Lekhnath Damauli 220 kV Transmission Line Project
Package A: OHL
BMZ201667773/KfW508597

Amendment № A_2

November 14, 2022

№	Reference	Amendment
1.	Part I Schedule I and II, items 1.2.4 and 1.2.5	In Part I, Schedule I and II, description of Items 1.2.4 and 1.2.5 shall read as follows: 1.2.4 - Joint Boxes along the line (2 OPGW entries) + coiling devices and attachment clamps to tower latticed steelwork for down leads, down loops 1.2.5 - Joint Boxes on terminal Substation gantries (1 OPGW entry+1 OPUG entry) + coiling devices and attachment clamps to tower latticed steelwork for down leads, down loops
2.	Part I Schedule I and II, item 1.11	In Part I, Schedule I and II, description of Item 1.11 shall read as follows: FOUNDATIONS INCLUDING STUBS, CLEATS, SETTING AND EXTENDED CHIMNEY WHERE REQUIRED (As a minimum, 20% of tower stubs shall be supplied 1.0 m longer, extended, from the standard length to accommodate down-hill located chimney extensions)
3.	Part I Schedule I and II, items 2.2.4 and 2.2.5	In Part I, Schedule I, description of Items 2.2.4 and 2.2.5 shall read as follows: 2.2.4 - Joint Boxes along the line (2 OPGW entries) + coiling devices and attachment clamps to tower latticed steelwork for downleads, downloops 2.2.5 - Joint Boxes on terminal Substation gantries (1 OPGW entry + 1 OPUG entry) + coiling devices and attachment clamps to tower latticed steelwork for downleads, downloops
4.	Part I Schedule I and II, item 2.10	In Part I, Schedule I and II, description of Item 2.10 shall read as follows: FOUNDATIONS INCLUDING STUBS, CLEATS, SETTING AND EXTENDED CHIMNEY WHERE REQUIRED (As a minimum, 20% of tower stubs shall be supplied 1.0 m longer, extended, from the standard length to accommodate down-hill located chimney extensions)

<table>
<tr><td>5.</td><td>Part I
Schedule I and II, items 3.2.5 and 3.2.6</td><td>In Part I, Schedule I and II, description of Items 3.2.5 and 3.2.6 shall read as follows:
3.2.5 - Joint Boxes along the line (3 OPGW entries) + coiling devices and attachment clamps to tower latticed steelwork for down leads, downloops

3.2.6 - Joint Boxes on terminal Substation gantries (1 OPGW entry + 1 OPUG entry) + coiling devices and attachment clamps to tower latticed steelwork for down leads, down loops</td></tr>
<tr><td>6.</td><td>Part I
Schedule I and II, item 4.1</td><td>In Part I, Schedule I and II, description of Item 4.1 shall read as follows:

TOWERS
Each of the items comprises the supply of a complete tower standard height (0 body extension and 4 standard leg extensions) and 1 piece of each body extensions and leg extensions</td></tr>
<tr><td>7.</td><td>Part I
Schedule I and II, item 4.2</td><td>In Part I, Schedule I and II, item 4.2 shall read as follows:
<table>
<tr><th>Item</th><th>Description</th><th>Code</th><th>Unit</th><th>Quantity</th></tr>
<tr><td>4.2</td><td>PHASE CONDUCTOR, EARTHWIRE AND OPGW</td><td></td><td></td><td></td></tr>
<tr><td>4.2.1</td><td>ACSR MOOSE conductor supplied on steel drums and protection adequate for long time storage</td><td></td><td>km</td><td>36</td></tr>
<tr><td>4.2.2</td><td>ACSR bison conductor supplied on steel drums and protection adequate for long time storage</td><td></td><td>km</td><td>12</td></tr>
<tr><td>4.2.3</td><td>Earthwire 93-A20SA type supplied on steel drums and protection adequate for long time storage</td><td></td><td>km</td><td>3</td></tr>
<tr><td>4.2.4</td><td>48 fibres OPGW (93-A20SA equivalent) on steel drums and protection adequate for long time storage</td><td></td><td>Km</td><td>3.5</td></tr>
<tr><td>4.2.5</td><td>Joint Boxes (2 entries OPGW)</td><td></td><td>Pcs</td><td>4</td></tr>
<tr><td>4.2.6</td><td>Joint Boxes (1 entry OPGW + 1 entry OPUG)</td><td></td><td>Pcs</td><td>1</td></tr>
</table></td></tr>
<tr><td>8.</td><td>Part I
Schedule I and II, item 4.3.1</td><td>In Part I, Schedule I and II, item 4.3.1 shall read as follows:
<table>
<tr><td>4.3.1</td><td>Composite insulator unit, suspension set (same as the insulator unit supplied under item 1.7.1)</td><td></td><td>pcs</td><td>18</td></tr>
</table></td></tr>
<tr><td>9.</td><td>Part I
Schedule I and II, Item 4.3.2</td><td>In Part I, Schedule I and II, item 4.3.2 shall read as follows:
<table>
<tr><td>4.3.2</td><td>Composite insulator unit, suspension set (same as the insulator unit supplied under item 1.7.1)</td><td></td><td>pcs</td><td>32</td></tr>
</table></td></tr>
<tr><td>10.</td><td>Part I
Schedule III, Item 2</td><td>In Part I, Schedule III, the following new Item 2 shall be included:
<table>
<tr><th>Item</th><th>Description</th><th>Unit</th><th>Quantity</th></tr>
<tr><td>2.0</td><td>TYPE TESTS</td><td></td><td></td></tr>
<tr><td>2.1</td><td>Towers Type tests</td><td></td><td></td></tr>
</table></td></tr>
</table>

	(including tower supply, erection and dismantling. Tower test loads shall be design loads multiplied by partial material factor)		
2.1.1	Type test to destruction of Normal Suspension Tower Type DA	Lot	1
2.1.2	Ultimate loading test of Tension Tower Type DB	lot	1
2.1.3	Ultimate loading test of Tension Tower Type DC	lot	1
2.1.4	Ultimate loading test of Tension Tower Type DD	lot	1
2.1.5	Ultimate loading test of Tension Tower Type 6T	lot	1
2.2	**Insulator Strings Type Tests (for complete string including insulators and associated hardware)**		
2.2.1	220 kV Single Suspension String for Twin ACSR Moose	lot	1
2.2.2	220 kV Double Suspension String for Twin ACSR Moose	lot	1
2.2.3	220 kV Double Tension String for Twin ACSR Moose	lot	1
2.3	**OPGW Type Tests (Tests description according to Data Sheets)**		
2.3.1	OPGW 48 FIBRES (EQUIVALENT TO 93-A20SA)	lot	1

11. Part I Schedule III, Item 3.1

In Part I, Schedule III, the following new Item 3.1 shall be included:

Item	Description	Unit	Quantity
3.1	**TRAINING OF EMPLOYER'S STAFF Overseas professional training (including costs for air tickets, accommodation and daily allowance)**		
3.1.1	Latticed steel towers and Foundation design (2 persons, 10 working days)	lot	1
3.1.2	PLS-CADD (Standard + FE edition) license registered to the Employer	lot	1
3.1.3	PLS Tower license registered to the Employer	lot	1

12. Part I Schedule IV, Items 1.1.2 to 1.1.6

In Part I Schedule IV, Items 1.1.2 to 1.1.6 shall read as follows:

Item	Description	Unit	Quantity
1.1.2	Construction, maintenance and reinstatement of new access roads, including erosion protection measures and all other works as per Clauses 8.3.1 to 8.3.10 of Sub-Section VII-4	route km	45
1.1.3	Upgrade of temporary access tracks to permanent as per Clause 8.3.11 of Sub-Section VII-4 (unit is km of upgraded temporary road to permanent)	Km	28
1.1.4	Fully furnished office for Employer, including running costs	lump sum	1
1.1.5	Price Item shall be deleted		
1.1.6	Survey Works including: angle points identification, line profile survey, towers pegging on site, survey of hill-side extensions, towers protection, towers diagonal profiling	route km	45

13. Part I Schedule IV, Item1.8

In Part I Schedule IV, Item 1.8 shall read as follows:

Item	Description	Unit	Quantity
1.8	**FOUNDATIONS TESTS**		
1.8.1	**Design tests as per EN 61773, section 4.1**		
1.8.1.1	Pad and Chimney foundation	lot	1
1.8.1.2	Anchor Rock foundation	lot	1
1.8.1.3	Piled foundation	lot	1
1.8.2	**Proof tests as per EN 61773, section 4.2**		
1.8.2.1	Required foundation proof tests up to 75% of design ultimate load as per EN 61773, chapter 8.	lot	1

14. Part I Schedule IV, Item1.9

In Part I Schedule IV, Item 1.9 shall read as follows:

Item	Description	Unit	Quantity
1.9	**ADDITIONAL WORKS**		
1.9.1	Relocation of approximately 300 m of 33kV line between AP62 and AP63, including any necessary	m	300

<table>
<tr><td></td><td></td><td>
<table>
<tr><td></td><td>design services, additional material supply and installation works for complete execution</td><td></td><td></td></tr>
<tr><td>1.9.2</td><td>Installation of 132kV tower for connection of autotransformer and gantry in Lekhnath substation as per clause 5.3 of Sub-Section VII-1 including all design verifications, investigations, measurements, material supply and installation works necessary for complete execution.
Item includes the supply and installation of all materials including lattice towers and foundations, phase conductors and earthwire, insulator sets and earthwire fittings, and related installation works.</td><td>lump sum</td><td>1</td></tr>
<tr><td>1.9.3</td><td>Tower location/site slope stabilisation works, including all necessary surveys, geotechnical design, material supply and installation works necessary for complete execution.</td><td>-</td><td>-</td></tr>
<tr><td>1.9.3.1</td><td>Reinforced concrete wall (approx. dimensions 3.0 x 0.5 m)</td><td>m3</td><td>225</td></tr>
<tr><td>1.9.3.2</td><td>Stone gabion wall</td><td>m3</td><td>1,650</td></tr>
<tr><td>1.9.3.3</td><td>Stone mortar wall (approx. dimensions 2.0 x 0.5 m)</td><td>m3</td><td>200</td></tr>
<tr><td>1.9.4</td><td>Tower location/site erosion prevention works, including all material supply and installation works necessary for complete execution.</td><td>-</td><td>-</td></tr>
<tr><td>1.9.4.1</td><td>Concrete drainage ditch (approx. 0.2 m deep U/V shape channel)</td><td>m</td><td>840</td></tr>
<tr><td>1.9.4.2</td><td>Biodegradable mats and vegetation seeding</td><td>m2</td><td>22,500</td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
</table>
</td></tr>
<tr><td>15.</td><td>Part I
Schedule IV, Item 2.2.1.4</td><td>In Part I Schedule IV, the quantity of Item 2.2.1.4 shall read as ‘3’.</td></tr>
<tr><td>16.</td><td>Part I
Schedule IV, Items 4.1 Type Tests</td><td>In Part I Schedule IV, items 4.1.1.1 – 4.1.1.5, 4.1.2.1- 4.1.2.3 and 4.1.3.1 shall be deleted.</td></tr>
<tr><td>17.</td><td>Part I
Schedule IV, Items 4.2.1, 4.2.2, 4.2.3</td><td>In Part I Schedule IV, items 4.2.1, 4.2.2, 4.2.3 shall be deleted.</td></tr>
<tr><td>18.</td><td>Part I
Schedule VIII, Items 1 and 1.1</td><td>In Part I Schedule VIII, items 1 and 1.1 shall be deleted.</td></tr>
<tr><td>19.</td><td>Part II
VII-7 Annexes</td><td>The following Annexes are attached for reference:
Annex R IEE Approved Lekhnath Damauli
Annex S Updated IEE Report Lekhnath Damauli</td></tr>
<tr><td>20.</td><td>Part I
IV. Bidding Forms</td><td>Revised Price Schedules covering Items 1 to 18 of this amendment are attached and shall be used for bidding. Updated line items are highlighted in yellow color for ease of reference.</td></tr>
<tr><td>21.</td><td>Part I, Section IV “Bidding Forms”, Financial Bid, Preamble / Schedules of Rates and Price,</td><td>The following shall be considered by the Bidders:

For Tower
The following formula
$$\sout{Pn = P_0 \times (a + b\frac{Fe_0}{Fe_1}) - P_0}$$
Shall be replaced by</td></tr>
</table>

	Part III, Section IX "Particular Conditions (PC)", Contract Data (Part A) and Special Conditions (Part B), Sub-clause 13.8 "Price Adjustment"	$$Pn = P_0 \times (a + b\frac{Fe_n}{Fe_0}) - P_0$$ in which: P_n = *adjustment amount payable to the Contractor* P_0 = *Contract price (base price)* *a* = *percentage of fixed element in Contract price (a = 36%)* *b* = *percentage of construction steel component in Contract price (b =64%)* M_{FE0}, M_{FE1} = *International Construction Steel Index on the base date and the date for adjustment, respectively* **For Conductor** The following formula ~~$Pn = P_0 \times (a + b\frac{Fe_0}{Fe_1} + c\frac{Al_0}{Al_1}) - P_0$~~ Shall be replaced by $$Pn = P_0 \times (a + b\frac{Fe_n}{Fe_0} + c\frac{Al_n}{Al_0}) - P_0$$ in which: P_n = *adjustment amount payable to the Contractor* P_0 = *Contract price (base price)* *a* = *percentage of fixed element in Contract price (a = 30%)* *b* = *percentage of construction steel component in Contract price (b =18%)* *c* = *percentage of Aluminum component in Contract price (c = 52%)* M_{FE0}, M_{FE1} = International Construction Steel Index on the base date and the date for adjustment, respectively M_{AL0}, M_{AL1} = International Aluminum Price Index on the base date and the date for adjustment, respectively The following sentence ~~The base date shall be the date thirty (30) days prior to the Bid closing date.~~

		Shall be replaced by The base date shall be the date thirty (30) days prior to the Bid Submission date as defined Part I, Section II. Bid "Data Sheet, Submission and Opening of Bids", Sub-clause No. 23.1. The following sentence ~~The date of adjustment shall be the mid-point (180 days) of the period of manufacture or installation of component or Plant.~~ Shall be replaced by The date of adjustment shall be 180 days prior the shipment of the goods.

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. I: Plant and Mandatory Spare Parts Supplied from Abroad

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(USD)	(USD)
				1	2	3=1x2
1	**LEKHNATH - DAMAULI 220 KV DOUBLE CIRCUIT LINE**					
1.1	**SELF-SUPPORTING STEEL LATTICE TOWERS COMPLETE WITH ALL BOLTS, NUTS, PLATES, LEG EXTENSIONS, SAFETY DEVICES, ANTI-CLIMBING DEVICES, STEP-BOLTS, ACCESSORIES AND EXTENSIONS**					
1.1.1	**Normal Suspension Tower Type DA**					
1.1.1.1	Basic tower -6 m		pcs	0		
1.1.1.2	Basic tower -3 m		pcs	1		
1.1.1.3	Basic tower ±0 m		pcs	22		
1.1.1.4	Basic tower +3 m		pcs	9		
1.1.1.5	Basic tower +6 m		pcs	4		
1.1.1.6	Basic tower +9 m		pcs	2		
1.1.1.7	Basic tower +12 m		pcs	0		
1.1.1.8	Leg reduction -3.0m		pcs	16		
1.1.1.9	Leg reduction -1.5m		pcs	22		
1.1.1.10	Leg extensions ±0 m		pcs	62		
1.1.1.11	Leg extensions +1.5 m		pcs	22		
1.1.1.12	Leg extensions +3.0 m		pcs	18		
1.1.1.13	Leg extensions +4.5 m		pcs	8		
1.1.1.14	Leg extensions +6.0 m		pcs	4		
1.1.2	**Light Angle (0° - 15°) Tension Tower Type DB**					
1.1.2.1	Basic tower -6 m		pcs	0		
1.1.2.2	Basic tower -3 m		pcs	5		
1.1.2.3	Basic tower ±0 m		pcs	30		
1.1.2.4	Basic tower +3 m		pcs	7		
1.1.2.5	Basic tower +6 m		pcs	6		
1.1.2.6	Basic tower +9 m		pcs	1		
1.1.2.7	Leg reduction -3.0 m		pcs	10		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
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Schedule No. I: Plant and Mandatory Spare Parts Supplied from Abroad

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(USD)	(USD)
				1	2	3=1x2
1.1.2.8	Leg reduction -1.5 m		pcs	24		
1.1.2.9	Leg extensions ±0 m		pcs	84		
1.1.2.10	Leg extensions +1.5 m		pcs	36		
1.1.2.11	Leg extensions +3.0 m		pcs	22		
1.1.2.12	Leg extensions +4.5 m		pcs	16		
1.1.2.13	Leg extensions +6.0 m		pcs	4		
1.1.3	**Medium Angle (15° - 30°) Tension Tower Type DC**					
1.1.3.1	Basic tower -6 m		pcs	0		
1.1.3.2	Basic tower -3 m		pcs	1		
1.1.3.3	Basic tower ±0 m		pcs	17		
1.1.3.4	Basic tower +3 m		pcs	5		
1.1.3.5	Basic tower +6 m		pcs	5		
1.1.3.6	Basic tower +9 m		pcs	3		
1.1.3.6	Basic tower +12 m		pcs	1		
1.1.3.7	Leg reduction -3.0 m		pcs	10		
1.1.3.8	Leg reduction -1.5 m		pcs	24		
1.1.3.9	Leg extensions ±0 m		pcs	54		
1.1.3.10	Leg extensions +1.5 m		pcs	16		
1.1.3.11	Leg extensions +3.0 m		pcs	12		
1.1.3.12	Leg extensions +4.5 m		pcs	8		
1.1.3.13	Leg extensions +6.0 m		pcs	4		
1.1.4	**Heavy Angle (30°-60°) Tower Type DD**					
1.1.4.1	Basic tower -6 m		pcs	0		
1.1.4.2	Basic tower -3 m		pcs	2		
1.1.4.3	Basic tower ±0 m		pcs	10		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. I: Plant and Mandatory Spare Parts Supplied from Abroad

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(USD)	(USD)
				1	2	3=1x2
1.1.4.4	Basic tower +3 m		pcs	6		
1.1.4.5	Basic tower +6 m		pcs	1		
1.1.4.6	Basic tower +9 m		pcs	0		
1.1.4.7	Leg reduction -3.0 m		pcs	4		
1.1.4.8	Leg reduction -1.5 m		pcs	8		
1.1.4.9	Leg extensions ±0 m		pcs	24		
1.1.4.10	Leg extensions +1.5 m		pcs	14		
1.1.4.11	Leg extensions +3.0 m		pcs	18		
1.1.4.12	Leg extensions +4.5 m		pcs	4		
1.1.4.13	Leg extensions +6.0 m		pcs	4		
1.1.5	**Dead End (0°-45° Line/0°-45° Gantry) Tower Type DE**					
1.1.5.1	Basic tower -3 m		pcs	0		
1.1.5.2	Basic tower ±0 m		pcs	4		
1.1.5.3	Basic tower +3 m		pcs	0		
1.1.5.4	Basic tower +6 m		pcs	0		
1.1.5.5	Leg reduction -3.0 m		pcs	0		
1.1.5.6	Leg reduction -1.5 m		pcs	2		
1.1.5.7	Leg extensions ±0 m		pcs	12		
1.1.5.8	Leg extensions +1.5 m		pcs	2		
1.1.5.9	Leg extensions +3.0 m		pcs	0		
1.1.5.10	Leg extensions +4.5 m		pcs	0		
1.1.5.10	Leg extensions +6.0 m		pcs	0		
1.1.6	**Undercrossing Gantry Tower Type UCG**					
1.1.6.1	Basic tower ±0 m		pcs	1		
1.1.6.2	Leg extensions ±0 m		pcs	2		

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Schedule No. I: Plant and Mandatory Spare Parts Supplied from Abroad

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(USD)	(USD)
				1	2	3=1x2
1.1.7	**Multi Circuit Angle (0°-50°) Tension Tower Type 6T**					
1.1.7.1	Basic tower -6 m		pcs	0		
1.1.7.2	Basic tower -3 m		pcs	0		
1.1.7.3	Basic tower ±0 m		pcs	6		
1.1.7.4	Basic tower +3 m		pcs	2		
1.1.7.5	Basic tower +6 m		pcs	1		
1.1.7.6	Basic tower +9 m		pcs	0		
1.1.7.7	Leg reduction -3.0 m		pcs	0		
1.1.7.8	Leg reduction -1.5 m		pcs	4		
1.1.7.9	Leg extensions ±0 m		pcs	16		
1.1.7.10	Leg extensions +1.5 m		pcs	8		
1.1.7.11	Leg extensions +3.0 m		pcs	8		
1.1.7.12	Leg extensions +4.5 m		pcs	4		
1.1.7.12	Leg extensions +6.0 m		pcs	0		
	SUBTOTAL STEEL TOWERS					
1.2	**PHASE CONDUCTORS, EARTHWIRE AND OPGW CABLE COMPLETE WITH REPAIR SLEEVES AND JOINTS**					
1.2.1	ACSR Moose phase conductor (double circuit, 3 phases, two sub-conductors per phase, 2x3x2) including extra length for sags, joints, jumpers, downleads and downdroppers		route km	45		
1.2.2	Earthwire 93-A20SA type including extra length for sags, earthing connections, etc.		route km	45		
1.2.3	48 fibres OPGW (sag matching conductor) including extra length for sags, earthing connections, downleads to joint box, coils, etc.		route km	45		
1.2.4	Joint Boxes along the line (2 OPGW entries)+coiling devices and attachment clamps to tower latticed steelwork for down leads, downloops		JB+set	17		
1.2.5	Joint Boxes on terminal Substation gantries (1 OPGW entry+1 OPUG entry)+coiling devices and attachment clamps to tower latticed steelwork for down leads, down loops		JB+set	3		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. I: Plant and Mandatory Spare Parts Supplied from Abroad

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(USD)	(USD)
				1	2	3=1x2
1.3	**SPACER DAMPERS**					
1.3.1	Spacer Dampers for Phase conductor 2 x ACSR Moose (including vibration damping study)		lot	1		
1.4	**VIBRATION DAMPERS**					
1.4.1	Stockbridge Dampers for Phase conductor Twin ACSR Moose (including vibration damping study)		lot	1		
1.4.2	Stockbridge Dampers for Earthwire 93-A20SA (including vibration damping study)		lot	1		
1.4.3	Stockbridge Dampers for OPGW (equivalent to 93-A20SA) (including vibration damping study)		lot	1		
1.5	**RIGID SPACERS FOR PHASE CONDUCTOR JUMPER LOOPS**					
1.5.1	Rigid Spacers for Twin ACSR Moose		lot	1		
1.6	**AVIAN PROTECTION & AIRCRAFT WARNING SYSTEM**					
1.6.1	Bird repellent system (spiked steel strips)		per tower	44		
1.6.2	Bird flight diverters		route km	18.5		
1.6.3	Aircraft marker balls (wire mounted)		route km	5		
1.6.4	Aircraft warning lights (wire mounted)		route km	5		
1.6.5	Aircraft warning lights (tower mounted)		per tower	20		
1.6.6	Tower painting		pcs	20		
	SUBTOTAL PHASE CONDUCTORS, EARTHWIRE, OPGW , SPACERS, DAMPERS, AVIAN PROTECTION & AIRCRAFT WARNING SYSTEM					
1.7	**INSULATOR STRINGS (HARDWARE AND INSULATOR UNIT), WITH COMPOSITE INSULATORS AND ASSOCIATED SUSPENSION AND TENSION CLAMPS FOR PHASE CONDUCTOR**					
1.7.1	Single Suspension "I" string for 2 x ACSR Moose		set	160		
1.7.2	Double suspension "I" string for 2 x ACSR Moose		set	68		

Package A OHL:
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Schedule No. I: Plant and Mandatory Spare Parts Supplied from Abroad

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(USD)	(USD)
				1	2	3=1x2
1.7.3	Double tension string for 2 x ACSR Moose		set	1332		
1.7.4	Jumpers insulator string for 2 x ACSR Moose		set	180		
1.7.5	Low Duty Upright String for 2 x ACSR Moose		set	18		
1.7.6	Low Duty Inverted String for 2 x ACSR Moose		set	12		
1.8	**EARTHWIRE SETS FOR 93-A20SA COMPLETE WITH ALL ACCESSORIES**					
1.8.1	Suspension Set		set	38		
1.8.2	Tension Set		set	105		
1.9	**OPGW SETS FOR OPGW (EQUIVALENT TO 93-A20SA) COMPLETE WITH ALL ACCESSORIES INCLUDING ARMOUR RODS AND EARTH CONNECTIONS**					
1.9.1	Suspension Set		set	38		
1.9.2	Tension By-Pass (non-joint) set		set	104		
1.9.3	Tension through set, double side, with connection to Joint Box set (including surplus OPGW length and all fittings and accessories needed to guide the OPGW to the joint box)		set	9		
1.9.4	Tension set, single side, with connection to Joint Box set (including surplus OPGW length and all fittings and accessories needed to guide the OPGW to the joint box)		set	4		
	SUBTOTAL INSULATOR STRINGS, EARTHWIRE SETS, OPGW SETS					
1.10	**TOWER EARTHING**					
1.10.1	Basic earthing system		per tower	152		
1.10.2	Additional earthing system		per tower	54		
1.10.3	Extension of additional earthing system		per tower	36		
	SUBTOTAL TOWER EARTHING					

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. I: Plant and Mandatory Spare Parts Supplied from Abroad

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(USD)	(USD)
				1	2	3=1x2
1.11	**FOUNDATIONS INCLUDING STUBS, CLEATS, SETTING AND EXTENDED CHIMNEY WHERE REQUIRED (As a minimum, 20% of tower stubs shall be supplied 1.0 m longer, extended, from the standard length to accomodate down-hill located chimney extensions)**					
1.11.1	**Foundations for Tower Type DA**					
1.11.1.1	Soil type 1		per tower	1		
1.11.1.2	Soil type 2 (dry)		per tower	3		
1.11.1.3	Soil type 2 (in presence of sub-soil water)		per tower	1		
1.11.1.4	Soil type 3 (dry)		per tower	11		
1.11.1.5	Soil type 3 (in presence of sub-soil water)		per tower	10		
1.11.1.6	Soil type 3 (wet black cotton)		per tower	4		
1.11.1.7	Soil type 4		per tower	4		
1.11.1.8	Piled foundations (wet black cotton >3.5m deep or frustum angle <10°)		per tower	4		
1.11.2	**Foundations for Tower Type DB**					
1.11.2.1	Soil type 1		per tower	2		
1.11.2.2	Soil type 2 (dry)		per tower	4		
1.11.2.3	Soil type 2 (in presence of sub-soil water)		per tower	2		
1.11.2.4	Soil type 3 (dry)		per tower	15		
1.11.2.5	Soil type 3 (in presence of sub-soil water)		per tower	14		
1.11.2.6	Soil type 3 (wet black cotton)		per tower	4		
1.11.2.7	Soil type 4		per tower	3		
1.11.2.8	Piled foundations (wet black cotton >3.5m deep or frustum angle <10°)		per tower	5		
1.11.3	**Foundations for Tower Type DC**					
1.11.3.1	Soil type 1		per tower	0		
1.11.3.2	Soil type 2 (dry)		per tower	1		
1.11.3.3	Soil type 2 (in presence of sub-soil water)		per tower	1		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. I: Plant and Mandatory Spare Parts Supplied from Abroad

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(USD)	(USD)
				1	2	3=1x2
1.11.3.4	Soil type 3 (dry)		per tower	12		
1.11.3.5	Soil type 3 (in presence of sub-soil water)		per tower	8		
1.11.3.6	Soil type 3 (wet black cotton)		per tower	3		
1.11.3.7	Soil type 4		per tower	2		
1.11.3.8	Piled foundations (wet black cotton >3.5m deep or frustum angle <10°)		per tower	4		
1.11.4	**Foundations for Tower Type DD**					
1.11.4.1	Soil type 1		per tower	0		
1.11.4.2	Soil type 2 (dry)		per tower	2		
1.11.4.3	Soil type 2 (in presence of sub-soil water)		per tower	1		
1.11.4.4	Soil type 3 (dry)		per tower	6		
1.11.4.5	Soil type 3 (in presence of sub-soil water)		per tower	4		
1.11.4.6	Soil type 3 (wet black cotton)		per tower	1		
1.11.4.7	Soil type 4		per tower	1		
1.11.4.8	Piled foundations (wet black cotton >3.5m deep or frustum angle <10°)		per tower	3		
1.11.5	**Foundations for Tower Type DE**					
1.11.5.1	Soil type 1		per tower	0		
1.11.5.2	Soil type 2 (dry)		per tower	0		
1.11.5.3	Soil type 2 (in presence of sub-soil water)		per tower	0		
1.11.5.4	Soil type 3 (dry)		per tower	0		
1.11.5.5	Soil type 3 (in presence of sub-soil water)		per tower	1		
1.11.5.6	Soil type 3 (wet black cotton)		per tower	0		
1.11.5.7	Soil type 4		per tower	0		
1.11.5.8	Piled foundations (wet black cotton >3.5m deep or frustum angle <10°)		per tower	3		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. I: Plant and Mandatory Spare Parts Supplied from Abroad

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(USD)	(USD)
				1	2	3=1x2
1.11.6	**Foundations for Tower Type UCG**					
1.11.6.1	Soil type 1		per tower	0		
1.11.6.2	Soil type 2 (dry)		per tower	0		
1.11.6.3	Soil type 2 (in presence of sub-soil water)		per tower	0		
1.11.6.4	Soil type 3 (dry)		per tower	1		
1.11.6.5	Soil type 3 (in presence of sub-soil water)		per tower	0		
1.11.6.6	Soil type 3 (wet black cotton)		per tower	0		
1.11.6.7	Soil type 4		per tower	0		
1.11.6.8	Piled foundations (wet black cotton >3.5m deep or frustum angle <10°)		per tower	0		
1.11.7	**Foundations for Multi Circuit Angle Tension Tower Type 6T**					
1.11.7.1	Soil type 1		per tower	0		
1.11.7.2	Soil type 2 (dry)		per tower	1		
1.11.7.3	Soil type 2 (in presence of sub-soil water)		per tower	1		
1.11.7.4	Soil type 3 (dry)		per tower	4		
1.11.7.5	Soil type 3 (in presence of sub-soil water)		per tower	2		
1.11.7.6	Soil type 3 (wet black cotton)		per tower	0		
1.11.7.7	Soil type 4		per tower	0		
1.11.7.8	Piled foundations (wet black cotton >3.5m deep or frustum angle <10°)		per tower	0		
	SUBTOTAL FOUNDATIONS					
	TOTAL LEKHNATH - DAMAULI 220 KV DOUBLE CIRCUIT LINE					

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. I: Plant and Mandatory Spare Parts Supplied from Abroad

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(USD)	(USD)
				1	2	3=1x2
2	**INTERCONNECTION OF TANAHU - BHARATPUR 220 KV DOUBLE CIRCUIT LINE TO NEW DAMAULI S/S (LOOP IN - LOOP OUT)**					
2.1	**SELF-SUPPORTING STEEL LATTICE TOWERS COMPLETE WITH ALL BOLTS, NUTS, PLATES, LEG EXTENSIONS, SAFETY DEVICES, ANTI-CLIMBING DEVICES, STEP-BOLTS, ACCESSORIES AND EXTENSIONS**					
2.1.1	**Multi Circuit Angle (0°-50°) Tension Tower Type 6T**					
2.1.1.1	Basic tower -6 m		pcs	0		
2.1.1.2	Basic tower -3 m		pcs	0		
2.1.1.3	Basic tower ±0 m		pcs	3		
2.1.1.4	Basic tower +3 m		pcs	1		
2.1.1.5	Basic tower +6 m		pcs	0		
2.1.1.6	Basic tower +9 m		pcs	0		
2.1.1.7	Leg reduction -3.0 m		pcs	0		
2.1.1.8	Leg reduction -1.5 m		pcs	2		
2.1.1.9	Leg extensions ±0 m		pcs	8		
2.1.1.10	Leg extensions +1.5 m		pcs	4		
2.1.1.11	Leg extensions +3.0 m		pcs	2		
2.1.1.12	Leg extensions +4.5 m		pcs	0		
2.1.1.13	Leg extensions +6.0 m		pcs	0		
	SUBTOTAL STEEL TOWERS					
2.2	**PHASE CONDUCTORS EARTHWIRE AND OPGW CABLE COMPLETE WITH REPAIR SLEEVES AND JOINTS**					
2.2.1	ACSR Bison phase conductor (four circuits, 3 phases, two sub-conductors per phase, 4x3x2) including extra length for sags, joints, jumpers, downleads and downdroppers		route km	3		
2.2.2	48 fibres OPGW (equivalent to 93-A20SA) including extra length for sags, earthing connections, downleads to joint box, coils, etc.		route km	3		
2.2.3	Earthwire 93-A20SA type including extra length for sags, earthing connections, etc.		route km	1.0		
2.2.4	Joint Boxes along the line (2 OPGW entries) + coiling devices and attachment clamps to tower latticed steelwork for downleads, downloops		JB+set	6		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. I: Plant and Mandatory Spare Parts Supplied from Abroad

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(USD)	(USD)
				1	2	3=1x2
2.2.5	Joint Boxes on terminal Substation gantries (1 OPGW entry + 1 OPUG entry) + coiling devices and attachment clamps to tower latticed steelwork for downleads, downloops		JB+set	1		
2.3	**SPACER DAMPERS**					
2.3.1	Spacer Dampers for Phase conductor 2 x ACSR Bison (including vibration damping study)		lot	1		
2.4	**VIBRATION DAMPERS**					
2.4.1	Stockbridge Dampers for Phase conductor Twin ACSR Bison (including vibration damping study)		lot	1		
2.4.2	Stockbridge Dampers for OPGW (equivalent to 93-A20SA) (including vibration damping study)		lot	1		
2.4.3	Stockbridge Dampers for Earthwire 93-A20SA (including vibration damping study)		lot	1		
2.5	**RIGID SPACERS FOR PHASE CONDUCTOR JUMPER LOOPS**					
2.5.1	Rigid Spacers for Twin ACSR Bison		lot	1		
	SUBTOTAL PHASE CONDUCTORS, OPGW , SPACERS AND DAMPERS					
2.6	**INSULATOR STRINGS (HARDWARE AND INSULATORS), WITH COMPOSITE INSULATORS AND ASSOCIATED TENSION CLAMPS FOR PHASE CONDUCTOR**					
2.6.1	Double tension string for 2 x ACSR Bison		set	324		
2.6.2	Jumpers insulator string for 2 x ACSR Bison		set	66		
2.6.3	Low Duty Upright String for 2 x ACSR Bison		set	12		
2.6.4	Low Duty Inverted String for 2 x ACSR Bison		set	12		
2.7	**OPGW SETS FOR OPGW (EQUIVALENT TO 93-A20SA) COMPLETE WITH ALL ACCESSORIES INCLUDING ARMOUR RODS AND EARTH CONNECTIONS**					
2.7.1	Tension By-Pass (non-joint) set		set	13		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. I: Plant and Mandatory Spare Parts Supplied from Abroad

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(USD)	(USD)
				1	2	3=1x2
2.7.2	Tension through set, double side, with connection to Joint Box set (including surplus OPGW length and all fittings and accessories needed to guide the OPGW to the joint box)		set	1		
2.7.3	Tension set, single side, with connection to Joint Box set (including surplus OPGW length and all fittings and accessories needed to guide the OPGW to the joint box)		set	4		
2.8	**EARTHWIRE SETS FOR 93-A20SA COMPLETE WITH ALL ACCESSORIES**					
2.8.1	Tension Set		set	6		
	SUBTOTAL INSULATOR STRINGS, EARTHWIRE SETS, OPGW SETS					
2.9	**TOWER EARTHING**					
2.9.1	Basic earthing system		per tower	4		
2.9.2	Additional earthing system		per tower	2		
2.9.3	Extension of additional earthing system		per tower	0		
	SUBTOTAL TOWER EARTHING					
2.10	**FOUNDATIONS INCLUDING STUBS, CLEATS, SETTING AND EXTENDED CHIMNEY WHERE REQUIRED (As a minimum, 20% of tower stubs shall be supplied 1.0 m longer, extended, from the standard length to accomodate down-hill located chimney extensions)**					
2.10.1	**Foundations for Multi Circuit Angle Tension Tower Type 6T**					
2.10.1.1	Soil type 1		per tower	0		
2.10.1.2	Soil type 2 (dry)		per tower	0		
2.10.1.3	Soil type 2 (in presence of sub-soil water)		per tower	0		
2.10.1.4	Soil type 3 (dry)		per tower	3		
2.10.1.5	Soil type 3 (in presence of sub-soil water)		per tower	1		
2.10.1.6	Soil type 3 (wet black cotton)		per tower	0		
2.10.1.7	Soil type 4		per tower	0		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. I: Plant and Mandatory Spare Parts Supplied from Abroad

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(USD)	(USD)
				1	2	3=1x2
2.10.1.8	Piled foundations (wet black cotton >3.5m deep or frustum angle <10°)		per tower	0		
	SUBTOTAL FOUNDATIONS					
	TOTAL INTERCONNECTION OF TANAHU - BHARATPUR 220 KV DOUBLE CIRCUIT LINE TO NEW DAMAULI S/S (LOOP IN - LOOP OUT)					
3	**INTERCONNECTION OF OLD DAMAULI - BHARATPUR 132 KV SINGLE CIRCUIT LINE TO NEW DAMAULI S/S (LOOP IN - LOOP OUT)**					
3.1.1	**Dead End (0°-45° Line/0°-45° Gantry) Tower Type DE**					
3.1.1.1	Basic tower -3 m		pcs	0		
3.1.1.2	Basic tower ±0 m		pcs	1		
3.1.1.3	Basic tower +3 m		pcs	2		
3.1.1.4	Basic tower +6 m		pcs	0		
3.1.1.5	Leg reduction -3.0 m		pcs	0		
3.1.1.6	Leg reduction -1.5 m		pcs	0		
3.1.1.7	Leg extensions ±0 m		pcs	8		
3.1.1.8	Leg extensions +1.5 m		pcs	4		
3.1.1.9	Leg extensions +3.0 m		pcs	0		
3.1.1.10	Leg extensions +4.5 m		pcs	0		
3.1.1.10	Leg extensions +6.0 m		pcs	0		
	SUBTOTAL STEEL TOWERS					
3.2	**PHASE CONDUCTORS, OPGW AND EARTHWIRE COMPLETE WITH REPAIR SLEEVES AND JOINTS**					
3.2.1	ACSR Wolf phase conductor (two circuits, 3 phases, one conductor per phase, 2x3x1) including extra length for sags, joints, jumpers, downleads and downdroppers		route km	0.45		
3.2.2	ACSR Wolf phase conductor (one circuit, 3 phases, one conductor per phase, 1x3x1) including extra length for sags, joints, jumpers, downleads and downdroppers		route km	0.55		
3.2.3	96 fibres OPGW (equivalent to 66-A20SA) including extra length for sags, earthing connections, downleads to joint box, coils, etc.		route km	0.45		
3.2.4	Earthwire 66-A20SA type including extra length for sags, earthing connections, etc.		route km	1		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. I: Plant and Mandatory Spare Parts Supplied from Abroad

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(USD)	(USD)
				1	2	3=1x2
3.2.5	Joint Boxes along the line (3 OPGW entries) + coiling devices and attachment clamps to tower latticed steelwork for down leads, downloops		JB+set	1		
3.2.6	Joint Boxes on terminal Substation gantries (1 OPGW entry + 1 OPUG entry) + coiling devices and attachment clamps to tower latticed steelwork for down leads, down loops		JB+set	1		
3.3	**VIBRATION DAMPERS**					
3.3.1	Stockbridge Dampers for Phase conductor ACSR Wolf (including vibration damping study)		lot	1		
3.3.2	Stockbridge Dampers for Earthwire 66-A20SA (including vibration damping study)		lot	1		
3.3.2	Stockbridge Dampers for 96 fibres OPGW (equivalent to 66-A20SA) (including vibration damping study)		lot	1		
	SUBTOTAL PHASE CONDUCTORS, OPGW AND EARTHWIRE AND DAMPERS					
3.4	**INSULATOR STRINGS (HARDWARE AND INSULATORS), WITH COMPOSITE INSULATORS AND ASSOCIATED TENSION CLAMPS FOR PHASE CONDUCTOR**					
3.4.1	Double tension string for ACSR Wolf		set	30		
3.4.2	Jumpers insulator string for ACSR Wolf		set	9		
3.4.3	Low Duty Upright String for ACSR Wolf		set	6		
3.4.4	Low Duty Inverted String for ACSR Wolf		set	6		
3.5	**EARTHWIRE SETS FOR 93-A20SA COMPLETE WITH ALL ACCESSORIES**					
3.5.1	Tension Set		set	10		
3.6	**OPGW SETS FOR OPGW (EQUIVALENT TO 93-A20SA)COMPLETE WITH ALL ACCESSORIES INCLUDING ARMOUR RODS AND EARTH CONNECTIONS**					
3.6.1	Tension By-Pass (non-joint) set		set	2		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. I: Plant and Mandatory Spare Parts Supplied from Abroad

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(USD)	(USD)
				1	2	3=1x2
3.6.2	Tension set, single side, with connection to Joint Box set (including surplus OPGW length and all fittings and accessories needed to guide the OPGW to the joint box)		set	2		
	SUBTOTAL INSULATOR STRINGS, EARTHWIRE SETS, OPGW SETS					
3.7	**TOWER EARTHING**					
3.7.1	Basic earthing system		per tower	3		
3.7.2	Additional earthing system		per tower	2		
3.7.3	Extension of additional earthing system		per tower	1		
	SUBTOTAL TOWER EARTHING					
3.8	**FOUNDATIONS INCLUDING STUBS, CLEATS, SETTING AND EXTENDED CHIMNEY WHERE REQUIRED**					
3.8.1	**Foundations for Tower Type DE**					
3.8.1.1	Soil type 1		per tower	0		
3.8.1.2	Soil type 2 (dry)		per tower	0		
3.8.1.3	Soil type 2 (in presence of sub-soil water)		per tower	0		
3.8.1.4	Soil type 3 (dry)		per tower	2		
3.8.1.5	Soil type 3 (in presence of sub-soil water)		per tower	0		
3.8.1.6	Soil type 3 (wet black cotton)		per tower	0		
3.8.1.7	Soil type 4		per tower	0		
3.8.1.8	Piled foundations (wet black cotton >3.5m deep or frustum angle <10°)		per tower	1		
	SUBTOTAL FOUNDATIONS					
	TOTAL INTERCONNECTION OF OLD DAMAULI - BHARATPUR 132 KV SINGLE CIRCUIT LINE TO NEW DAMAULI S/S (LOOP IN - LOOP OUT)					

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. I: Plant and Mandatory Spare Parts Supplied from Abroad

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(USD)	(USD)
				1	2	3=1x2
	TOTAL OHL					
4	**MANDATORY SPARE PARTS**					
4.1	**TOWERS** **Each of the items comprises the supply of a complete tower standard height (0 body extension and 4 standard leg extensions) and 1 piece of each body extensions and leg extensions**					
4.1.1	Complete Standard Height Suspension tower type DA including all body extensions, leg extensions, stubs, cleats, step bolts, plates, safety device, bolts, nuts and accessories supplied adequately protected for long time storage		pcs	2		
4.1.2	Complete Standard Height Tension Tower Type DB (0°- 15°) including all body extensions, leg extensions, stubs, cleats, step bolts, plates, safety device, bolts, nuts and accessories supplied adequately protected for long time storage		pcs	2		
4.1.3	Complete Standard Height Tension Tower Type DC (15°- 30°) including all body extensions, leg extensions, stubs, cleats, step bolts, plates, safety device, bolts, nuts and accessories supplied adequately protected for long time storage		pcs	1		
4.1.4	Complete Standard Height Tension Tower Type DD (15°- 30°) including all body extensions, leg extensions, stubs, cleats, step bolts, plates, safety device, bolts, nuts and accessories supplied adequately protected for long time storage		pcs	1		
4.1.5	Complete Standard Height Tension Tower Type 6T including all body extensions, leg extensions, stubs, cleats, step bolts, plates, safety device, bolts, nuts and accessories supplied adequately protected for long time storage		pcs	1		
4.2	**PHASE CONDUCTOR, EARTHWIRE AND OPGW**					
4.2.1	ACSR MOOSE conductor supplied on steel drums and protection adequate for long time storage		km	36		
4.2.2	ACSR bison conductor supplied on steel drums and protection adequate for long time storage		km	12		
4.2.3	Earthwire 93-A20SA type supplied on steel drums and protection adequate for long time storage		km	3		
4.2.4	48 fibres OPGW (93-A20SA equivalent) on steel drums and protection adequate for long time storage		km	3.5		
4.2.5	Joint Boxes (2 entries OPGW)		pcs	4		
4.2.6	Joint Boxes (1 entry OPGW + 1 entry OPUG)		pcs	1		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. I: Plant and Mandatory Spare Parts Supplied from Abroad

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(USD)	(USD)
				1	2	3=1x2
4.3	**COMPOSITE INSULATORS**					
4.3.1	Composite insulator unit, suspension set (same as the insulator unit supplied under item 1.7.1)		pcs	18		
4.3.2	Composite insulator unit, tension string (same as the insulator unit supplied under item 1.7.3)		pcs	32		
4.4	**INSULATOR SET, WITH ASSOCIATED SUSPENSION AND TENSION CLAMPS FOR PHASE CONDUCTOR**					
4.4.1	Single Suspension "I" string for 2 x ACSR Moose		pcs	12		
4.4.2	Double suspension "I" string for 2 x ACSR Moose		pcs	3		
4.4.3	Double tension string for 2 x ACSR Moose		pcs	24		
4.4.4	Double tension string for 2 x ACSR Bison		pcs	16		
4.5	**EARTHWIRE SETS COMPLETE WITH ALL ACCESSORIES**					
4.5.1	93-A20SA Suspension Set		set	10		
4.5.2	93-A20SA Tension Set		set	8		
4.6	**OPGW SETS COMPLETE WITH ALL ACCESSORIES INCLUDING ARMOUR RODS AND EARTH CONNECTIONS**					
4.6.1	Suspension Set		set	10		
4.6.2	Tension Non-joint set		set	8		
4.6.3	Tension Joint set		set	6		
4.7	**DAMPERS**					
4.7.1	Stockbridge Dampers for Phase conductor ACSR Moose		pcs	30		
4.7.2	Stockbridge Dampers for Phase conductor ACSR Bison		pcs	20		
4.7.3	Stockbridge Dampers for Earthwire 93-A20SA		pcs	10		
4.7.4	Stockbridge Dampers for OPGW (similar to 93-A20SA)		pcs	10		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. I: Plant and Mandatory Spare Parts Supplied from Abroad

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(USD)	(USD)
				1	2	3=1x2
4.8	**REPAIR SLEEVE**					
4.8.1	For ACSR Moose		pcs	18		
4.8.2	For ACSR Bison		pcs	12		
4.8.3	For Earthwire 93-A20SA		pcs	8		
4.9	**MIDSPAN JOINTS**					
4.9.1	For ACSR Moose		pcs	18		
4.9.2	For ACSR Bison		pcs	4		
4.9.3	For Earthwire 93-A20SA		pcs	9		
4.10	**SPACER DAMPERS**					
4.10.1	For 2 x ACSR Moose conductor		pcs	50		
4.10.2	For 2 x ACSR Bison conductor		pcs	20		
4.11	**AVIAN PROTECTION**					
4.11.1	Bird repellent system (spiked steel strips)		per tower	6		
4.11.2	Bird flight diverters		route km	2		
	SUBTOTAL MANDATORY SPARE PARTS					
5	**TOOLS**					
5.1	Resistivity tester with ground resistance test facility		pcs	2		
5.2	Fusion splicer OPGW		pcs	2		
5.3	Compression dies for ACSR Moose conductor		set	2		
5.4	Compression dies for ACSR Bison conductor		set	2		
5.5	Compression dies for ACSR Wolf conductor		set	2		
5.6	Electronic magnetic galvanising thickness gauge		pcs	2		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. I: Plant and Mandatory Spare Parts Supplied from Abroad

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(USD)	(USD)
				1	2	3=1x2
	SUBTOTAL TOOLS					
6	OTHER NECESSARY MATERIAL AND EQUIPMENT					
6.1	Other necessary material and equipment (list to be provided separately by the Bidder)		lot	1		
	SUBTOTAL OTHER NECESSARY MATERIAL AND EQUIPMENT					
	TOTAL OHL					

TOTAL (to Schedule No. VI Grand Summary)

Name of Bidder:

Signature of Bidder:

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. II: Plant and Mandatory Spare Parts Supplied from within the Employer's Country

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(NPR)	(NPR)
				1	2	3=1x2
1	**LEKHNATH - DAMAULI 220 KV DOUBLE CIRCUIT LINE**					
1.1	**SELF-SUPPORTING STEEL LATTICE TOWERS COMPLETE WITH ALL BOLTS, NUTS, PLATES, LEG EXTENSIONS, SAFETY DEVICES, ANTI-CLIMBING DEVICES, STEP-BOLTS, ACCESSORIES AND EXTENSIONS**					
1.1.1	**Normal Suspension Tower Type DA**					
1.1.1.1	Basic tower -6 m		pcs	0		
1.1.1.2	Basic tower -3 m		pcs	1		
1.1.1.3	Basic tower ±0 m		pcs	22		
1.1.1.4	Basic tower +3 m		pcs	9		
1.1.1.5	Basic tower +6 m		pcs	4		
1.1.1.6	Basic tower +9 m		pcs	2		
1.1.1.7	Basic tower +12 m		pcs	0		
1.1.1.8	Leg reduction -3.0m		pcs	16		
1.1.1.9	Leg reduction -1.5m		pcs	22		
1.1.1.10	Leg extensions ±0 m		pcs	62		
1.1.1.11	Leg extensions +1.5 m		pcs	22		
1.1.1.12	Leg extensions +3.0 m		pcs	18		
1.1.1.13	Leg extensions +4.5 m		pcs	8		
1.1.1.14	Leg extensions +6.0 m		pcs	4		
1.1.2	**Light Angle (0° - 15°) Tension Tower Type DB**					
1.1.2.1	Basic tower -6 m		pcs	0		
1.1.2.2	Basic tower -3 m		pcs	5		
1.1.2.3	Basic tower ±0 m		pcs	30		
1.1.2.4	Basic tower +3 m		pcs	7		
1.1.2.5	Basic tower +6 m		pcs	6		
1.1.2.6	Basic tower +9 m		pcs	1		
1.1.2.7	Leg reduction -3.0 m		pcs	10		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. II: Plant and Mandatory Spare Parts Supplied from within the Employer's Country

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(NPR)	(NPR)
				1	2	3=1x2
1.1.2.8	Leg reduction -1.5 m		pcs	24		
1.1.2.9	Leg extensions ±0 m		pcs	84		
1.1.2.10	Leg extensions +1.5 m		pcs	36		
1.1.2.11	Leg extensions +3.0 m		pcs	22		
1.1.2.12	Leg extensions +4.5 m		pcs	16		
1.1.2.13	Leg extensions +6.0 m		pcs	4		
1.1.3	**Medium Angle (15° - 30°) Tension Tower Type DC**					
1.1.3.1	Basic tower -6 m		pcs	0		
1.1.3.2	Basic tower -3 m		pcs	1		
1.1.3.3	Basic tower ±0 m		pcs	17		
1.1.3.4	Basic tower +3 m		pcs	5		
1.1.3.5	Basic tower +6 m		pcs	5		
1.1.3.6	Basic tower +9 m		pcs	3		
1.1.3.6	Basic tower +12 m		pcs	1		
1.1.3.7	Leg reduction -3.0 m		pcs	10		
1.1.3.8	Leg reduction -1.5 m		pcs	24		
1.1.3.9	Leg extensions ±0 m		pcs	54		
1.1.3.10	Leg extensions +1.5 m		pcs	16		
1.1.3.11	Leg extensions +3.0 m		pcs	12		
1.1.3.12	Leg extensions +4.5 m		pcs	8		
1.1.3.13	Leg extensions +6.0 m		pcs	4		
1.1.4	**Heavy Angle (30°-60°) Tower Type DD**					
1.1.4.1	Basic tower -6 m		pcs	0		
1.1.4.2	Basic tower -3 m		pcs	2		
1.1.4.3	Basic tower ±0 m		pcs	10		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. II: Plant and Mandatory Spare Parts Supplied from within the Employer's Country

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(NPR)	(NPR)
				1	2	3=1x2
1.1.4.4	Basic tower +3 m		pcs	6		
1.1.4.5	Basic tower +6 m		pcs	1		
1.1.4.6	Basic tower +9 m		pcs	0		
1.1.4.7	Leg reduction -3.0 m		pcs	4		
1.1.4.8	Leg reduction -1.5 m		pcs	8		
1.1.4.9	Leg extensions ±0 m		pcs	24		
1.1.4.10	Leg extensions +1.5 m		pcs	14		
1.1.4.11	Leg extensions +3.0 m		pcs	18		
1.1.4.12	Leg extensions +4.5 m		pcs	4		
1.1.4.13	Leg extensions +6.0 m		pcs	4		
1.1.5	**Dead End (0°-45° Line/0°-45° Gantry) Tower Type DE**					
1.1.5.1	Basic tower -3 m		pcs	0		
1.1.5.2	Basic tower ±0 m		pcs	4		
1.1.5.3	Basic tower +3 m		pcs	0		
1.1.5.4	Basic tower +6 m		pcs	0		
1.1.5.5	Leg reduction -3.0 m		pcs	0		
1.1.5.6	Leg reduction -1.5 m		pcs	2		
1.1.5.7	Leg extensions ±0 m		pcs	12		
1.1.5.8	Leg extensions +1.5 m		pcs	2		
1.1.5.9	Leg extensions +3.0 m		pcs	0		
1.1.5.10	Leg extensions +4.5 m		pcs	0		
1.1.5.10	Leg extensions +6.0 m		pcs	0		
1.1.6	**Undercrossing Gantry Tower Type UCG**					
1.1.6.1	Basic tower ±0 m		pcs	1		
1.1.6.2	Leg extensions ±0 m		pcs	2		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. II: Plant and Mandatory Spare Parts Supplied from within the Employer's Country

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(NPR)	(NPR)
				1	2	3=1x2
1.1.7	**Multi Circuit Angle (0°-50°) Tension Tower Type 6T**					
1.1.7.1	Basic tower -6 m		pcs	0		
1.1.7.2	Basic tower -3 m		pcs	0		
1.1.7.3	Basic tower ±0 m		pcs	6		
1.1.7.4	Basic tower +3 m		pcs	2		
1.1.7.5	Basic tower +6 m		pcs	1		
1.1.7.6	Basic tower +9 m		pcs	0		
1.1.7.7	Leg reduction -3.0 m		pcs	0		
1.1.7.8	Leg reduction -1.5 m		pcs	4		
1.1.7.9	Leg extensions ±0 m		pcs	16		
1.1.7.10	Leg extensions +1.5 m		pcs	8		
1.1.7.11	Leg extensions +3.0 m		pcs	8		
1.1.7.12	Leg extensions +4.5 m		pcs	4		
1.1.7.12	Leg extensions +6.0 m		pcs	0		
	SUBTOTAL STEEL TOWERS					
1.2	**PHASE CONDUCTORS, EARTHWIRE AND OPGW CABLE COMPLETE WITH REPAIR SLEEVES AND JOINTS**					
1.2.1	ACSR Moose phase conductor (double circuit, 3 phases, two sub-conductors per phase, 2x3x2) including extra length for sags, joints, jumpers, downleads and downdroppers		route km	45		
1.2.2	Earthwire 93-A20SA type including extra length for sags, earthing connections, etc.		route km	45		
1.2.3	48 fibres OPGW (sag matching conductor) including extra length for sags, earthing connections, downleads to joint box, coils, etc.		route km	45		
1.2.4	Joint Boxes along the line (2 OPGW entries)+coiling devices and attachment clamps to tower latticed steelwork for down leads, downloops		JB+set	17		
1.2.5	Joint Boxes on terminal Substation gantries (1 OPGW entry+1 OPUG entry)+coiling devices and attachment clamps to tower latticed steelwork for down leads, down loops		JB+set	3		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. II: Plant and Mandatory Spare Parts Supplied from within the Employer's Country

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(NPR)	(NPR)
				1	2	3=1x2
1.3	**SPACER DAMPERS**					
1.3.1	Spacer Dampers for Phase conductor 2 x ACSR Moose (including vibration damping study)		lot	1		
1.4	**VIBRATION DAMPERS**					
1.4.1	Stockbridge Dampers for Phase conductor Twin ACSR Moose (including vibration damping study)		lot	1		
1.4.2	Stockbridge Dampers for Earthwire 93-A20SA (including vibration damping study)		lot	1		
1.4.3	Stockbridge Dampers for OPGW (equivalent to 93-A20SA) (including vibration damping study)		lot	1		
1.5	**RIGID SPACERS FOR PHASE CONDUCTOR JUMPER LOOPS**					
1.5.1	Rigid Spacers for Twin ACSR Moose		lot	1		
1.6	**AVIAN PROTECTION & AIRCRAFT WARNING SYSTEM**					
1.6.1	Bird repellent system (spiked steel strips)		per tower	44		
1.6.2	Bird flight diverters		route km	18.5		
1.6.3	Aircraft marker balls (wire mounted)		route km	5		
1.6.4	Aircraft warning lights (wire mounted)		route km	5		
1.6.5	Aircraft warning lights (tower mounted)		per tower	20		
1.6.6	Tower painting		pcs	20		
	SUBTOTAL PHASE CONDUCTORS, EARTHWIRE, OPGW , SPACERS, DAMPERS, AVIAN PROTECTION & AIRCRAFT WARNING SYSTEM					
1.7	**INSULATOR STRINGS (HARDWARE AND INSULATOR UNIT), WITH COMPOSITE INSULATORS AND ASSOCIATED SUSPENSION AND TENSION CLAMPS FOR PHASE CONDUCTOR**					
1.7.1	Single Suspension "I" string for 2 x ACSR Moose		set	160		
1.7.2	Double suspension "I" string for 2 x ACSR Moose		set	68		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. II: Plant and Mandatory Spare Parts Supplied from within the Employer's Country

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(NPR)	(NPR)
				1	2	3=1x2
1.7.3	Double tension string for 2 x ACSR Moose		set	1332		
1.7.4	Jumpers insulator string for 2 x ACSR Moose		set	180		
1.7.5	Low Duty Upright String for 2 x ACSR Moose		set	18		
1.7.6	Low Duty Inverted String for 2 x ACSR Moose		set	12		
1.8	**EARTHWIRE SETS FOR 93-A20SA COMPLETE WITH ALL ACCESSORIES**					
1.8.1	Suspension Set		set	38		
1.8.2	Tension Set		set	105		
1.9	**OPGW SETS FOR OPGW (EQUIVALENT TO 93-A20SA) COMPLETE WITH ALL ACCESSORIES INCLUDING ARMOUR RODS AND EARTH CONNECTIONS**					
1.9.1	Suspension Set		set	38		
1.9.2	Tension By-Pass (non-joint) set		set	104		
1.9.3	Tension through set, double side, with connection to Joint Box set (including surplus OPGW length and all fittings and accessories needed to guide the OPGW to the joint box)		set	9		
1.9.4	Tension set, single side, with connection to Joint Box set (including surplus OPGW length and all fittings and accessories needed to guide the OPGW to the joint box)		set	4		
	SUBTOTAL INSULATOR STRINGS, EARTHWIRE SETS, OPGW SETS					
1.10	**TOWER EARTHING**					
1.10.1	Basic earthing system		per tower	152		
1.10.2	Additional earthing system		per tower	54		
1.10.3	Extension of additional earthing system		per tower	36		
	SUBTOTAL TOWER EARTHING					

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. II: Plant and Mandatory Spare Parts Supplied from within the Employer's Country

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(NPR)	(NPR)
				1	2	3=1x2
1.11	**FOUNDATIONS INCLUDING STUBS, CLEATS, SETTING AND EXTENDED CHIMNEY WHERE REQUIRED (As a minimum, 20% of tower stubs shall be supplied 1.0 m longer, extended, from the standard length to accomodate down-hill located chimney extensions)**					
1.11.1	**Foundations for Tower Type DA**					
1.11.1.1	Soil type 1		per tower	1		
1.11.1.2	Soil type 2 (dry)		per tower	3		
1.11.1.3	Soil type 2 (in presence of sub-soil water)		per tower	1		
1.11.1.4	Soil type 3 (dry)		per tower	11		
1.11.1.5	Soil type 3 (in presence of sub-soil water)		per tower	10		
1.11.1.6	Soil type 3 (wet black cotton)		per tower	4		
1.11.1.7	Soil type 4		per tower	4		
1.11.1.8	Piled foundations (wet black cotton >3.5m deep or frustum angle <10°)		per tower	4		
1.11.2	**Foundations for Tower Type DB**					
1.11.2.1	Soil type 1		per tower	2		
1.11.2.2	Soil type 2 (dry)		per tower	4		
1.11.2.3	Soil type 2 (in presence of sub-soil water)		per tower	2		
1.11.2.4	Soil type 3 (dry)		per tower	15		
1.11.2.5	Soil type 3 (in presence of sub-soil water)		per tower	14		
1.11.2.6	Soil type 3 (wet black cotton)		per tower	4		
1.11.2.7	Soil type 4		per tower	3		
1.11.2.8	Piled foundations (wet black cotton >3.5m deep or frustum angle <10°)		per tower	5		
1.11.3	**Foundations for Tower Type DC**					
1.11.3.1	Soil type 1		per tower	0		
1.11.3.2	Soil type 2 (dry)		per tower	1		
1.11.3.3	Soil type 2 (in presence of sub-soil water)		per tower	1		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. II: Plant and Mandatory Spare Parts Supplied from within the Employer's Country

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(NPR)	(NPR)
				1	2	3=1x2
1.11.3.4	Soil type 3 (dry)		per tower	12		
1.11.3.5	Soil type 3 (in presence of sub-soil water)		per tower	8		
1.11.3.6	Soil type 3 (wet black cotton)		per tower	3		
1.11.3.7	Soil type 4		per tower	2		
1.11.3.8	Piled foundations (wet black cotton >3.5m deep or frustum angle <10°)		per tower	4		
1.11.4	**Foundations for Tower Type DD**					
1.11.4.1	Soil type 1		per tower	0		
1.11.4.2	Soil type 2 (dry)		per tower	2		
1.11.4.3	Soil type 2 (in presence of sub-soil water)		per tower	1		
1.11.4.4	Soil type 3 (dry)		per tower	6		
1.11.4.5	Soil type 3 (in presence of sub-soil water)		per tower	4		
1.11.4.6	Soil type 3 (wet black cotton)		per tower	1		
1.11.4.7	Soil type 4		per tower	1		
1.11.4.8	Piled foundations (wet black cotton >3.5m deep or frustum angle <10°)		per tower	3		
1.11.5	**Foundations for Tower Type DE**					
1.11.5.1	Soil type 1		per tower	0		
1.11.5.2	Soil type 2 (dry)		per tower	0		
1.11.5.3	Soil type 2 (in presence of sub-soil water)		per tower	0		
1.11.5.4	Soil type 3 (dry)		per tower	0		
1.11.5.5	Soil type 3 (in presence of sub-soil water)		per tower	1		
1.11.5.6	Soil type 3 (wet black cotton)		per tower	0		
1.11.5.7	Soil type 4		per tower	0		
1.11.5.8	Piled foundations (wet black cotton >3.5m deep or frustum angle <10°)		per tower	3		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. II: Plant and Mandatory Spare Parts Supplied from within the Employer's Country

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(NPR)	(NPR)
				1	2	3=1x2
1.11.6	**Foundations for Tower Type UCG**					
1.11.6.1	Soil type 1		per tower	0		
1.11.6.2	Soil type 2 (dry)		per tower	0		
1.11.6.3	Soil type 2 (in presence of sub-soil water)		per tower	0		
1.11.6.4	Soil type 3 (dry)		per tower	1		
1.11.6.5	Soil type 3 (in presence of sub-soil water)		per tower	0		
1.11.6.6	Soil type 3 (wet black cotton)		per tower	0		
1.11.6.7	Soil type 4		per tower	0		
1.11.6.8	Piled foundations (wet black cotton >3.5m deep or frustum angle <10°)		per tower	0		
1.11.7	**Foundations for Multi Circuit Angle Tension Tower Type 6T**					
1.11.7.1	Soil type 1		per tower	0		
1.11.7.2	Soil type 2 (dry)		per tower	1		
1.11.7.3	Soil type 2 (in presence of sub-soil water)		per tower	1		
1.11.7.4	Soil type 3 (dry)		per tower	4		
1.11.7.5	Soil type 3 (in presence of sub-soil water)		per tower	2		
1.11.7.6	Soil type 3 (wet black cotton)		per tower	0		
1.11.7.7	Soil type 4		per tower	0		
1.11.7.8	Piled foundations (wet black cotton >3.5m deep or frustum angle <10°)		per tower	0		
	SUBTOTAL FOUNDATIONS					
	TOTAL LEKHNATH - DAMAULI 220 KV DOUBLE CIRCUIT LINE					

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. II: Plant and Mandatory Spare Parts Supplied from within the Employer's Country

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(NPR)	(NPR)
				1	2	3=1x2
2	**INTERCONNECTION OF TANAHU - BHARATPUR 220 KV DOUBLE CIRCUIT LINE TO NEW DAMAULI S/S (LOOP IN - LOOP OUT)**					
2.1	**SELF-SUPPORTING STEEL LATTICE TOWERS COMPLETE WITH ALL BOLTS, NUTS, PLATES, LEG EXTENSIONS, SAFETY DEVICES, ANTI-CLIMBING DEVICES, STEP-BOLTS, ACCESSORIES AND EXTENSIONS**					
2.1.1	**Multi Circuit Angle (0°-50°) Tension Tower Type 6T**					
2.1.1.1	Basic tower -6 m		pcs	0		
2.1.1.2	Basic tower -3 m		pcs	0		
2.1.1.3	Basic tower ±0 m		pcs	3		
2.1.1.4	Basic tower +3 m		pcs	1		
2.1.1.5	Basic tower +6 m		pcs	0		
2.1.1.6	Basic tower +9 m		pcs	0		
2.1.1.7	Leg reduction -3.0 m		pcs	0		
2.1.1.8	Leg reduction -1.5 m		pcs	2		
2.1.1.9	Leg extensions ±0 m		pcs	8		
2.1.1.10	Leg extensions +1.5 m		pcs	4		
2.1.1.11	Leg extensions +3.0 m		pcs	2		
2.1.1.12	Leg extensions +4.5 m		pcs	0		
2.1.1.13	Leg extensions +6.0 m		pcs	0		
	SUBTOTAL STEEL TOWERS					
2.2	**PHASE CONDUCTORS EARTHWIRE AND OPGW CABLE COMPLETE WITH REPAIR SLEEVES AND JOINTS**					
2.2.1	ACSR Bison phase conductor (four circuits, 3 phases, two sub-conductors per phase, 4x3x2) including extra length for sags, joints, jumpers, downleads and downdroppers		route km	3		
2.2.2	48 fibres OPGW (equivalent to 93-A20SA) including extra length for sags, earthing connections, downleads to joint box, coils, etc.		route km	3		
2.2.3	Earthwire 93-A20SA type including extra length for sags, earthing connections, etc.		route km	1.0		
2.2.4	Joint Boxes along the line (2 OPGW entries) + coiling devices and attachment clamps to tower latticed steelwork for down leads, downloops		JB+set	6		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. II: Plant and Mandatory Spare Parts Supplied from within the Employer's Country

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(NPR)	(NPR)
				1	2	3=1x2
2.2.5	Joint Boxes on terminal Substation gantries (1 OPGW entry + 1 OPUG entry) + coiling devices and attachment clamps to tower latticed steelwork for down leads, downloops		JB+set	1		
2.3	**SPACER DAMPERS**					
2.3.1	Spacer Dampers for Phase conductor 2 x ACSR Bison (including vibration damping study)		lot	1		
2.4	**VIBRATION DAMPERS**					
2.4.1	Stockbridge Dampers for Phase conductor Twin ACSR Bison (including vibration damping study)		lot	1		
2.4.2	Stockbridge Dampers for OPGW (equivalent to 93-A20SA) (including vibration damping study)		lot	1		
2.4.3	Stockbridge Dampers for Earthwire 93-A20SA (including vibration damping study)		lot	1		
2.5	**RIGID SPACERS FOR PHASE CONDUCTOR JUMPER LOOPS**					
2.5.1	Rigid Spacers for Twin ACSR Bison		lot	1		
	SUBTOTAL PHASE CONDUCTORS, OPGW , SPACERS AND DAMPERS					
2.6	**INSULATOR STRINGS (HARDWARE AND INSULATORS), WITH COMPOSITE INSULATORS AND ASSOCIATED TENSION CLAMPS FOR PHASE CONDUCTOR**					
2.6.1	Double tension string for 2 x ACSR Bison		set	324		
2.6.2	Jumpers insulator string for 2 x ACSR Bison		set	66		
2.6.3	Low Duty Upright String for 2 x ACSR Bison		set	12		
2.6.4	Low Duty Inverted String for 2 x ACSR Bison		set	12		
2.7	**OPGW SETS FOR OPGW (EQUIVALENT TO 93-A20SA) COMPLETE WITH ALL ACCESSORIES INCLUDING ARMOUR RODS AND EARTH CONNECTIONS**					
2.7.1	Tension By-Pass (non-joint) set		set	13		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. II: Plant and Mandatory Spare Parts Supplied from within the Employer's Country

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(NPR)	(NPR)
				1	2	3=1x2
2.7.2	Tension through set, double side, with connection to Joint Box set (including surplus OPGW length and all fittings and accessories needed to guide the OPGW to the joint box)		set	1		
2.7.3	Tension set, single side, with connection to Joint Box set (including surplus OPGW length and all fittings and accessories needed to guide the OPGW to the joint box)		set	4		
2.8	**EARTHWIRE SETS FOR 93-A20SA COMPLETE WITH ALL ACCESSORIES**					
2.8.1	Tension Set		set	6		
	SUBTOTAL INSULATOR STRINGS, EARTHWIRE SETS, OPGW SETS					
2.9	**TOWER EARTHING**					
2.9.1	Basic earthing system		per tower	4		
2.9.2	Additional earthing system		per tower	2		
2.9.3	Extension of additional earthing system		per tower	0		
	SUBTOTAL TOWER EARTHING					
2.10	**FOUNDATIONS INCLUDING STUBS, CLEATS, SETTING AND EXTENDED CHIMNEY WHERE REQUIRED (As a minimum, 20% of tower stubs shall be supplied 1.0 m longer, extended, from the standard length to accomodate down-hill located chimney extensions)**					
2.10.1	**Foundations for Multi Circuit Angle Tension Tower Type 6T**					
2.10.1.1	Soil type 1		per tower	0		
2.10.1.2	Soil type 2 (dry)		per tower	0		
2.10.1.3	Soil type 2 (in presence of sub-soil water)		per tower	0		
2.10.1.4	Soil type 3 (dry)		per tower	3		
2.10.1.5	Soil type 3 (in presence of sub-soil water)		per tower	1		
2.10.1.6	Soil type 3 (wet black cotton)		per tower	0		
2.10.1.7	Soil type 4		per tower	0		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. II: Plant and Mandatory Spare Parts Supplied from within the Employer's Country

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(NPR)	(NPR)
				1	2	3=1x2
2.10.1.8	Piled foundations (wet black cotton >3.5m deep or frustum angle <10°)		per tower	0		
	SUBTOTAL FOUNDATIONS					
	TOTAL INTERCONNECTION OF TANAHU - BHARATPUR 220 KV DOUBLE CIRCUIT LINE TO NEW DAMAULI S/S (LOOP IN - LOOP OUT)					
3	**INTERCONNECTION OF OLD DAMAULI - BHARATPUR 132 KV SINGLE CIRCUIT LINE TO NEW DAMAULI S/S (LOOP IN - LOOP OUT)**					
3.1.1	**Dead End (0°-45° Line/0°-45° Gantry) Tower Type DE**					
3.1.1.1	Basic tower -3 m		pcs	0		
3.1.1.2	Basic tower ±0 m		pcs	1		
3.1.1.3	Basic tower +3 m		pcs	2		
3.1.1.4	Basic tower +6 m		pcs	0		
3.1.1.5	Leg reduction -3.0 m		pcs	0		
3.1.1.6	Leg reduction -1.5 m		pcs	0		
3.1.1.7	Leg extensions ±0 m		pcs	8		
3.1.1.8	Leg extensions +1.5 m		pcs	4		
3.1.1.9	Leg extensions +3.0 m		pcs	0		
3.1.1.10	Leg extensions +4.5 m		pcs	0		
3.1.1.10	Leg extensions +6.0 m		pcs	0		
	SUBTOTAL STEEL TOWERS					
3.2	**PHASE CONDUCTORS, OPGW AND EARTHWIRE COMPLETE WITH REPAIR SLEEVES AND JOINTS**					
3.2.1	ACSR Wolf phase conductor (two circuits, 3 phases, one conductor per phase, 2x3x1) including extra length for sags, joints, jumpers, downleads and downdroppers		route km	0.45		
3.2.2	ACSR Wolf phase conductor (one circuit, 3 phases, one conductor per phase, 1x3x1) including extra length for sags, joints, jumpers, downleads and downdroppers		route km	0.55		
3.2.3	96 fibres OPGW (equivalent to 66-A20SA) including extra length for sags, earthing connections, downleads to joint box, coils, etc.		route km	0.45		
3.2.4	Earthwire 66-A20SA type including extra length for sags, earthing connections, etc.		route km	1		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. II: Plant and Mandatory Spare Parts Supplied from within the Employer's Country

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(NPR)	(NPR)
				1	2	3=1x2
3.2.5	Joint Boxes along the line (3 OPGW entries) + coiling devices and attachment clamps to tower latticed steelwork for down leads, downloops		JB+set	1		
3.2.6	Joint Boxes on terminal Substation gantries (1 OPGW entry + 1 OPUG entry) + coiling devices and attachment clamps to tower latticed steelwork for down leads, down loops		JB+set	1		
3.3	**VIBRATION DAMPERS**					
3.3.1	Stockbridge Dampers for Phase conductor ACSR Wolf (including vibration damping study)		lot	1		
3.3.2	Stockbridge Dampers for Earthwire 66-A20SA (including vibration damping study)		lot	1		
3.3.2	Stockbridge Dampers for 96 fibres OPGW (equivalent to 66-A20SA) (including vibration damping study)		lot	1		
	SUBTOTAL PHASE CONDUCTORS, OPGW AND EARTHWIRE AND DAMPERS					
3.4	**INSULATOR STRINGS (HARDWARE AND INSULATORS), WITH COMPOSITE INSULATORS AND ASSOCIATED TENSION CLAMPS FOR PHASE CONDUCTOR**					
3.4.1	Double tension string for ACSR Wolf		set	30		
3.4.2	Jumpers insulator string for ACSR Wolf		set	9		
3.4.3	Low Duty Upright String for ACSR Wolf		set	6		
3.4.4	Low Duty Inverted String for ACSR Wolf		set	6		
3.5	**EARTHWIRE SETS FOR 93-A20SA COMPLETE WITH ALL ACCESSORIES**					
3.5.1	Tension Set		set	10		
3.6	**OPGW SETS FOR OPGW (EQUIVALENT TO 93-A20SA)COMPLETE WITH ALL ACCESSORIES INCLUDING ARMOUR RODS AND EARTH CONNECTIONS**					
3.6.1	Tension By-Pass (non-joint) set		set	2		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. II: Plant and Mandatory Spare Parts Supplied from within the Employer's Country

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(NPR)	(NPR)
				1	2	3=1x2
3.6.2	Tension set, single side, with connection to Joint Box set (including surplus OPGW length and all fittings and accessories needed to guide the OPGW to the joint box)		set	2		
	SUBTOTAL INSULATOR STRINGS, EARTHWIRE SETS, OPGW SETS					
3.7	**TOWER EARTHING**					
3.7.1	Basic earthing system		per tower	3		
3.7.2	Additional earthing system		per tower	2		
3.7.3	Extension of additional earthing system		per tower	1		
	SUBTOTAL TOWER EARTHING					
3.8	**FOUNDATIONS INCLUDING STUBS, CLEATS, SETTING AND EXTENDED CHIMNEY WHERE REQUIRED**					
3.8.1	**Foundations for Tower Type DE**					
3.8.1.1	Soil type 1		per tower	0		
3.8.1.2	Soil type 2 (dry)		per tower	0		
3.8.1.3	Soil type 2 (in presence of sub-soil water)		per tower	0		
3.8.1.4	Soil type 3 (dry)		per tower	2		
3.8.1.5	Soil type 3 (in presence of sub-soil water)		per tower	0		
3.8.1.6	Soil type 3 (wet black cotton)		per tower	0		
3.8.1.7	Soil type 4		per tower	0		
3.8.1.8	Piled foundations (wet black cotton >3.5m deep or frustum angle <10°)		per tower	1		
	SUBTOTAL FOUNDATIONS					
	TOTAL INTERCONNECTION OF OLD DAMAULI - BHARATPUR 132 KV SINGLE CIRCUIT LINE TO NEW DAMAULI S/S (LOOP IN - LOOP OUT)					

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. II: Plant and Mandatory Spare Parts Supplied from within the Employer's Country

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(NPR)	(NPR)
				1	2	3=1x2
	TOTAL OHL					
4	**MANDATORY SPARE PARTS**					
4.1	**TOWERS** **Each of the item comprise the supply of a complete tower standard height (0 body extension and 4 standard leg extensions) and 1 piece of each body extensions and leg extensions**					
4.1.1	Complete Standard Height Suspension tower type DA including all body extensions, leg extensions, stubs, cleats, step bolts, plates, safety device, bolts, nuts and accessories supplied adequately protected for long time storage		pcs	2		
4.1.2	Complete Standard Height Tension Tower Type DB (0°- 15°) including all body extensions, leg extensions, stubs, cleats, step bolts, plates, safety device, bolts, nuts and accessories supplied adequately protected for long time storage		pcs	2		
4.1.3	Complete Standard Height Tension Tower Type DC (15°- 30°) including all body extensions, leg extensions, stubs, cleats, step bolts, plates, safety device, bolts, nuts and accessories supplied adequately protected for long time storage		pcs	1		
4.1.4	Complete Standard Height Tension Tower Type DD (15°- 30°) including all body extensions, leg extensions, stubs, cleats, step bolts, plates, safety device, bolts, nuts and accessories supplied adequately protected for long time storage		pcs	1		
4.1.5	Complete Standard Height Tension Tower Type 6T including all body extensions, leg extensions, stubs, cleats, step bolts, plates, safety device, bolts, nuts and accessories supplied adequately protected for long time storage		pcs	1		
4.2	**PHASE CONDUCTOR, EARTHWIRE AND OPGW**					
4.2.1	ACSR MOOSE conductor supplied on steel drums and protection adequate for long time storage		km	36		
4.2.2	ACSR bison conductor supplied on steel drums and protection adequate for long time storage		km	12		
4.2.3	Earthwire 93-A20SA type supplied on steel drums and protection adequate for long time storage		km	3		
4.2.4	48 fibres OPGW (93-A20SA equivalent) on steel drums and protection adequate for long time storage		km	3.5		
4.2.5	Joint Boxes (2 entries OPGW)		pcs	4		
4.2.6	Joint Boxes (1 entry OPGW + 1 entry OPUG)		pcs	1		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. II: Plant and Mandatory Spare Parts Supplied from within the Employer's Country

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(NPR)	(NPR)
				1	2	3=1x2
4.3	**COMPOSITE INSULATORS**					
4.3.1	Composite insulator unit, suspension set (same as the insulator unit supplied under tem 1.7.1)		pcs	18		
4.3.2	Composite insulator unit, tension string (same as the insulator unit supplied under tem 1.7.3)		pcs	32		
4.4	**INSULATOR SET, WITH ASSOCIATED SUSPENSION AND TENSION CLAMPS FOR PHASE CONDUCTOR**					
4.4.1	Single Suspension "I" string for 2 x ACSR Moose		pcs	12		
4.4.2	Double suspension "I" string for 2 x ACSR Moose		pcs	3		
4.4.3	Double tension string for 2 x ACSR Moose		pcs	24		
4.4.4	Double tension string for 2 x ACSR Bison		pcs	16		
4.5	**EARTHWIRE SETS COMPLETE WITH ALL ACCESSORIES**					
4.5.1	93-A20SA Suspension Set		set	10		
4.5.2	93-A20SA Tension Set		set	8		
4.6	**OPGW SETS COMPLETE WITH ALL ACCESSORIES INCLUDING ARMOUR RODS AND EARTH CONNECTIONS**					
4.6.1	Suspension Set		set	10		
4.6.2	Tension Non-joint set		set	8		
4.6.3	Tension Joint set		set	6		
4.7	**DAMPERS**					
4.7.1	Stockbridge Dampers for Phase conductor ACSR Moose		pcs	30		
4.7.2	Stockbridge Dampers for Phase conductor ACSR Bison		pcs	20		
4.7.3	Stockbridge Dampers for Earthwire 93-A20SA		pcs	10		
4.7.4	Stockbridge Dampers for OPGW (similar to 93-A20SA)		pcs	10		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. II: Plant and Mandatory Spare Parts Supplied from within the Employer's Country

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(NPR)	(NPR)
				1	2	3=1x2
4.8	**REPAIR SLEEVE**					
4.8.1	For ACSR Moose		pcs	18		
4.8.2	For ACSR Bison		pcs	12		
4.8.3	For Earthwire 93-A20SA		pcs	8		
4.9	**MIDSPAN JOINTS**					
4.9.1	For ACSR Moose		pcs	18		
4.9.2	For ACSR Bison		pcs	4		
4.9.3	For Earthwire 93-A20SA		pcs	9		
4.10	**SPACER DAMPERS**					
4.10.1	For 2 x ACSR Moose conductor		pcs	50		
4.10.2	For 2 x ACSR Bison conductor		pcs	20		
4.11	**AVIAN PROTECTION**					
4.11.1	Bird repellent system (spiked steel strips)		per tower	6		
4.11.2	Bird flight diverters		route km	2		
	SUBTOTAL MANDATORY SPARE PARTS					
5	**TOOLS**					
5.1	Resistivity tester with ground resistance test facility		pcs	2		
5.2	Fusion splicer OPGW		pcs	2		
5.3	Compression dies for ACSR Moose conductor		set	2		
5.4	Compression dies for ACSR Bison conductor		set	2		
5.5	Compression dies for ACSR Wolf conductor		set	2		
5.6	Electronic magnetic galvanising thickness gauge		pcs	2		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. II: Plant and Mandatory Spare Parts Supplied from within the Employer's Country

Item	Description	Code	Unit	Quantity	Unit Price	Total Price
		(Country of origin)			CIP	CIP
					(NPR)	(NPR)
				1	2	3=1x2
	SUBTOTAL TOOLS					
6	OTHER NECESSARY MATERIAL AND EQUIPMENT					
6.1	Other necessary material and equipment (list to be provided separately by the Bidder)		lot	1		
	SUBTOTAL OTHER NECESSARY MATERIAL AND EQUIPMENT					
	TOTAL OHL					

TOTAL (to Schedule No. VI Grand Summary)

Name of Bidder:

Signature of Bidder:

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. III: Design Services

Item	Description	Unit	Quantity	Unit Price	Total Price
				CIP	CIP
				(USD)	(USD)
		1	2	3	4=2x3
1.1	**LINE DESIGN**				
1.1.1	Detailed transmission line design including plan and profiles; conductor, earthwire and OPGW sag-tension calculations, tower spotting and structural verification of the towers, design of earthing, design of towers locations protection and slope stabilization measures (where applicable)	lot	1		
1.1.2	Geotechnical investigations: execution of boreholes	Per tower location	36		
1.1.3	Geotechnical investigations: execution of trial pits	Per tower location	56		
1.1.4	Geotechnical investigations: execution of penetration tests (CPT/SPT)	Per tower location	92		
1.1.5	Geotechnical investigations: execution of penetration tests (DPL)	Per tower location	58		
1.1.6	Geotechnical Investigations (excluding field execution of boreholes, trial pits and penetration tests) including: taking samples, laboratory testing and interpretative reports in accordance with requirements specified in document General Technical Requirements. Also includes the hydrological study described in Sub-Section VII-1	lot	1		
1.1.5	Soil resistivity tests (one per tower)	Per tower location	150		
1.2	**SELF-SUPPORTING STEEL LATTICE TOWERS DESIGN COMPLETE WITH ALL BOLTS, NUTS, PLATES, LEG EXTENSIONS, SAFETY DEVICES, ANTI-CLIMBING DEVICES, STEP-BOLTS, ACCESSORIES AND EXTENSIONS**				
1.2.1	Normal Suspension Tower Type DA	lot	1		
1.2.2	Light Angle (0° - 15°) Tension Tower Type DB	lot	1		
1.2.3	Medium Angle (15° - 30°) Tension Tower Type DC	lot	1		
1.2.4	Heavy Angle (30°-60°) Tension Tower Type DD	lot	1		
1.2.5	Dead End (0°-45°)/(0°-45°)Tower Type DE	lot	1		
1.2.6	Undercrossing Gantry Tower Type UCG	lot	1		
1.2.6	Six Circuit Angle (0°-50°) Tension Tower Type 6T	lot	1		
1.3	**FOUNDATIONS DESIGN INCLUDING STUBS, CLEATS AND SETTING**				
1.3.1	Foundations for Tower Type DA (for all soil types)	lot	1		
1.3.2	Foundations for Tower Type DB (for all soil types)	lot	1		
1.3.3	Foundations for Tower Type DC (for all soil types)	lot	1		
1.3.4	Foundations for Tower Type DD (for all soil types)	lot	1		
1.3.5	Foundations for Tower Type DE (for all soil types)	lot	1		
1.3.6	Foundations for Tower Type UCG (for all soil types)	lot	1		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. III: Design Services

Item	Description	Unit	Quantity	Unit Price	Total Price
				CIP	CIP
				(USD)	(USD)
		1	2	3	4=2x3
1.3.7	Foundations for Tower Type 6T (for all soil types)	lot	1		
1.4	**DESIGN OF EARTHING SYSTEM**	**Lot**	1		
	SUBTOTAL DESIGN				
2.0	**TYPE TESTS**				
2.1	**Towers Type tests (including tower supply, erection and dismantling. Tower test loads shall be design loads multiplied by partial material factor)**				
2.1.1	Type test to destruction of Normal Suspension Tower Type DA	lot	1		
2.1.2	Ultimate loading test of Tension Tower Type DB	lot	1		
2.1.3	Ultimate loading test of Tension Tower Type DC	lot	1		
2.1.4	Ultimate loading test of Tension Tower Type DD	lot	1		
2.1.5	Ultimate loading test of Tension Tower Type 6T	lot	1		
2.2	**Insulator Strings Type Tests (for complete string including insulators and associated hardware)**				
2.2.1	220 kV Single Suspension String for Twin ACSR Moose	lot	1		
2.2.2	220 kV Double Suspension String for Twin ACSR Moose	lot	1		
2.2.3	220 kV Double Tension String for Twin ACSR Moose	lot	1		
2.3	**OPGW Type Tests *(Tests description according to Data Sheets)***				
2.3.1	OPGW 48 FIBRES (EQUIVALENT TO 93-A20SA)	lot	1		
	SUBTOTAL TYPE TEST				
3.1	**TRAINING OF EMPLOYER'S STAFF Overseas professional training (including costs for air tickets, accommodation and daily allowance)**				
3.1.1	Latticed steel towers and Foundation design (2 persons, 10 working days)	lot	1		
3.1.2	PLS-CADD (Standard + FE edition) license registered to the Employer	pcs	1		

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S

Schedule No. III: Design Services

Item	Description	Unit	Quantity	Unit Price	Total Price
				CIP	CIP
				(USD)	(USD)
		1	2	3	4=2x3
3.1.3	PLS Tower license registered to the Employer	pcs	1		
	SUBTOTAL TRAINING				
	TOTAL (to Schedule No. VI Grand Summary)				

Name of Bidder: _____

Signature of Bidder: _____

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S
Kreditanstalt für Wiederaufbau (KfW)
NEPAL ELECTRICITY AUTHORITY (NEA)
Schedule No. IV: Installation and Other Services

Item	Description	Unit	Quantity	Unit Price	Total Price
				CIP	CIP
				(NPR)	(NPR)
		1	2	3	4=2x3
1	**INSTALLATION OF LEKHNATH - DAMAULI 220 KV DOUBLE CIRCUIT LINE**				
1.1	**PRELIMINARY WORKS**				
1.1.1	Mobilization and Site installation Office including all necessary equipment and maintenance during whole construction period	lump sum	1		
1.1.2	Construction, maintenance and reinstatement of new access roads, including erosion protection measures and all other works as per Clauses 8.3.1 to 8.3.10 of Sub-Section VII-4	route km	45		
1.1.3	Upgrade of temporary access tracks to permanent as per Clause 8.3.11 of Sub-Section VII-4 (unit is km of upgraded temporary road to permanent)	km	28		
1.1.4	Fully furnished office for Employer, including running costs	lump sum	1		
1.1.6	Survey Works including: angle points identification, line profile survey, towers pegging on site, survey of hill-side extensions, towers protection, towers diagonal profiling	route km	45		
	SUBTOTAL PRELIMINARY WORKS				
1.2	**INSTALLATION OF FOUNDATIONS**				
	Including: stripping of top soil for re-implementation after backfilling, excavation, placing of blind concrete, stubs setting, earthing system installation, preparing reinforcement steel and concreting (including extended chimneys and surface drainage channel where required), backfilling and compaction, material removal, cleaning and re-instatement of site				
1.2.1	**Foundations for Tower Type DA**				
1.2.1.1	Soil type 1	per tower	1		
1.2.1.2	Soil type 2 (dry)	per tower	3		
1.2.1.3	Soil type 2 (in presence of sub-soil water)	per tower	1		
1.2.1.4	Soil type 3 (dry)	per tower	11		
1.2.1.5	Soil type 3 (in presence of sub-soil water)	per tower	10		
1.2.1.6	Soil type 3 (wet black cotton)	per tower	4		
1.2.1.7	Soil type 4	per tower	4		

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Kreditanstalt für Wiederaufbau (KfW)
NEPAL ELECTRICITY AUTHORITY (NEA)
Schedule No. IV: Installation and Other Services

Item	Description	Unit	Quantity	Unit Price	Total Price
				CIP	CIP
				(NPR)	(NPR)
		1	2	3	4=2x3
1.2.1.8	Piled foundations (wet black cotton >3.5m deep or frustum angle <10°)	per tower	4		
1.2.2	**Foundations for Tower Type DB**				
1.2.2.1	Soil type 1	per tower	2		
1.2.2.2	Soil type 2 (dry)	per tower	4		
1.2.2.3	Soil type 2 (in presence of sub-soil water)	per tower	2		
1.2.2.4	Soil type 3 (dry)	per tower	15		
1.2.2.5	Soil type 3 (in presence of sub-soil water)	per tower	14		
1.2.2.6	Soil type 3 (wet black cotton)	per tower	4		
1.2.2.7	Soil type 4	per tower	3		
1.2.2.8	Piled foundations (wet black cotton >3.5m deep or frustum angle <10°)	per tower	5		
1.2.3	**Foundations for Tower Type DC**				
1.2.3.1	Soil type 1	per tower	0		
1.2.3.2	Soil type 2 (dry)	per tower	1		
1.2.3.3	Soil type 2 (in presence of sub-soil water)	per tower	1		
1.2.3.4	Soil type 3 (dry)	per tower	12		
1.2.3.5	Soil type 3 (in presence of sub-soil water)	per tower	8		
1.2.3.6	Soil type 3 (wet black cotton)	per tower	3		
1.2.3.7	Soil type 4	per tower	2		
1.2.3.8	Piled foundations (wet black cotton >3.5m deep or frustum angle <10°)	per tower	4		
1.2.4	**Foundations for Tower Type DD**				
1.2.4.1	Soil type 1	per tower	0		
1.2.4.2	Soil type 2 (dry)	per tower	2		
1.2.4.3	Soil type 2 (in presence of sub-soil water)	per tower	1		
1.2.4.4	Soil type 3 (dry)	per tower	6		

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Kreditanstalt für Wiederaufbau (KfW)
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Item	Description	Unit	Quantity	Unit Price	Total Price
				CIP	CIP
				(NPR)	(NPR)
		1	2	3	4=2x3
1.2.4.5	Soil type 3 (in presence of sub-soil water)	per tower	4		
1.2.4.6	Soil type 3 (wet black cotton)	per tower	1		
1.2.4.7	Soil type 4	per tower	1		
1.2.4.8	Piled foundations (wet black cotton >3.5m deep or frustum angle <10°)	per tower	3		
1.2.5	**Foundations for Tower Type DE**				
1.2.5.1	Soil type 1	per tower	0		
1.2.5.2	Soil type 2 (dry)	per tower	0		
1.2.5.3	Soil type 2 (in presence of sub-soil water)	per tower	0		
1.2.5.4	Soil type 3 (dry)	per tower	0		
1.2.5.5	Soil type 3 (in presence of sub-soil water)	per tower	1		
1.2.5.6	Soil type 3 (wet black cotton)	per tower	0		
1.2.5.7	Soil type 4	per tower	0		
1.2.5.8	Piled foundations (wet black cotton >3.5m deep or frustum angle <10°)	per tower	3		
1.2.6	**Foundations for Tower Type UCG**				
1.2.6.1	Soil type 1	per tower	0		
1.2.6.2	Soil type 2 (dry)	per tower	0		
1.2.6.3	Soil type 2 (in presence of sub-soil water)	per tower	0		
1.2.6.4	Soil type 3 (dry)	per tower	1		

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Kreditanstalt für Wiederaufbau (KfW)
NEPAL ELECTRICITY AUTHORITY (NEA)
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Item	Description	Unit	Quantity	Unit Price	Total Price
				CIP	CIP
				(NPR)	(NPR)
		1	2	3	4=2x3
1.2.6.5	Soil type 3 (in presence of sub-soil water)	per tower	0		
1.2.6.6	Soil type 3 (wet black cotton)	per tower	0		
1.2.6.7	Soil type 4	per tower	0		
1.2.6.8	Piled foundations (wet black cotton >3.5m deep or frustum angle <10°)	per tower	0		
1.2.7	**Foundations for Multi Circuit Tower Type 6T**				
1.2.7.1	Soil type 1	per tower	0		
1.2.7.2	Soil type 2 (dry)	per tower	1		
1.2.7.3	Soil type 2 (in presence of sub-soil water)	per tower	1		
1.2.7.4	Soil type 3 (dry)	per tower	4		
1.2.7.5	Soil type 3 (in presence of sub-soil water)	per tower	2		
1.2.7.6	Soil type 3 (wet black cotton)	per tower	0		
1.2.7.7	Soil type 4	per tower	0		
1.2.7.8	Piled foundations (wet black cotton >3.5m deep or frustum angle <10°)	per tower	0		
	SUBTOTAL INSTALLATION OF FOUNDATIONS				
1.3	**ERECTION OF SELF-SUPPORTING STEEL LATTICE TOWERS COMPLETE WITH ALL BOLTS, NUTS, PLATES, LEG EXTENSIONS, SAFETY DEVICES, ANTI-CLIMBING DEVICES, STEP-BOLTS, ACCESSORIES AND EXTENSIONS**				
1.3.1	**Normal Suspension Tower Type DA**				
1.3.1.1	Basic tower -6 m	pcs	0		
1.3.1.2	Basic tower -3 m	pcs	1		
1.3.1.3	Basic tower ±0 m	pcs	22		
1.3.1.4	Basic tower +3 m	pcs	9		
1.3.1.5	Basic tower +6 m	pcs	4		

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Kreditanstalt für Wiederaufbau (KfW)
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Item	Description	Unit	Quantity	Unit Price	Total Price
				CIP	CIP
				(NPR)	(NPR)
		1	2	3	4=2x3
1.3.1.6	Basic tower +9 m	pcs	2		
1.3.1.7	Basic tower +12 m	pcs	0		
1.3.1.8	Leg reduction -3.0m	pcs	16		
1.3.1.9	Leg reduction -1.5m	pcs	22		
1.3.1.10	Leg extensions ±0 m	pcs	62		
1.3.1.11	Leg extensions +1.5 m	pcs	22		
1.3.1.12	Leg extensions +3.0 m	pcs	18		
1.3.1.13	Leg extensions +4.5 m	pcs	8		
1.3.1.13	Leg extensions +6.0 m	pcs	4		
1.3.2	**Light Angle (0° - 15°) Tension Tower Type DB**				
1.3.2.1	Basic tower -6 m	pcs	0		
1.3.2.2	Basic tower -3 m	pcs	5		
1.3.2.3	Basic tower ±0 m	pcs	30		
1.3.2.4	Basic tower +3 m	pcs	7		
1.3.2.5	Basic tower +6 m	pcs	6		
1.3.2.6	Basic tower +9 m	pcs	1		
1.3.2.7	Leg reduction -3.0 m	pcs	10		
1.3.2.8	Leg reduction -1.5 m	pcs	24		
1.3.2.9	Leg extensions ±0 m	pcs	84		
1.3.2.10	Leg extensions +1.5 m	pcs	36		
1.3.2.11	Leg extensions +3.0 m	pcs	22		
1.3.2.12	Leg extensions +4.5 m	pcs	16		
1.3.2.12	Leg extensions +6.0 m	pcs	4		

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Kreditanstalt für Wiederaufbau (KfW)
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Item	Description	Unit	Quantity	Unit Price	Total Price
				CIP	CIP
				(NPR)	(NPR)
		1	2	3	4=2x3
1.3.3	**Medium Angle (15° - 30°) Tension Tower Type DC**				
1.3.3.1	Basic tower -6 m	pcs	0		
1.3.3.2	Basic tower -3 m	pcs	1		
1.3.3.3	Basic tower ±0 m	pcs	17		
1.3.3.4	Basic tower +3 m	pcs	5		
1.3.3.5	Basic tower +6 m	pcs	5		
1.3.3.6	Basic tower +9 m	pcs	3		
1.3.3.7	Basic tower +12 m	pcs	1		
1.3.3.8	Leg reduction -3.0 m	pcs	10		
1.3.3.9	Leg reduction -1.5 m	pcs	24		
1.3.3.10	Leg extensions ±0 m	pcs	54		
1.3.3.11	Leg extensions +1.5 m	pcs	16		
1.3.3.12	Leg extensions +3.0 m	pcs	12		
1.3.3.13	Leg extensions +4.5 m	pcs	8		
1.3.3.13	Leg extensions +6.0 m	pcs	4		
1.3.4	**Heavy Angle (30°-60°) Tower Type DD**				
1.3.4.1	Basic tower -6 m	pcs	0		
1.3.4.2	Basic tower -3 m	pcs	2		
1.3.4.3	Basic tower ±0 m	pcs	10		
1.3.4.4	Basic tower +3 m	pcs	6		
1.3.4.5	Basic tower +6 m	pcs	1		
1.3.4.6	Basic tower +9 m	pcs	0		
1.3.4.7	Leg reduction -3.0 m	pcs	4		
1.3.4.8	Leg reduction -1.5 m	pcs	8		
1.3.4.9	Leg extensions ±0 m	pcs	24		
1.3.4.10	Leg extensions +1.5 m	pcs	14		

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Kreditanstalt für Wiederaufbau (KfW)
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Item	Description	Unit	Quantity	Unit Price	Total Price
				CIP	CIP
				(NPR)	(NPR)
		1	2	3	4=2x3
1.3.4.11	Leg extensions +3.0 m	pcs	18		
1.3.4.12	Leg extensions +4.5 m	pcs	4		
1.3.4.13	Leg extensions +6.0 m	pcs	4		
1.3.5	**Dead End (0°-45° Line/0°-45° Gantry) Tower Type DE**				
1.3.5.1	Basic tower -3 m	pcs	0		
1.3.5.2	Basic tower ±0 m	pcs	4		
1.3.5.3	Basic tower +3 m	pcs	0		
1.3.5.4	Basic tower +6 m	pcs	0		
1.3.5.5	Leg reduction -3.0 m	pcs	0		
1.3.5.6	Leg reduction -1.5 m	pcs	2		
1.3.5.7	Leg extensions ±0 m	pcs	12		
1.3.5.8	Leg extensions +1.5 m	pcs	2		
1.3.5.9	Leg extensions +3.0 m	pcs	0		
1.3.5.10	Leg extensions +4.5 m	pcs	0		
1.3.5.11	Leg extensions +6.0 m	pcs	0		
1.3.6	**Undercrossing Gantry Tower Type UCG**				
1.3.6.1	Basic tower ±0 m	pcs	1		
1.3.6.2	Leg extensions ±0 m	pcs	2		
1.3.7	**Multi Circuit Angle (0°-50°) Tension Tower Type 6T**				
1.3.7.1	Basic tower -6 m	pcs	0		
1.3.7.2	Basic tower -3 m	pcs	0		
1.3.7.3	Basic tower ±0 m	pcs	6		
1.3.7.4	Basic tower +3 m	pcs	2		
1.3.7.5	Basic tower +6 m	pcs	1		

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Kreditanstalt für Wiederaufbau (KfW)
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Item	Description	Unit	Quantity	Unit Price	Total Price
				CIP	CIP
				(NPR)	(NPR)
		1	2	3	4=2x3
1.3.7.6	Basic tower +9 m	pcs	0		
1.3.7.7	Leg reduction -3.0 m	pcs	0		
1.3.7.8	Leg reduction -1.5 m	pcs	4		
1.3.7.9	Leg extensions ±0 m	pcs	16		
1.3.7.10	Leg extensions +1.5 m	pcs	8		
1.3.7.11	Leg extensions +3.0 m	pcs	8		
1.3.7.12	Leg extensions +4.5 m	pcs	4		
1.3.7.13	Leg extensions +6.0 m	pcs	0		
	SUBTOTAL ERECTION OF TOWERS				
1.4	**STRINGING OF DOUBLE CIRCUIT (SIX PHASES), DOUBLE CONDUCTOR ACSR MOOSE PER PHASE**				
	Including: insulator strings assembly, dead ends and jumpers, clipping and sagging, installation of spacer dampers, installation of vibration dampers and armor rods	route km	45		
1.5	**STRINGING OF OPGW 48 FIBRES (EQUIVALENT TO 93-A20SA)**				
	Including: attachment sets assembly, dead ends and by-pass jumpers, clipping and sagging, installation of vibration dampers, armor rods and warning spheres, installation of joint boxes	route km	45		
1.6	**STRINGING OF EARTHWIRE 93-A20SA**				
	Including: attachment sets assembly, dead ends and by-pass jumpers, clipping and sagging, installation of vibration dampers, armor rods and warning spheres.	route km	45		
1.7	**AVIAN PROTECTION & AIRCRAFT WARNING SYSTEM**				
1.7.1	Bird repellent system (spiked steel strips)	per tower	44		
1.7.2	Bird flight diverters	route km	18.5		
1.7.4	Aircraft Warning System	route km	1		

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Item	Description	Unit	Quantity	Unit Price	Total Price
				CIP	CIP
				(NPR)	(NPR)
		1	2	3	4=2x3
	SUBTOTAL STRINGING OF CONDUCTORS, EARTHWIRES AND OPGW				
1.8	**FOUNDATIONS TESTS**	**-**	-		
1.8.1	**Design tests as per EN 61773, section 4.1**	**-**	-		
1.8.1.1	Pad and Chimney foundation	lot	1		
1.8.1.2	Anchor Rock foundation	lot	1		
1.8.1.3	Piled foundation	lot	1		
1.8.2	**Proof tests as per EN 61773, section 4.2**	-	-		
1.8.2.1	Required foundation proof tests up to 75% of design ultimate load as per EN 61773, chapter 8.	lot	1		
	SUBTOTAL FOUNDATIONS TESTS				
1.9	**ADDITIONAL WORKS**				
1.9.1	Relocation of approximately 300 m of 33kV line between AP62 and AP63, including any necessary design services, additional material supply and installation works for complete execution	m	300		
1.9.2	Installation of 132kV tower for connection of autotransformer and gantry in Lekhnath substation as per clause 5.3 of Sub-Section VII-1 including all design verifications, investigations, measurements, material supply and installation works necessary for complete execution. Item includes the supply and installation of all materials including lattice towers and foundations, phase conductors and earthwire, insulator sets and earthwire fittings, and related installation works.	lump sum	1		
1.9.3	Tower location/site slope stabilisation works, including all necessary surveys, geotechnical design, material supply and installation works necessary for complete execution.	-	-		
1.9.3.1	Reinforced concrete wall (approx. dimensions 3.0 x 0.5 m)	m3	225		
1.9.3.2	Stone gabion wall	m3	1,650		
1.9.3.3	Stone mortar wall (approx. dimensions 2.0 x 0.5 m)	m3	200		

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Item	Description	Unit	Quantity	Unit Price	Total Price
				CIP	CIP
				(NPR)	(NPR)
		1	2	3	4=2x3
1.9.4	Tower location/site erosion prevention works, including all material supply and installation works necessary for complete execution.	-	-		
1.9.4.1	Concrete drainage ditch (approx. 0.2 m deep U/V shape channel)	m	840		
1.9.4.2	Biodegradable mats and vegetation seeding	m2	22,500		
	SUBTOTAL INSTALLATION OF LEKHNATH - DAMAULI 220 KV DOUBLE CIRCUIT LINE				
2	**INSTALLATION OF INTERCONNECTION OF TANAHU - BHARATPUR 220 KV DOUBLE CIRCUIT LINE TO NEW DAMAULI S/S (LOOP IN - LOOP OUT)**				
2.1	**PRELIMINARY WORKS**				
2.1.1	Temporary access tracks and access route works	lump sum	1		

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Item	Description	Unit	Quantity	Unit Price	Total Price
				CIP	CIP
				(NPR)	(NPR)
		1	2	3	4=2x3
2.1.2	Survey Works including: angle points identification, line profile survey, towers pegging on site, survey of hill-side extensions, towers protection, towers diagonal profiling	route km	1		
	SUBTOTAL PRELIMINARY WORKS				
2.2	**INSTALLATION OF FOUNDATIONS**				
	Including: stripping of top soil for re-implementation after backfilling, excavation, placing of blind concrete, stubs setting, earthing system installation, preparing reinforcement steel and concreting (including extended chimneys where required), backfilling and compaction, material removal, cleaning and re-instatement of site				
2.2.1	**Foundations for Multi Circuit Angle Tension Tower Type 6T**				
2.2.1.1	Soil type 1	per tower	0		
2.2.1.2	Soil type 2 (dry)	per tower	0		
2.2.1.3	Soil type 2 (in presence of sub-soil water)	per tower	0		
2.2.1.4	Soil type 3 (dry)	per tower	3		
2.2.1.5	Soil type 3 (in presence of sub-soil water)	per tower	1		
2.2.1.6	Soil type 3 (wet black cotton)	per tower	0		
2.2.1.7	Soil type 4	per tower	0		
2.2.1.8	Piled foundations (wet black cotton >3.5m deep or frustum angle <10°)	per tower	0		
	SUBTOTAL INSTALLATION OF FOUNDATIONS				
2.3	**ERECTION OF SELF-SUPPORTING STEEL LATTICE TOWERS COMPLETE WITH ALL BOLTS, NUTS, PLATES, LEG EXTENSIONS, SAFETY DEVICES, ANTI-CLIMBING DEVICES, STEP-BOLTS, ACCESSORIES AND EXTENSIONS**				
2.3.1	**Multi Circuit Angle (0°-45°) Tension Tower Type 6T**				
2.3.1.1	Basic tower -6 m	pcs	0		
2.3.1.2	Basic tower -3 m	pcs	0		

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				CIP	CIP
				(NPR)	(NPR)
		1	2	3	4=2x3
2.3.1.3	Basic tower ±0 m	pcs	3		
2.3.1.4	Basic tower +3 m	pcs	1		
2.3.1.5	Basic tower +6 m	pcs	0		
2.3.1.6	Basic tower +9 m	pcs	0		
2.3.1.7	Leg reduction -3.0 m	pcs	0		
2.3.1.8	Leg reduction -1.5 m	pcs	2		
2.3.1.9	Leg extensions ±0 m	pcs	8		
2.3.1.10	Leg extensions +1.5 m	pcs	4		
2.3.1.11	Leg extensions +3.0 m	pcs	2		
2.3.1.12	Leg extensions +4.5 m	pcs	0		
	SUBTOTAL ERECTION OF TOWERS				
2.4	**STRINGING OF FOUR CIRCUIT (TWELVE PHASES), DOUBLE CONDUCTOR ACSR BISON PER PHASE**				
	Including: insulator strings assembly, dead ends and jumpers, clipping and sagging, installation of spacer dampers, installation of vibration dampers and armor rods	route km	2.9		
2.5	**STRINGING OF OPGW 48 FIBRES (equivalent to 93-A20SA)**				
	Including: attachement sets assembly, dead ends and by-pass jumpers, clipping and sagging, installation of vibration dampers, armor rods, installation of joint boxes	route km	3		
2.6	**STRINGING OF EARTHWIRE 93-A20SA**				
	Including: attachement sets assembly, dead ends and by-pass jumpers, clipping and sagging, installation of vibration dampers, armor rods and warning spheres.	route km	1		
	SUBTOTAL STRINGING OF CONDUCTORS AND OPGW				

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
Interconnection of Tanahu - Bharatpur 220 kV Double Circuit Line to New Damauli S/S;
Interconnection of Old Damauli - Lekhnath 132 kV Single Circuit Line to New Damauli S/S
Kreditanstalt für Wiederaufbau (KfW)
NEPAL ELECTRICITY AUTHORITY (NEA)
Schedule No. IV: Installation and Other Services

Item	Description	Unit	Quantity	Unit Price	Total Price
				CIP	CIP
				(NPR)	(NPR)
		1	2	3	4=2x3
2.7	**ADDITIONAL WORKS**				
2.7.1	Dismantling of 200 m (span 0B/0 - 0C/0) of existing Tanahu - Bharatpur 220 kV double circuit Line, including removal of conductors/earthwire/OPGW and related insulator strings/attachement sets and transport to Employer's designated storage area, according to document B1, Scope of Supply and Services.	lump sum	1		
	SUBTOTAL INSTALLATION OF INTERCONNECTION OF TANAHU - BHARATPUR 220 KV DOUBLE CIRCUIT LINE TO NEW DAMAULI S/S (LOOP IN - LOOP OUT)				
3	**INSTALLATION OF INTERCONNECTION OF OLD DAMAULI - BHARATPUR 132 KV SINGLE CIRCUIT LINE TO NEW DAMAULI S/S (LOOP IN - LOOP OUT)**				
3.1	**PRELIMINARY WORKS**				
3.1.1	Temporary access tracks and access route works	lump sum	1		
3.1.2	Survey Works including: angle points identification, line profile survey, towers pegging on site, survey of hill-side extensions, towers protection, towers diagonal profiling	route km	0.45		
	SUBTOTAL PRELIMINARY WORKS				

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Kreditanstalt für Wiederaufbau (KfW)
NEPAL ELECTRICITY AUTHORITY (NEA)
Schedule No. IV: Installation and Other Services

Item	Description	Unit	Quantity	Unit Price	Total Price
				CIP	CIP
				(NPR)	(NPR)
		1	2	3	4=2x3
3.2	**INSTALLATION OF FOUNDATIONS**				
	Including: stripping of top soil for re-implementation after backfilling, excavation, placing of blind concrete, stubs setting, earthing system installation, preparing reinforcement steel and concreting (including extended chimneys where required), backfilling and compaction, material removal, cleaning and re-instatement of site				
3.2.1	**Foundations for Tower Type DE**				
3.2.1.1	Soil type 1	per tower	0		
3.2.1.2	Soil type 2 (dry)	per tower	0		
3.2.1.3	Soil type 2 (in presence of sub-soil water)	per tower	0		
3.2.1.4	Soil type 3 (dry)	per tower	1		
3.2.1.5	Soil type 3 (in presence of sub-soil water)	per tower	1		
3.2.1.6	Soil type 3 (wet black cotton)	per tower	0		
3.2.1.7	Soil type 4	per tower	0		
3.2.1.8	Piled foundations (wet black cotton >3.5m deep or frustum angle <10°)	per tower	1		
	SUBTOTAL INSTALLATION OF FOUNDATIONS				
3.3	**ERECTION OF SELF-SUPPORTING STEEL LATTICE TOWERS COMPLETE WITH ALL BOLTS, NUTS, PLATES, LEG EXTENSIONS, SAFETY DEVICES, ANTI-CLIMBING DEVICES, STEP-BOLTS, ACCESSORIES AND EXTENSIONS**				
3.3.1	**Dead End (0°-45° Line/0°-45° Gantry) Tower Type DE**				
3.3.1.2	Basic tower -3 m	pcs	0		
3.3.1.3	Basic tower ±0 m	pcs	1		
3.3.1.4	Basic tower +3 m	pcs	2		
3.3.1.5	Basic tower +6 m	pcs	0		
3.3.1.7	Leg reduction -3.0 m	pcs	0		
3.3.1.8	Leg reduction -1.5 m	pcs	0		
3.3.1.9	Leg extensions ±0 m	pcs	8		
3.3.1.10	Leg extensions +1.5 m	pcs	4		
3.3.1.11	Leg extensions +3.0 m	pcs	0		

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Kreditanstalt für Wiederaufbau (KfW)
NEPAL ELECTRICITY AUTHORITY (NEA)
Schedule No. IV: Installation and Other Services

Item	Description	Unit	Quantity	Unit Price	Total Price
				CIP	CIP
				(NPR)	(NPR)
		1	2	3	4=2x3
3.3.1.12	Leg extensions +4.5 m	pcs	0		
	SUBTOTAL ERECTION OF TOWERS				
3.4	**STRINGING OF DOUBLE CIRCUIT (SIX PHASES), SINGLE CONDUCTOR ACSR WOLF PER PHASE**				
	Including: insulator strings assembly, dead ends and jumpers, clipping and sagging, installation of vibration dampers and armor rods	route km	0.45		
3.5	**STRINGING OF SINGLE CIRCUIT (THREE PHASES), SINGLE CONDUCTOR ACSR WOLF PER PHASE**				
	Including: insulator strings assembly, dead ends and jumpers, clipping and sagging, installation of vibration dampers and armor rods	route km	0.55		
3.6	**STRINGING OF EARTHWIRE 66-A20SA**				
	Including: attachment sets assembly, dead ends and by-pass jumpers, clipping and sagging, installation of vibration dampers, armor rods.	route km	1		
3.7	**STRINGING OF OPGW 96 FIBRES (equivalent to 66-A20SA)**				
	Including: attachment sets assembly, dead ends and by-pass jumpers, clipping and sagging, installation of vibration dampers, armor rods.	route km	0.45		
	SUBTOTAL STRINGING OF CONDUCTORS AND EARTHWIRE				
3.8	**ADDITIONAL WORKS**				
3.8.1	Complete dismantling of one existing tower and correspoding foundations up to a depth of 1.0 m below ground level, insulator strings and earthwire attachements, including transportation and storage of resulted materials to NEA designated warehouse, according to Sub-Section VII-1 of Employer's Requirements	lump sum	1		
3.8.2	Stringing of 2 spans (conductor and earthwire) between the adjacent existing 132 kV single circuit towers and new DE tower including all preparatory works and coordination with NEA	lump sum	1		

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Kreditanstalt für Wiederaufbau (KfW)
NEPAL ELECTRICITY AUTHORITY (NEA)
Schedule No. IV: Installation and Other Services

Item	Description	Unit	Quantity	Unit Price	Total Price
				CIP	CIP
				(NPR)	(NPR)
		1	2	3	4=2x3
	SUBTOTAL INSTALLATION OF INTERCONNECTION OF OLD DAMAULI - BHARATPUR 132 KV SINGLE CIRCUIT LINE TO NEW DAMAULI S/S (LOOP IN - LOOP OUT)				
4	**OTHER WORKS AND SERVICES**				
4.2	**TRAINING OF EMPLOYER'S STAFF**				
4.2.4	On site optical fiber technology and optical fiber (OPGW and OPUG) installation, cable testing, maintenance (7 persons, 7 working days)	lot	1		
4.2.5	On Site Training during erection works, testing and commissioning (7 persons, 7 working days)	lot	1		
	SUBTOTAL TRAINING				
4.3	**Project comunication and visibility services**	lump sum	1		
	SUBTOTAL PROJECT COMMUNICATION AND VISIBILITY SERVICES				
	TOTAL OTHER SERVICES				
5. ADDITIONAL WORKS					
	TOTAL (to Schedule No. VI Grand Summary)				

Name of Bidder: _____

Signature of Bidder: _____

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
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Schedule No.V: ESHS Requirements

Item	Description	Unit	Quantity	Total (NPR)
1.1	Resources allocated to ESHS management as per the ESMP requirements	Lump sum	1	
1.2	Required tools, equipment, facilities (toilets/cabin/tents/security), and transportation for Archaeological Clerk of Works for any archaeological excavations required (Archaeological Clerk of Work appointed by NEA)	Lump sum	1	
1.3	Required tools, equipment, facilities (toilets/cabin/tents/security), and transportation for Biodiveristiy Clerk of Work to sites required (Biodiversity Clerk of Work appointed by NEA)	Lump sum	1	
1.4	Drafting and updating the ESHS documentation, reporting, inspections as per the ESMP requirements	Lump sum	1	
1.5	Implementation of the Health and Safety Plan: meetings, health care center, medical check-ups, emergencies and evacuations, safety protective equipment, hygiene as per the ESMP requirements	Lump sum	1	
1.6	Accommodation, drinking water, meals and transportation of staff(*) as per the ESMP requirements (*) : The Bidder shall detail the financial conditions of the supply of accommodation, meals and transport to its staff:			
1.6.1	- Accommodation	Lump sum	1	
1.6.2	- Meals	Lump sum	1	
1.6.3	- Transport	Lump sum	1	
1.7	Local recruitment and training management costs	Lump sum	1	
1.8	Biodiversity studies, surveys and related activites as per ESMP requirements	Lump sum	1	
1.9	Temporary access rights, land take and compensation as per the ESMP requirements	Lump sum	1	
1.10	RoW vegetation and tree removal as per ESMP requirements	Lump sum	1	
1.11	Protection of the biodiversity, adjacent areas, prevention of erosion at work sites and access tracks as per the ESMP requirements	Lump sum	1	
1.12	Traffic, noise and atmospheric emissions management as per the ESMP requirements	Lump sum	1	
1.13	Contamination studies, wastewater, waste and hazardous products mangement as per the ESMP requirements	Lump sum	1	
1.14	Site reinstatement as per the ESMP requirements	Lump sum	1	
1.15	Other material, equipment or studies not specifically mentioned but deemed necessary based on ESMP requirements	Lump sum	1	
	TOTAL (to Schedule No. VI Grand Summary)			

Name of Bidder:

Signature of Bidder:

Package A OHL:
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Schedule No. VI: Grand Summary

Schedule	Description	Total
		(USD + NPR)
1	Plant and Mandatory Spare Parts supplied from abroad	
2	Plant and Mandatory Spare Parts supplied from within the Employer's Country	
3	Design Services	
4	Installation and Other Services	
5	ESHS Requirements	
6	TOTAL (to Bid Form)	

Name of Bidder:

Signature of Bidder:

Package A OHL:
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Schedule No. VII: Recommended Spare Parts and Tools

Item	Description	Country of Origin	Unit	Quantity	Unit Price	Total
					CIP	CIP
					(USD)	(USD)
			1	2	3	4 = 2x3

Name of Bidder: _____

Signature of Bidder: _____

Package A OHL:
Lekhnath - Damauli 220 kV Double Circuit Line;
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Schedule No. VIII: Optional Items

Item	Description	Unit	Quantity	Unit Price	Total Price
				CIP	CIP
				(USD)	(USD)
		1	2	3	4=2x3
	Total amount:				

Name of Bidder: _____

Signature of Bidder: _____

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Annexes

List of Annexes

Annex No.	Description
Annex A	Line route layout drawing
Annex A-1	List of preliminary route angle point coordinates
Annex A-2	Lekhnath Substation Layout
Annex B + C	Typical tower outlines
Annex D	Typical arrangement of towers
Annex E	Typical foundations
Annex F, G, H + I	Insulator sets
Annex J	Typical Earthing System
Annex K + L	EW Attachment Sets
Annex M, N + O	OPGW Attachment Sets
Annex P	OHL/SS limit of scope of supply
Annex Q	Preliminary Geotechnical Investigation elaborated for Bidding Purpose
Annex R	IEE Approved Lekhnath Damauli
Annex S	Updated IEE Report Lekhnath Damauli