos.	24					
1.1.5	Tension Tower DD Special							
a)	Basic tower	Nos.	6					
b)	-4.5 m Leg Extension	Nos.	2					
c)	-3 m Leg Extension	Nos.	2					
d)	-1.5 m Leg Extension	Nos.	2					
e)	+/- 0 m Leg Extension	Nos.	12					
f)	+1.5 m Leg Extension	Nos.	2					
g)	+3 m Leg Extension	Nos.	2					
h)	+4.5 m Leg Extension	Nos.	2					
i)	+6 m Leg Extension	Nos.	2					
j)	+7.5 m Leg Extension	Nos.	2					
k)	+9 m Leg Extension	Nos.	2					
l)	+18 m Leg Extension	Nos.	4					
m)	+25 m Leg Extension	Nos.	4					
6	Installation of Earthing of towers							
i.	Pipe Type	Nos.	115					
ii.	Counterpoise Type	Nos.	138					
7	Installation of following tower accessories							
i.	Danger Plate	Nos.	253					
ii.	Number Plate	Nos.	253					
iii.	Phase Plate (Set of three)	Sets	506					
iv.	Circuit Plate(Set of two)	Sets	253					
v.	Anti climbing device	Nos.	253					
vi.	Bird Guard(set of three)	Sets	56					
						-		
9	Protection of tower footing							
i)	Random rubble stone masonry including excavation (1:5 cement concrete)	Cu.m.	5700		-	-		
ii)	Stone bound in galvanising wire netting including excavation	Cu.m.	3200		-	-		
iii)	Back filling and levelling of volumes enclosed by revetment	Cu.m.	5450		-	-		
iv)	M15 Conc. Nominal Mix 1:2:4 for top seal cover	Cu.m.	400		-	-		

Sl. No.	Item Description	Unit	Qty.	Portion in Foreign Currency			Portion in Nepal Currency (in NRs)	
				Currency*	Unit Rate	Total Charges	Unit Rate	Total Charges
(1)	(2)	(4)	(5)	(6)	(7)	(8)=(5)X(7)	(9)	(10)=(5)X(9)
10	Installation of insulator strings complete with arcing horns & necessary hardware, installing of bundle conductor including fixing of conductor accessories, installing & stringing of earthwire including fixing of earthwire accessories (Twin bundle Conductor) in Double Ckt Line.							
(i)	Normal Stretch (Double Ckt. Portion)	kms	88		-	-		
11	Optical Fibre Cabling							
A.	OPGW cable & Accessories							
(a)	24 Fibre (DWSM) OPGW fibre optic cable	km	88					
(b)	Installation Hardware set for above 24 Fibre OPGW Fibre Optic cabling including all cable fittings & accessories except joint box	Sets	88					
(c)	Joint box (24 Fibres)	No.	28					
B.	FODP							
(a)	FODP 48F : Indoor Type, rack mounted with FCPC coupling and pig tails	No.	2					
C.	Fibre Optic approach cable							
(a)	24 Fibre (DWSM)	km	1					
(b)	Installation hardware set for above 24 Fibre, Fibre Optic Approach Cable	Sets	1					
12	Pile Foundation:							
	No. of Pile Foundation	No.	1					
12.1	Boring, providing and installation of bored Cast-in-situ RCC vertical piles of specified diameter and of any length below the pile cap with M25 grade of cement concrete, excluding the cost of supply & placing the reinforcement steel but including the cost of boring with temporary Guide casing, bentonite solution and the length of pile to be embedded in the pile cap (length of pile for payment shall be measured from bottom of pile cap), all necessary labour, materials, plants, tools & tackles etc., complete, as necessary for proper execution of the job. (Boring in weathered rock, shale, fissured rock and soft rock excluded).							
	a) 1200mm diameter R.C.C. vertical bored pile upto 30 m from bottom of pile cap.	Meter	500					

Sl. No.	Item Description	Unit	Qty.	Portion in Foreign Currency			Portion in Nepal Currency (in NRs)	
				Currency*	Unit Rate	Total Charges	Unit Rate	Total Charges
(1)	(2)	(4)	(5)	(6)	(7)	(8)=(5)X(7)	(9)	(10)=(5)X(9)
12.2	Extra over item 12.1 for boring including socketing, anchoring (if required) with required size,nos. & depth of Reinforcement in weathered rock, shale, fissured rock soft rock and hard rock upto a maximum depth of 5.0m.	Meter	32					
12.3	Excavation wherever required for pile cap /tie etc. (other than boring) for all depth and size, in all types of soils including disposal of excavated materials for all lifts and leads,decent etc.as directed by Engineer - In -charge,together with all labour,tools & tackles,sheeting, sheet piling,dewatering etc. complete as required for proper execution of the job.	Cu.m.	7					
12.4	Back filling with available excavated earth for all leads and lifts in sides of foundations and other under ground facilities in horizontal layers not exceeding 20 cm. in depth consolidating each deposited layer by ramming and watering etc.	Cu.m.	1					
12.5	Form work for placing plain or reinforced cement concrete of any type including blockout and section at any elevation including all labour, materials, equipments, waste for form, shoring,shuttering,strutting,propping, scaffolding,tying,nailing, caulking, dismantling & removal of forms etc. complete.	Sq.m.	165					
12.6	Supply and placing of steel reinforcement of specified grade for R.C.C. work in pile,pile cap, pedestal / chimney, tie beam (if required) including straightening, cutting, bending, binding etc. all complete	M.T.	38					
12.7	Providing and laying in position M25 Grade concrete of specified 28 days strength for pile caps, pedestal/chimney and tie beam(if required), excluding reinforcement steel and form work but including cement, all necessary tools and tackles,labour, materials, equipments for handling,transportation, batching, mixing,placing, vibrating,dewatering etc. all complete (excluding cost of concrete in piles which is included in item no.12.1).	Cu.m.	145					
12.8	Providing and laying plain cement concrete 1:4:8 (1cement : 4 coarse sand: 8 graded stone aggregate 40mm nominal size) including cement, all necessary tools and tackles, labour, materials, equipments for handling,transportation, mixing,placing, vibrating,dewatering etc.all complete.	Cu.m.	7					

Sl. No.	Item Description	Unit	Qty.	Portion in Foreign Currency			Portion in Nepal Currency (in NRs)	
				Currency*	Unit Rate	Total Charges	Unit Rate	Total Charges
(1)	(2)	(4)	(5)	(6)	(7)	(8)=(5)X(7)	(9)	(10)=(5)X(9)
12.9	Conducting Standard Penetration Test (SPT) at various elevations in pile bore holes in all kind of soils including all labour, materials, tools and tackles, equipments etc. required for successful completion of the job.	Nos.	40					
12.10	Supply and Providing M.S. liner of 6mm. thick in piles upto 10m. Depth (maxm.) from bottom of pile cap, limited to the approved drawing, including supply, straightening, bending, welding, all supports, labours, tools and tackles, plants & equipments, with primer and painting etc. (complete) as required for successful completion of the job	MT	29					
12.11	Conducting integrity test on pile using electronic control unit, hand held hammer, accelerometer, computer with required software to assess as-installed pile characteristics including mobilisation of necessary manpower, equipments, materials etc. required for successful completion of the job	Nos.	16					
13	Installation of following softwares							
i)	PLS-CADD (multiuser license for 10 users)	Set	1					
ii)	PLS-TOWER (multiuser license for 10 users)	Set	1					
14	Cost for supervision works to be imparted by the principal Core Manufacturer during the installation of HTLS conductor at site							
	Engineer	Mdays	180					
	Supervisor	Mdays	180					
TOTAL INSTALATION SERVICES (Total of column 8 and 10 to be carried forward to Schedule No. 5: Grand Summary)								

Note : 1) Bidder is required to quote prices in this Schedule for all the individual items/sub-items.

2.) BOQ given above is indicative only based on the scope of work as given in Employer's Requirements. The quantities mentioned above may undergo change during detailed engineering to meet the functional requirement and scope of work defined in Employer's Requirements.

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

Φ Strike out if not applicable

Name of Bidder:
Signature of Bidder:

Date:

SI. No.	Item Description	Unit	Qty.	Portion in Foreign Currency			Portion in Nepal Currency (in NRs)	
				Currency*	Unit Rate	Total Charges	Unit Rate	Total Charges
(1)	(2)	(4)	(5)	(6)	(7)	(8)=(5)X(7)	(9)	(10)=(5)X(9)

(Printed Name)
 (Designation)
 (Common Seal)

NEPAL ELECTRICITY AUTHORITY
PROJECT MANAGEMENT DIRECTORATE
Kushma - New Butwal 220 kV Transmission Line
Part A: Transmission Line

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

Sl. No.	Description of the Test	Item for which training is to be imparted.	Training duration in days	Training Charges for Contractors Trainers
				Currency
1	2	3	4	5
	HTLS Conductor Installation, O&M for 20 Supervisors	HTLS Conductor Installation Operation and Maintenance	21	
	Total for Training Charges (total of column 6 To be carried forward to Schedule 5: Grand Summary)			

Date:

Signature:

Printed Name:

Designation:

Common Seal:

NEPAL ELECTRICITY AUTHORITY
PROJECT MANAGEMENT DIRECTORATE
Kushma - New Butwal 220 kV Transmission Line

Schedule No. 4 : Installation and Other Services**(b): Training Charges for training to be imparted abroad**

Sl. No.	Description	Item for which training is to be imparted.	Country where training is to be imparted	Nos. of Trainee	Training duration in days	Total Training Charges	
						Currency	Total Training Charges
1	2		3	4	5	6	7 = 4x5 x 6
1	Training to Owners personnel on use & application of the softwares	i)EHV Transmission Line Design with HTLS conductors using PLS CADD :		8	10 days		
		ii)EHV Transmission Tower Design using PLS-Tower :		4	10 days		
	Total for Training Charges (Total of column 7 to be carried forward to Schedule No. 5: Grand Summary)	Total					

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

Date:

NEPAL ELECTRICITY AUTHORITY
PROJECT MANAGEMENT DIRECTORATE
Kushma - New Butwal 220 kV Transmission Line

Schedule No. 5: Grand Summary

Sl. No.	Description	Total Price Foreign ()*	Total Price Local ()*
1	TOTAL SCHEDULE NO. 1		
	Plant and Equipment including Mandatory Spares to be supplied from abroad.	0	
2	TOTAL SCHEDULE NO. 2		
	Plant and Equipment including Mandatory Spares Parts to be supplied from within Nepal		
3	TOTAL SCHEDULE NO. 3		
	Design Services		
4	TOTAL SCHEDULE NO. 4		
	(a) Installation and construction charges		
	(b) Training charges for training to be imparted abroad		
	(c) Training charges for training to be imparted in Nepal		
	(d) Type Tests charges for type Tests to be conducted abroad		
	GRAND TOTAL FOR PART A [1+2+3+4]		

Printed Name: _____

Designation: _____

Common Seal: _____

PROJECT MANAGEMENT DIRECTORATE
Kushma - New Butwal 220 kV Transmission Line

Schedule No. 4 : Installation and Other Services**(d): Type Test charges for Type Tests to be conducted abroad**

Sl. No.	Description of Tests	Country of Testing	Unit	Qty.	Currency #	Amount
	(2)	(3)	(4)	(5)	(6)	(7)=(4) x (5)
1	Proto Type Testing of towers					
1.1	Tower Type DA with extension		No.	1		
1.2	Tower Type DB with extension		No.	1		
1.3	Tower Type DC with extension		No.	1		
1.4	Tower Type DD with extension		No.	1		
2 (i)	On complete HTLS Conductor		No.	1		
a)	DC resistance test on stranded conductor		No.	1		
b)	UTS test on stranded conductor		No.	1		
c)	Radio interference voltage test (dry)		No.	1		
d)	Corona extinction voltage test (dry)		No.	1		
e)	Stress- Strain test on stranded conductor and core at room temperature		No.	1		
			No.	1		
f)	Stress-strain test on stranded conductor and core at elevated temperature		No.	1		
g)	High temperature endurance & creep test on stranded conductor		No.	1		
			No.	1		
h)	Sheaves Test		No.	1		
i)	Axial Impact Test		No.	1		
j)	Radial Crush Test		No.	1		
k)	Torsional Ductility Test		No.	1		

Sl. No.	Description of Tests	Country of Testing	Unit	Qty.	Currency #	Amount
	(2)	(3)	(4)	(5)	(6)	(7)=(4) x (5)
l)	Aeolian Vibration Test		No.	1		
m)	Temperature Cycle Test		No.	1		
2 (ii)	On HTLS Conductor Strand/core					
a)	Heat resistance test on Aluminium Alloy strands or core		No.	1		
b)	Bending test on aluminium clad core (if applicable)		No.	1		
c)	Compression test on aluminium clad core (if applicable)		No.	1		
d)	Coefficient of linear expansion on core wire		No.	1		
e)	Strand Brittle fracture test (for composite core only)		No.	1		
f)	Bending test on composite core		No.	1		
4	7/3.35 mm GS Earthwire					
4.1	UTS Test		No.	1		
4.2	D.C. Resistance Test		No.	1		
5	AACSR Earthwire					
5.1	UTS Test		No.	1		
5.2	D.C. Resistance Test		No.	1		
6	Insulators					
	Type tests on disc insulator unit and complete insulator string		Lot	1		
	TOTAL (Total of column 7 to be carried forward to Schedule No. 5: Grand Summary)					

Sl. No.	Description of Tests	Country of Testing	Unit	Qty.	Currency #	Amount
	(2)	(3)	(4)	(5)	(6)	(7)=(4) x (5)
#	Specify currency in accordance with BDS ITB Clause 32.1, Part-I of the Bidding Documents.					
	Name of Bidder:				Date:	
	Signature of Bidder:					
	(Printed Name)					
	(Designation)					
	(Common Seal)					

**NEPAL ELECTRICITY AUTHORITY
PROJECT MANAGEMENT DIRECTORATE
Kushma - New Butwal 220 kV Transmission Line**

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

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

Date:
