



**Procurement of Plant Design, Supply, Delivery, Installation, Testing and Commissioning of**  
**Lot 1: Lapsiphedhi-Ratmate-New Hetauda 400kV D/C Transmission Line**  
**Lot 2: Ratmate-New Damauli 400kV D/C Transmission Line**  
**Lot 3: New Damauli-New Butwal 400kV D/C Transmission Line (Base) And New Butwal -Nepal/India Border 400kV D/C Transmission Line (Option)**

**ADDENDUM #6**

**Date: 30 March 2023**

This Addendum No. 6 modifies respective portions of the Bidding Document issued on 28 November 2022 and amended through Addendum No. 1 on 4 January 2023, Addendum No. 2 on 14 February 2023, Addendum No. 3 on 27 February 2023, Addendum No. 4 on 3 March 2023 and Addendum No. 5 on 15 March 2023. The changes, as indicated below, are effective on the date of issue of this Addendum.

Except as expressly amended by this Addendum, all other terms and conditions of the Bidding Document - issued on 28 November 2022 and amended through Addendum No. 1 on 4 January 2023, Addendum No. 2 on 14 February 2023, Addendum No. 3 on 27 February 2023, Addendum No. 4 on 3 March 2023 and Addendum No. 5 on 15 March 2023 remains unchanged and shall remain in full force and effect in accordance with their terms.

SN	Pages/Paragraph	Amendments
1.	Part 1: Page 2, Specific Procurement Notice (SPN), Submission Deadline, Addendum 3 of the Bidding Document	<b>17 April 2023</b>  <b>has been replaced by:</b>  <b>08 May 2023</b>
2.	Part 1: Page 3, Specific Procurement	Bids shall be submitted to the address below on or before <b>13:00 hours (local time of Nepal (GMT+5:45))</b> on <b>17 April 2023</b> . Electronic bidding shall not be permitted. Late bids will be rejected. Bids will be publicly opened in the presence of the bidders'

	<p>Notice (SPN), , Addendum 3 of the Bidding Document</p>	<p>designated representatives and anyone who chooses to attend at the address below on <b>17 April 2023 at 13:00 hours (local time of Nepal (GMT+5:45))</b>. All bids shall be accompanied by a <i>Bid Security</i> in the amount of <b>US\$700,000 for Lot 1, US\$550,000 for Lot 2 and US\$675,000 for Lot 3 and if issued by a bank located outside of Nepal</b>, must be confirmed (counter bank guarantee to be issued) by a correspondent financial institution located in Nepal and shall be valid until <b>10 January 2024</b>.</p> <p><b>has been replaced by:</b></p> <p>Bids shall be submitted to the address below on or before <b>13:00 hours (local time of Nepal (GMT+5:45)) on 08 May 2023</b>. Electronic bidding shall not be permitted. Late bids will be rejected. Bids will be publicly opened in the presence of the bidders' designated representatives and anyone who chooses to attend at the address below on <b>08 May 2023 at 13:00 hours (local time of Nepal (GMT+5:45))</b>. All bids shall be accompanied by a <i>Bid Security</i> in the amount of <b>US\$700,000 for Lot 1, US\$550,000 for Lot 2 and US\$675,000 for Lot 3 and if issued by a bank located outside of Nepal</b>, must be confirmed (counter bank guarantee to be issued) by a correspondent financial institution located in Nepal and shall be valid until <b>31 January 2024</b>.</p>
<p>3.</p>	<p>Part 1: Page 47, Section II. Bid Data Sheet, ITB 8.1 (subsequent addendum#5, SN#1)</p>	<p>To request clarification of this Bidding Document only, the Employer's address is:  Attention: Procurement Agent of Millennium Challenge Account Nepal  Address: 2nd&amp; 3rd Floor, East Wing, Lal Durbar Convention Centre, Yak &amp; Yeti Complex, Durbar Marg, Kathmandu Nepal  Email: <a href="mailto:MCANepalPA@dt-global.com">MCANepalPA@dt-global.com</a></p> <p>Clarifications may be requested by e-mail not later than <b>66</b> days before deadline for Bid submission, so that responses to the last set of requests for clarifications received can be issued to all Bidders not later than 31 days before the deadline for Bid submission, which is by <b>17 March 2023</b>.</p> <p><b>has been replaced by:</b></p> <p>To request clarification of this Bidding Document only, the Employer's address is:  Attention: Procurement Agent of Millennium Challenge Account Nepal  Address: 2nd&amp; 3rd Floor, East Wing, Lal Durbar Convention Centre, Yak &amp; Yeti Complex, Durbar Marg, Kathmandu Nepal  Email: <a href="mailto:MCANepalPA@dt-global.com">MCANepalPA@dt-global.com</a></p> <p>Clarifications may be requested by e-mail not later than <b>42 days before deadline (27 March 2023)</b> for Bid submission, so that responses to the last set of requests for clarifications received can be issued to all Bidders not later than 31 days before</p>

		deadline for Bid submission, which is by <b>7 April 2023.</b>
4.	Part 1, Page 51, Section II. Bid Data Sheet,	<p><b>Amend ITB 15.10 as follows:</b></p> <p><b>“In the case of <u>Adjustable Price</u>, prices quoted by the Bidder shall be subject to adjustment during performance of the Contract to reflect changes in the cost elements such as labor, material, transport and Contractor’s equipment in accordance with the procedures specified in the corresponding Appendix to the Contract Agreement. A Bid submitted with a fixed price quotation will not be rejected, but the price adjustment will be treated as zero.”</b></p>
5.	Part 1: Page 51, Section II. Bid Data Sheet, ITB 19.1, Addendum 3 of the Bidding Document	<p>The Bid validity period shall be <b>240</b> days, until <b>13 December 2023.</b></p> <p><b>has been replaced by:</b></p> <p>The Bid validity period shall be <b>240</b> days, until <b>03 January 2024.</b></p>
6.	Part 1: Page 52, Section II. Bid Data Sheet, ITB 23.1, , Addendum 3 of the Bidding Document	<p><b>The address for Bid submission is:</b></p> <p>Attention: <b>Procurement Agent of Millennium Challenge Account Nepal</b>  <b>Address: 2nd &amp; 3rd Floor, East Wing, Lal Durbar Convention Centre, Yak &amp; Yeti Complex, Durbar Marg, Kathmandu, Nepal</b></p> <p><b>The deadline for Bid submission is:</b></p> <p>Date: <b>17 April 2023</b></p> <p>Time: <b>13:00 hours (local time of Nepal (GMT+5:45))</b></p> <p><b>has been replaced by:</b></p> <p><b>The address for Bid submission is:</b></p> <p>Attention: <b>Procurement Agent of Millennium Challenge Account Nepal</b>  <b>Address: 2nd &amp; 3rd Floor, East Wing, Lal Durbar Convention Centre, Yak &amp; Yeti Complex, Durbar Marg, Kathmandu, Nepal</b></p> <p><b>The deadline for Bid submission is:</b></p> <p>Date: <b>08 May 2023</b></p> <p>Time: <b>13:00 hours (local time of Nepal (GMT+5:45))</b></p>

7.	<p>Part 1: Page 53, Section II. Bid Data Sheet, ITB 26.1, , Addendum 3 of the Bidding Document</p>	<p><b>The Bid opening shall take place at:</b>  <b>Millennium Challenge Account Nepal Office</b>  <b>2nd&amp; 3rd Floor, East Wing, Lal Durbar Convention Centre,</b>  <b>Yak &amp; Yeti Complex, Durbar Marg,</b>  <b>Kathmandu</b>  <u><b>Nepal</b></u>  Date: <b>17 April 2023</b>  Time: <b>13:00 hours (local time of Nepal (GMT+5:45))</b></p> <p><b>has been replaced by:</b></p> <p><b>The Bid opening shall take place at:</b>  <b>Millennium Challenge Account Nepal Office</b>  <b>2nd&amp; 3rd Floor, East Wing, Lal Durbar Convention Centre,</b>  <b>Yak &amp; Yeti Complex, Durbar Marg,</b>  <b>Kathmandu</b>  <u><b>Nepal</b></u>  Date: <b>08 May 2023</b>  Time: <b>13:00 hours (local time of Nepal (GMT+5:45))</b></p>
8.	<p>Part 1, Page 73, 74, 75, Section III: Qualification and Evaluation Criteria, 11. Annual Average Turnover, 2. Minimum average annual design turnover</p>	<p><b>Minimum average annual design turnover of</b>  <b>Lot 1: US\$ 3.6 Million</b>  <b>Lot 2: US\$ 3.6 Million</b>  <b>Lot 3: US\$ 3.6 Million,</b>  calculated as total certified payments received for contracts in progress or completed, within the last three (3) years. Values to determine annual design turnover are to be demonstrated in the audited financial statements (income statements) of the last three (3) years and are to be considered to be indicative. <b>To be eligible for award of more than one lot, the bidder needs to satisfy the total requirements for the lots in consideration.</b></p> <p><b>has been replaced as:</b></p> <p><b>Minimum average annual design turnover of US\$ 3.6 Million,</b> calculated as total certified payments received for contracts in progress or completed, within the last three (3) years. Values to determine annual design turnover are to be demonstrated in the audited financial statements (income statements) of the last three (3) years and are to be considered to be indicative. <b>A certificate issued by the Bidder's Chartered Accountant certifying that the design turnover was of value in US\$ (value of the design turnover in an year) will also be acceptable.</b></p>

		<b>This is the minimum requirement to qualify for one or two lots.</b>					
9.	Part 1, Page 84, Section IV. Bid Submission Forms	The bidder must fill form CON-1 for critical Subcontractors/Manufacturers such as for conductors, towers/steel, insulators and OPGW etc. for Employer to ascertain past performance of the proposed Subcontractors / manufacturers. <b>has been deleted</b>					
10.	Part 1, Page 144, Section IV. Bid Submission Forms, 1.3.10, Min. diameter and number of bolts at stressed member connections, bolt diameter, mm	- Has been replaced as: 5/8"					
11.	Part 1, Page 158, TECH-11: Technical Data Schedule, TS3. Conductors, Technical DATA Schedules – Conductor		Item	Description	Unit	Required	Bidder Guaranteed
		8		Coefficient of thermal resistance at 20°C:	1/°C		
				Steel	M	0.0036	
				Aluminum	M	0.00404	
				Total	M	0.0039	
				Maximum Conductor length on drum	M	4600	
		9		Maximum Gross weight per drum incl. conductor  (Reel: FL=2440mm; TR=1525mm; DR=1050mm; OW=1650mm; AH=130mm; W=1000 kg)	Kg	10186	

**has been replaced by:**

Item	Description	Unit	Required	Bidder Guaranteed
8	Coefficient of thermal resistance at 20°C:	1/°C		
	Steel	M	0.0036	
	Aluminum	M	0.00404	
	Total	M	0.0039	
	Maximum Conductor length on drum	M	Up to 4600	
9	Maximum Gross weight per drum incl. conductor  (Reel: FL=2440mm; TR=1525mm; DR=1050mm; OW=1650mm; AH=130mm; W=1000 kg)	kg	Up to 10186	

12.

Part 1, Page 191, Section IV. Bid Submission Forms, Dates, Tests, Periods and Completion, Sub-Clause 1.1.3.3

Time for completion from the Commencement Date is:  
 Lot 1: Lapsipedi-Ratmate-New Hetauda 400kV D/C Transmission Line:  
 1202 days  
 Lot 2: Ratmate-New Damauli 400kV D/C Transmission Line:  
 1202 days  
 Lot 3: New Damauli-New Butwal 400kV D/C Transmission Line (Base) And New Butwal -Nepal/India Border 400kV D/C Transmission Line (Option):  
 1202 days  
**has been replaced by:**  
 Time for completion from the Commencement Date for Lots are:

**Lot 1: Lapsiphedhi-Ratmate-New Hetauda 400kV D/C Transmission Line:  
1202 days**

5 (Five) km of Transmission Line from Lapsephedi , Ratmate and New Hetauda substations are to be completed on priority basis including construction of quad circuit towers at New Hetauda substation. The construction timeline for this 5 Km line from each substation (total approximately 20km) will be 18 months from the date of providing permanent site access. Please note that the Contractor has to work in other sections as per their schedule, but they should prepare their Construction schedule in such a way that the 5Km of lines from each substation be completed within 18 months from the date of providing permanent site access.

**Lot 2: Ratmate-New Damauli 400kV D/C Transmission Line:  
1202 days**

5 (Five) km of Transmission Line from Ratmate and New Damauli substations are to be completed on a priority basis. The construction timeline for this 5 Km of line from each substation (total approximately 10km) will be 18 months from the date of providing permanent site access. Please note that the Contractor has to work in other sections as per their schedule, but they should prepare their construction schedule in such a way that the 5Km of lines from each substation be completed within 18 months from the date of providing permanent site access.

**Lot 3 (Base): New Damauli-New Butwal 400kV D/C Transmission Line: 1202 days**

5 (Five) km of Transmission Line from **New Damauli and New Butwal** substations are to be completed on a priority basis including construction of quad circuit towers at New Butwal substation. The construction timeline for this 5 Km of line from each substation (total approximately 10km) will be 18 months from the date of providing permanent site access. Please note that the Contractor has to work in other sections as per their schedule, but they should prepare their Construction schedule in such a way that the 5Km of lines from each substation be completed within 18 months from the date of providing permanent site access.

**Lot 3 (Option): New Butwal -Nepal/India Border 400kV D/C Transmission Line:  
720 days**

The entire length of Transmission Line (Approximately 18 Km) from New Butwal to Nepal/India Border is to be completed on a top priority basis. The construction timeline for this 18 Km of line will be 24 months from date of commencement. The Contractor

		<p>shall complete the check survey and geotechnical activities within four months from the date of commencement. Employer will provide permanent site access within three months of completion of the check survey activity. The construction work should start within eight months from date of commencement.</p>
<p>13.</p>	<p>Part 1, Page 197, Section IV. Bid Submission Forms, Appendix to Letter of Financial Offer, <b>Adjustment for Changes in Cost (13.8)</b>,</p>	<p>For this Contact of Transmission Line the price adjustment clause is applicable only for the tower superstructures, including accessories as stated under Schedule No. 2. Plant and Mandatory Tools and Spare Parts Supplied from Abroad, item number 1 (only Iron and Zinc component) and ACSR conductors under Schedule No. 2. Plant and Mandatory Tools and Spare Parts Supplied from Abroad, item number 2 (Aluminum and Steel component).</p> <p>The Base date for indices, for the purpose of price adjustment, shall be taken as 28 days prior to the deadline for submission of the Bid.</p> <p>For final date for indices, for price adjustment, the same will be governed by 60 days prior to the date of dispatch of different lot, which is committed by the Contractor for various plants in the bar chart (work Schedule) and approved &amp; accepted by the employer at the time of signing of contract agreement.</p> <p>Prices payable to the Contractor, in accordance with the Contract, shall be subject to adjustment during performance of the Contract to reflect changes in the cost, in accordance with the following formula:</p> <p><b>has been replaced by:</b></p> <p>For this <b>Contract</b> of Transmission Line the price adjustment clause is applicable only for the tower superstructures, including accessories as stated under Schedule No. 2. Plant and Mandatory Tools and Spare Parts Supplied from Abroad, item number 1 (only Iron and Zinc component) and ACSR conductors under Schedule No. 2. Plant and Mandatory Tools and Spare Parts Supplied from Abroad, item number 2 (Aluminum and Steel component).</p> <p>The Base date for indices, for the purpose of price adjustment, shall be taken as 28 days prior to the deadline for submission of the Bid.</p> <p>For final date for indices, for price adjustment, the same will be governed by 60 days prior to the date of dispatch of different lot, which is committed by the Contractor for various plants in the bar chart (work Schedule) and approved &amp; accepted by the employer at the time of signing of contract agreement.</p> <p><b>Price Adjustment, if required and approved by the Engineer, shall be made from the second Interim Payment as the first one will be the Advance Payment and will be applied progressively.</b></p>



		Prices payable to the Contractor, in accordance with the Contract, shall be subject to adjustment during performance of the Contract to reflect changes in the cost, in accordance with the following formula:
14.	Part 1, Page 209 and PDF page 209 to 276, Price Schedule for all Lots	The Price Schedule for all Lots has been amended as per Attachment 1 of this Addendum 6.
15.	Part 1, Page 277 and PDF page 277 to 334, Breakdown of Price for Price Reasonability	The Price for Price Reasonability has been amended as per Attachment 2 of this Addendum 6.
16.	Part 2, B0, 221123_Section-V-B0-Final, Page 18 or PDF Page 24 of 128, 20. Accommodation	<p>The Contractor shall provide suitable furnished office accommodation for Engineer and Employer at least in one convenient location per Lot. In line with requirements specified in Technical Data Schedule TS13. This will include but not limited to office furniture, pantry items, smoke detection, and firefighting equipment, HSE equipment, IT infrastructure, etc. complete in all respect as per the satisfaction of Engineer. The Contractor is also liable for the arrangement of running and maintenance of such establishments including the arrangement of electricity, drinking waters, gas, and other consumables, stationery items, IT consumables, etc. for the entire contract period.</p> <p><b>has been replaced by:</b></p> <p>The Contractor shall provide suitable furnished office accommodation for Engineer and Employer at least in one convenient location per Lot. In line with requirements specified in Technical Data Schedule TS13. This will include but not limited to office furniture, pantry items, smoke detection, and firefighting equipment, HSE equipment, IT infrastructure, etc. complete in all respect as per the satisfaction of Engineer. The Contractor is also liable for the arrangement of running and maintenance of such establishments including the arrangement of electricity, drinking waters, gas, and other consumables, stationery items, IT consumables, etc. for the entire contract period.</p> <p>In case of non-availability of such accommodation, the Contractor may opt for providing such hotel accommodation to the Engineer and Employer in agreement with the Engineer.</p>
17.	Part 2 B0, Annex_B0, Annex_6_ESHS MP_BoQ_exl	The Annex_6_ESHSMP_BoQ_exl has been amended as per Attachment 3 of this Addendum 6.

18.	Part 2, B0, Annex_B0, Annex 10 MCA-N ESHSMP, Page 14, Soil erosion control – all laydown areas and construction sites	<p>Do not make access tracks wider than 1.25 metre or make other cleared areas larger than is absolutely necessary.</p> <p><b>has been replaced by:</b></p> <p>Do not make access tracks wider than 1.50 metre or make other cleared areas larger than is absolutely necessary.</p>
19.	Part 2, B0, 221123_Section-V-B0-Final, 20. Accommodation, Page 19 or PDF Page 25 of 128	<p>The Contractor shall also provide one number fully furnished guesthouse (with at least four rooms) for the visiting staff of Engineer with the same facilities as mentioned in sub-clause “k”.</p> <p><b>has been replaced by:</b></p> <p>The Contractor shall also provide one number fully furnished guesthouse (with at least four rooms) for the visiting staff of Engineer.</p>
20.	Part 2, B0, Annex_B0, Annex 10 MCA-N ESHSMP, Page 40, Access to tower sites	<p>No new access tracks or roads may be made to provide vehicle access to tower sites. Access will be only using existing access routes. New foot trails to a maximum width of 1.25 metre may be constructed. These will be earth paths made following the guideline in Annex E.5.4, and must be removed and the land rehabilitated at the time of site closure.</p> <p>All-terrain vehicles (ATV) may be used on foot trails where it is safe to do so. Trails may not be widened beyond 1.25 metre for their use, although in steep terrain step-out areas for pedestrians may be built every 50 metres or where the ground allows. For the ETP, an ATV is defined as having the following attributes.</p> <p><b>has been replaced by:</b></p> <p>No new access tracks or roads may be made to provide vehicle access to tower sites. Access will be only using existing access routes. New foot trails to a maximum width of 1.50 metre may be constructed. These will be earth paths made following the guideline in Annex E.5.4, and must be removed and the land rehabilitated at the time of site closure.</p> <p>All-terrain vehicles (ATV) may be used on foot trails where it is safe to do so. Trails may not be widened beyond 1.50 metre for their use, although in steep terrain step-out areas for pedestrians may be built every 50 metres or where the ground allows. For the ETP, an ATV is defined as having the following attributes.</p>





21.	Part 2, B0, Annex_B0, Annex 10 MCA-N ESHSMP, Page 79, Mitigation measures	<p>Do not make access tracks wider than 1.25 metre or make other cleared areas larger than is absolutely necessary.</p> <p><b>has been replaced by:</b></p> <p>Do not make access tracks wider than 1.50 metre or make other cleared areas larger than is absolutely necessary.</p>
22.	Part 2, B1, 221023_Section-V-B1, Page 62 pr PDF Page 63 of 93, 7-Tower Beacons	<p>Tower lights shall be medium-intensity obstacle lights type B, flashing simultaneously. Three lights shall be placed one on the top, one at the lowest level of the conductor and one in the middle.</p> <p><b>has been replaced as:</b></p> <p>Tower lights shall be medium-intensity obstacle lights type B, flashing simultaneously. Three lights shall be placed one on the top, one at the lowest level of the conductor and one in the middle. Tower lights needs to be operational for day time, twilight and night time.</p>
23.	Part 2, B1, 221023_Section-V-B1, Page 62 or PDF Page 63 of 93, 7-Tower Beacons	<p>The power input for the light system shall be supplied through solar power with back-up battery for night time operation.</p> <p><b>has been replaced by:</b></p> <p>The power input for the light system shall be supplied through solar power with back-up battery.</p>
24.	Part 2, B1, Annex_B1, 6. Annex D_Technical Specifications_Final Design Report-2019-11-08, Annex D Appendix 8 - Insulator Specification Rev 1, Page 3.10 or PDF Page 25 of 54, 3.1	<ol style="list-style-type: none"> <li>1. The Supplier shall be a manufacturer of insulators of similar nature for the last 10 years.</li> <li>2. The Supplier shall have design, manufacturing, supply and satisfactory service experience for the last 10 years in at least five (5) projects / lines for at least 200,000 units each of same or similar insulator type offered, operating under similar climate conditions.</li> <li>3. The Supplier shall submit documentary evidence of the good performance of the offered insulators by providing at least 3 performance certificates showing a self-shattering rate less or equal to 1 / 10,000 unit per year, on a minimum of three (3) different projects of more than 100,000 insulators each, being in service for more than five (5) years and operating at voltage level equal to or higher than 230 kV AC. The required evidence should be issued by at least 3 different recognized utilities.</li> </ol>

	<p>PARAMETERS FOR TENDER DOCUMENT, A. Proof of Experience</p>	<p>4. The references shall clearly mention the name of the transmission line and its operating voltage, month and year of delivery completion and operation: quantities and type of insulators and the name of the utility, addresses and phone number, as well as the name and mail address of a representative of the utility.</p> <p>5. The Owner has the right to verify the experience and performance of the Supplier by contacting the utilities which issued the submitted performance evidences but also by its own criteria, not limited to these utilities.</p> <p><b>has been replaced by:</b></p> <p>1. The insulator manufacturer shall have been in its business for the last ten (10) years. It shall have manufactured and supplied minimum 400,000 disc insulators within the last five (5) years of 160KN rating or as per ANSI 52-8 and above for operating at voltage level equal to or higher than 230kV AC.</p> <p>2. Evidence is to be given by reference lists for the required period of time (showing supplied insulator quantities in pieces, project designation, year of supply). Additionally, a type test report for insulator unit(s) shall be submitted.</p> <p>3. The references shall clearly mention the name of the transmission line and its operating voltage, month and year of delivery completion and operation: quantities and type of insulators and the name of the utility, addresses and phone number, as well as the name and mail address of a representative of the utility.</p> <p>4. The Owner has the right to verify the experience and performance of the Supplier by contacting the utilities which issued the submitted performance evidence but also by its own criteria, not limited to these utilities.</p>
25.	<p>Part 2, B1, Annex_B1, 6. Annex D_Technical Specifications_Final Design Report-2019-11-08, Annex D Appendix 8 - Insulator Specification Rev 1, Electrical and Mechanical Required Parameters, Page xi or PDF page 13</p>	<p>1x530=530KN<sup>4</sup></p> <p><b>has been replaced by:</b></p> <p>1x530=530KN<sup>4</sup> or 2x300=600KN<sup>4</sup></p>

	of 54, Suspension String Running Angle Towers D1C-ALT/ Mechanical Rating (kN)	
26.	Part 2 Employer’s Requirement: B1, Annex_B1, 2. Final Design Report_2019-1108, Final Design Report - Main Document - 19 March 2020, 2.8 Structures, Page 2.27  and subsequent changes in addendum#4 (SN 13)	<p>e. Full scale testing of tower with highest body extension of maximum overturning moment, maximum uplift in maximum loading condition to be done as per CBIP-3223 (2014 with latest amendment) and IS-802 (2015with latest amendment)- one Tower per type per lot.</p> <p>In case multiple lots are awarded to the contractor then one tower per type for all lots will be required, provided the same tower design is considered for the type in all lots.</p> <p>The contractor is free to propose their own design as per the design criteria mentioned in section V, B1 and its annexures. Overload factor of 1.2 to be considered in the design of non-tested towers <b>and their foundation.</b></p> <p><b>has been replaced by:</b></p> <p>e. Full scale testing of tower with highest body extension of maximum overturning moment, maximum uplift in maximum loading condition to be done as per CBIP-3223 (2014 with latest amendment) and IS-802 (2015 with latest amendment)- one Tower per type per lot.</p> <p>In case multiple lots are awarded to the contractor then one tower per type for all lots will be required, provided the same tower design is considered for the type in all lots.</p> <p>The contractor is free to propose their own design as per the design criteria mentioned in section V, B1 and its annexures. Overload factor of 1.2 to be considered in the design of non-tested towers. <b>For normal Foundation design overload factor should be minimum 1.1 for coordination of strength between foundation &amp; structure. For Pile foundation/well foundation overload factor should be minimum 2.5 for coordination of strength between foundation &amp; structure.</b></p>

# ATTACHMENT 1

## Revised Price Schedule for all Lots

Price Schedule for	Price Schedule
Lot 1	 230307_Price_Schedule_Lot-1.xlsx
Lot 2	 230307_Price_Schedule_Lot-2.xlsx
Lot 3 – Base	 230307_Price_Schedule_Lot-3-Base.xlsx
Lot 3 – Option	 230307_Price_Schedule_Lot-3-Option.xlsx

## **Revised Price Schedule for Lot 1**

**Lot 1: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Lapsiphidi to Ratmate Substation (approx. Route Length: 59 KM) (b) Ratmate to New Hetauda Substation of NEA (approx. Route Length: 58 KM)**

**Breakdown of Rates and Prices Schedule No. 1. Design Services**

Item	Description	Unit	Qty.	Unit Rate (US\$)	Total Price (US\$)
			1	2	(1) x (2)
1	<b>Design services and Engineering</b>				
1.1	Detailed design (Tower Design & Foundation Design including design of Double Circuit and Quad Circuit Towers) and delivery of all documents, drawings and plans for final approval	LS	1		
1.2	Proto Type Testing of Transmission Towers and approval including manufacturing of prototype towers and accessories and transport the same to the proto test lab.	LS	1		
1.3	Detailed line survey including check survey , preparation of plans and longitudinal profiles, cross sectional profile for individual locations, route maps, spotting of towers, staking of tower locations using suitable softwares (PLS CADD) and approval by the Engineer.	LS	1		
<b>TOTAL (Carried Forward to Schedule No. 5. Grand Summary)</b>					

Name of Bidder :
Signature of Bidder :

**Note:**

1. The design available in Section V (Employer's Requirement) is indicative only.
2. The responsibility of the design according to the Employer's Requirement lies with the Contractor.
3. The line length and no. of towers indicated in the BID document and in Price Schedule is tentative only. The Bidder should properly examine the **latest KMZ file and other documents available in section V - B1 Annex H2** for quoting their price.



**Lot 1: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Lapsiphidi to Ratmate Substation (approx. Route Length: 59 KM) (b) Ratmate to New Hetauda Substation of NEA (approx. Route Length: 58 KM)**

**Breakdown of Rates and Prices Schedule No. 2. Plant and Mandatory Tools and Spare Parts Supplied from Abroad**

	Description	Country of origin	Unit	Qty.	Unit Rate (US\$)	Total Price (US\$)	Remarks
					DDP *		
				1	2	(1) x (2)	
1	Self-supporting lattice towers including double circuit and Quad Circuit Towers etc. as appropriate with vertical configuration of phases, two peaks - one OHGW, one OPGW, complete with stubs and all necessary accessories, with anticlimbing devices, Bird Anti-Nest Spikes, bird reflectors, bird nesting platforms, step bolts and all kind of plates, etc. along with templates or props for stub setting for different type of foundations with or without body and leg extensions suitable for live line maintenance as per approved design by the Engineer. A tentative Tower schedule along with other relevant information is available in Section V - B1/Annex C & Annex H. The Assessment for length, type, height, No. of Towers, etc. to be done from Annex H2 which is the latest document.		Lot	1			<i>Price Adjustment clause is applicable as per Price Adjustment Sub-clause 13.8 as well as Tower weight from the approved Bills of Quantities provided by the Contractor and the unit rates of tower material from the LME.</i>
2	Conductor, Compression joints and other accessories. Details description is available in Section V/Annexure D Appendix 5 and also consult Annex H2 for latest informations.		Lot	1			<i>Price Adjustment clause is applicable only on Conductor (on Aluminium and Steel Component) as per Price Adjustment Sub-clause 13.8 as well as unit weight of the Conductor from the approved Bills of Quantities provided by the Contractor and the unit rates of conductor components from the LME.</i>
3	Aircraft Warning System. Details description is available in Section V - B1/Annex D, Appendix 11.		Lot	1			
4	OPGW system. Details description is available in Section V -B1/Annex D, Appendix 3 and also consult Annex H2 for latest informations.		Lot	1			<b>For Quad Circuit Towers OPGW has to be considered in both peaks of the Tower, instead of one OPGW and one OHGW.</b>

**Lot 1: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Lapsiphidi to Ratmate Substation (approx. Route Length: 59 KM) (b) Ratmate to New Hetauda Substation of NEA (approx. Route Length: 58 KM)**

**Breakdown of Rates and Prices Schedule No. 2. Plant and Mandatory Tools and Spare Parts Supplied from Abroad**

5	OHWG, Compression joints and Accessories. Details description is available in Section V - B1/Annex D, Appendix 4 and also consult Annex H2 for latest informations.	Lot	1			
6	Insulator sets (included: Disc Insulators, Assembly fittings, Phase conductor fittings. Details description is available in Section V - B1/Annex D, Appendix 8 and Appendix 9 and also consult Annex H2 for latest informations.	Lot	1			
7	Tower Earthing (normal & counterpoise type including additional tower earthings). Details description is available in Section V - B1/Annex D, Appendix 10 and also consult Annex H2 for latest informations.	Lot	1			
8	Danger Plate / Phase Plate / No. plate / Anticlimbing Device / Bird Anti-Nest Spikes / Bird Reflectors / Bird Nesting Patforms. Details description is available in Section V - B1/Annex D, Appendix 6 and Appendix 11 and also consult Annex H2 for latest information.	Lot	1			
9	Mandatory Spare parts. Details description is available in Section V (Employer's Requirement) B0 Annex 2	Lot	1			
10	Mandatory Tools. Details description is available in Section V (Employer's Requirement) B0 Annex 7	Lot	1			
				<b>TOTAL (Carried Forward to Schedule No. 5. Grand Summary)</b>		

Name of Bidder :
Signature of Bidder :

Country of Origin Declaration Form

**Lot 1: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Lapsiphidi to Ratmate Substation (approx. Route Length: 59 KM) (b) Ratmate to New Hetauda Substation of NEA (approx. Route Length: 58 KM)**

**Breakdown of Rates and Prices Schedule No. 2. Plant and Mandatory Tools and Spare Parts Supplied from Abroad**

\* DDP-Works Site in Nepal: All Plant and Mandatory Spare Parts Supplied from Abroad shall be quoted as DDP- Works Site in Nepal basis. The Contractor shall also be responsible for custom clearance, loading, unloading, insurance, transportation, off-loading at Site and any other associate charges (inside or outside Nepal) to bring all goods and equipment to Site and staking and storing properly at Site. However, the tax exemption letter as per MCC Compact provision shall be provided to the winning bidder/future contractor if required documents as per MCA-Nepal tax exemption process attached under Section V (Employer’s Requirement) shall be submitted before arrival to Nepal boarder of the Plant and Mandatory Spare Parts Supplied from Abroad. The bidder shall include all cost in their bid price. During Contract implementation, Employer shall not be responsible for paying any extra/additional cost. The successful bidder/Contractor shall be required to submit Pro forma invoice 60 days before arrival of Equipment/Goods to Nepal border and the delivered items shall be exactly same with Pro forma invoice.

Item	Description	Code	Country

Note

- 1 Bidders shall enter the full name of the country of origin of all imported plant and equipment.

**Lot 1: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Lapsiphidi to Ratmate Substation (approx. Route Length: 59 KM) (b) Ratmate to New Hetauda Substation of NEA (approx. Route Length: 58 KM)**

**Breakdown of Rates and Prices Schedule No. 3. Plant, Goods, Materials and Mandatory Tools and Mandatory Spare Parts Supplied from Within the Employer's Country**

Item	Description	Qty.	EXW Unit Price (US\$)	EXW Total Price (US\$)
		<i>1</i>	<i>2</i>	<i>(1) x (2)</i>
1	Contractor may list the items available locally (Employer's country) provided it meets the Employer's requirement of the project.			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
<b>TOTAL (Carried Forward to Schedule No. 5. Grand Summary)</b>				

Name of Bidder :
Signature of Bidder :

Note

- 1 EXW Price – The Contractor shall also be responsible for loading, unloading, transit insurance (if any) and any other associate charges to bring all goods and equipment to Site, unloading, staking and storing/storage properly at Site. The bidder shall include all cost in their bid price. During Contract implementation, Employer shall not be responsible for paying any extra/additional cost.

**Lot 1: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Lapsiphidi to Ratmate Substation (approx. Route Length: 59 KM) (b) Ratmate to New Hetauda Substation of NEA (approx. Route Length: 58 KM)**

**Breakdown of Rates and Prices Schedule No. 4. Installation and Other Services Included all Related Civil Works**

Item	Description	Unit	Qty.	Unit Price	Total Price
				Currency	Currency (US\$)
				1	2
1	Preliminary Works, Site Preparation and General Facilities				
1.1	Submission of plans and documents/drawings of the approved tower to the Engineer.	Lot	1		
1.2	Geo Technical investigation including Ground Motion values for the area, Seismic Analysis, measurement of soil resistivity, tower footing resistance, Standard Penetration Test (SPT) / slope and soil stability as required, laboratory tests and submission of report. Refer to Section V - B1/Annex D, Appendix 2 and Appendix 2A, for Geo Technical investigation report (conducted earlier by Employer) for reference only. Also consult Section V- B1 Annex H2 for Updated Route.	Lot	1		
1.3	Setting up of laydown area / Store yard / Helipad (if contractor intends to use helicopter). For details refer to the latest EIA document available in MCA-Nepal website- www.mcanp.org	Lot	1		
1.4	Site office (and O&M cost of Site Office) including setting up of Site Office for Employer & Engineer including all necessary facilities (such as furnitures, computer and communication equipment etc.). For details refer to Section - V (Employer's Requirement).	Lot	1		
1.5	Arrangement of living accommodation for Contractor & Engineer's employees including all necessary amenities (at Contractor's cost). For details refer to Section - V (Employer's Requirement).	Lot	1		
1.6	Employer & Engineers transport facilities with drivers (including fuel, running and maintenance costs, statutory charges for cars etc.) - 4 Wheel Drive Pick up 2 No + 4 Wheel Drive SUV - 2 No as per Details available in Section V (Employer's Requirement), B0, Annex 9	Lot	1		
1.7	Concrete Design Mix preparation & Testing and approval by the Engineer.	LS	1		

**Lot 1: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Lapsiphidi to Ratmate Substation (approx. Route Length: 59 KM) (b) Ratmate to New Hetauda Substation of NEA (approx. Route Length: 58 KM)**

**Breakdown of Rates and Prices Schedule No. 4. Installation and Other Services Included all Related Civil Works**

1.8	Upgradation of existing roads without widening and without tree cutting and re-instatement of the road as specified in Section V (Employer's Requirement).	LS	1		
1.9	Construction of new access trails of 1.5 m width without tree cutting as specified in Section V (Employer's Requirement).	LS	1		
1.10	Arrangement of working area required during construction (by contractor) – considering the movement of workers and machineries during foundation, erection and stringing activities.	LS	1		
2	Tower (including Double Circuit and Quad Circuits) Foundations (including rock anchoring, Piling, Micro- Piling, etc. ) along with setting of stubs for towers using templates or props and other related works like Benching / Grading, excavations, dewatering, shoring and shuttering, reinforcement, concreting, curing, backfilling, compaction, Revetment, Stone Gabion Wall, Stone / Brick masonry Wall, Stone/Concrete Drainage Ditch etc. as per requirement, complete in all respect under different types of soil conditions . Contractor should provide suitable corrosion protection and flood protection for tower foundations as required. For details refer to Section - V - B0 and B1/Annex D, Appendix 11 and also consult Section V- B1 Annex H2 for Updated Route .	Lot	1		
3	Erosion Protection (include removal of excess material, site stabilisation with selected fill and drainage gravel package, geotextile and filter wrap, vertiver grass). For details refer to Section - V - B0.	Lot	1		
4	Tower (Including Double and Quad Circuits) Erection - For all type of Towers (Base Body & extensions including leg extensions) including Broad Base, Narrow Base , with or without extensions, including fixing of all accessories associated with Tower body, Aviation Lights as per requirements, tack welding / anti theft bolting after final tightening up-to bottom cross arm. For details refer to Section - V - B1/Annex D, Appendix 6 and also consult Section V- B1 Annex H2 for Updated Route.	Lot	1		

**Lot 1: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Lapsiphidi to Ratmate Substation (approx. Route Length: 59 KM) (b) Ratmate to New Hetauda Substation of NEA (approx. Route Length: 58 KM)**

**Breakdown of Rates and Prices Schedule No. 4. Installation and Other Services Included all Related Civil Works**

5	Stringing of ACSR Quad Moose Conductor for Normal, Multicircuit or any other type of Towers <b>including crossing of power lines (medium, high and extra high voltage), rivers, all types of roads, forests, etc.</b> with controlled tension method using Pilot Wire with or without Drones (to reduce tree clearance impact) including fixing of all accessories related to stringing work like disc insulators, hardware fittings, vibration dampers, arcing rings or other corona protection items, spacers, etc. complete in all respect. <b>The work also includes necessary arrangement for scaffolding, power and traffic blocks, etc.</b> For details refer to Section - V - B1/Annex D, Appendix 5 and also consult Section V- B1 Annex <b>H2</b> for Updated Route.	Lot	1		
6	Stringing of OHGW for Normal, Multicircuit and any other type of Towers using Pilot Wire with or without Drones (to reduce tree clearance impact ) <b>including crossing of power lines (medium, high and extra high voltage), rivers, all types of roads, forests, etc.</b> and fixing of all accessories related to stringing work like hardware fittings, vibration dampers, Aviation marker balls, complete in all respect. <b>The work also includes necessary arrangement for scaffolding, power and traffic blocks, etc..</b> For details refer to Section - V B1/Annex D, Appendix 4 and also consult Section V- B1 Annex <b>H2</b> for Updated Route.	Lot	1		
7	Stringing of OPGW for Normal, Multicircuit and any other type of Towers using Pilot Wire with or without Drones (to reduce tree clearance impact ) <b>including crossing of power lines (medium, high and extra high voltage), rivers, all types of roads, forests, etc.</b> and fixing of all accessories related to stringing work like hardware fittings, vibration dampers, Aviation marker balls, Splicing etc. complete in all respect. <b>The work also includes necessary arrangement for scaffolding, power and traffic blocks, etc..</b> For details refer to Section - V B1/Annex D, Appendix 3 and also consult Section V- B1 Annex <b>H2</b> for Updated Route.	Lot	1		
8	Tower Earthing Works which includes Earthing with one or multiple rod per foundation, Continuous counterpoise across one line span as well as earthing of the 5 Towers closest to Substation	Lot	1		
9	Environmental, Health & Safety, Social and Gender Requirements. For Details refer to Section V (Employer's Requirement) Annex 6 and EIA Document.	Lot	1		
10	FAT Witness . For details refer to Section - V (Employer's Requirement) Annex 3.	Lot	1		
11	Testing, Commissioning and Energizing. For details refer to Section - V (Employer's Requirement ).	Lot	1		
12	Tree Clearance Work during Survey & Geo-tech investigation, Foundation, Erection & Stringing Work. For details refer to EIA document Section - V (Employer's Requirement).	Lot	1		

**Lot 1: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Lapsiphidi to Ratmate Substation (approx. Route Length: 59 KM) (b) Ratmate to New Hetauda Substation of NEA (approx. Route Length: 58 KM)**

**Breakdown of Rates and Prices Schedule No. 4. Installation and Other Services Included all Related Civil Works**

13	Demolision of Building in ROW 46 Meter For details refer to EIA document attached in Section - V (Employer's Requirement).	Lot	1		
<b>TOTAL (to Schedule No. 5. Grand Summary)</b>					

Name of Bidder :
Signature of Bidder :



**Lot 1: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Lapsiphidi to Ratmate Substation (approx. Route Length: 59 KM) (b) Ratmate to New Hetauda Substation of NEA (approx. Route Length: 58 KM)**

**Breakdown of Rates and Prices Schedule No. 4. Installation and Other Services Included all Related Civil Works**

**DAYWORK**

**Schedule No. 4.1: Breakdown of General Installation and Construction Items**

Item no.	Description	Unit	Quantity	Unit Rate (US\$)	Amount (US\$)
1	Site Clearance and Preparation - Bush cutting, leveling of undulated ground for stacking of Construction Materials etc.	Per Tower	15		
2	Upgrading of existing road and temporary access road/foot-trail	Per Tower	15		
3	Construction of Temporary Camps for worker - Ladies & Gents	Per Tower	15		
4	Installation of safety caution tapes/bars, sign and boards in construction sites	Per Tower	15		
Total for Schedule No. 4.1					
(Carried Forward to Summary)					

Remarks: The quantity has been assumed for 5 KM of route length.

**Schedule No. 4.2: Breakdown of Earthworks**

Item no.	Description	Unit	Quantity	Unit Rate (US\$)	Amount (US\$)
1	Excavation in all type of soils except hard rock	cum	8,000		
2	Excavation in hard rock	cum	2,000		
3	Backfilling with carried earth	cum	3,000		
4	Backfilling with excavated earth	cum	10,000		
Total for Schedule No. 4.2					
(Carried Forward to Summary)					

Remarks: The quantity has been assumed for 5 KM of route length.

**Lot 1: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Lapsiphidi to Ratmate Substation (approx. Route Length: 59 KM) (b) Ratmate to New Hetauda Substation of NEA (approx. Route Length: 58 KM)**

**Breakdown of Rates and Prices Schedule No. 4. Installation and Other Services Included all Related Civil Works  
Schedule No. 4.3: Breakdown of Civil Works**

Item no.	Description	Unit	Quantity	Unit Rate (US\$)	Amount (US\$)
1	Concreting work with supply of M-10 (1:3:6) grade of concrete including all associated work like shuttering, dewatering etc. complete in all respect.	cum	500		
2	Concreting work with supply of M-20 (1:1.5:3) grade of concrete including all associated work like shuttering, dewatering etc. complete in all respect.	cum	1,500		
3	Concreting work with supply of M-30 (as per design mix approved by Engineer) grade of concrete including all associated work like shuttering, dewatering etc. complete in all respect.	cum	1,500		
4	Reinforced Concrete Wall with M20/M30 grade for revetment purpose including supply of all materials complete in all respect	cum	1,000		
5	Stone Gabion Wall with laid steel net caging including supply of all materials	cum	1,500		
6	Stone / Brick masonry Wall including supply of all materials	cum	2,000		
7	Stone/Concrete Drainage Ditch including supply of all materials	cum	1,000		
8	Benching / Grading for tower foundations including supply of all materials				
8.1	Normal dry soil	cum	1,500		
8.2	Fissured Rock	cum	1,000		
8.3	Hard Rock	cum	500		
9	Supply of Tor Steel of different size Fe 50C	MT	300		
10	Stub Setting & Template fixing / prop setting Work	Per Tower/Loc.	15		
11	Dewatering including supply of pump with fuel	cum	3,000		

**Lot 1: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Lapsiphidi to Ratmate Substation (approx. Route Length: 59 KM) (b) Ratmate to New Hetauda Substation of NEA (approx. Route Length: 58 KM)**

**Breakdown of Rates and Prices Schedule No. 4. Installation and Other Services Included all Related Civil Works**

12	Bar Bending for different size of reinforcement		MT	300		
13	Detailed line survey, plan, longitudinal and cross sectional profiles, route maps, spotting of towers, staking of tower locations and approval by employer		Km	5		
14	Soil investigation, including laboratory tests and submission of report		Km	5		
15	Micropiling for large angle towers (30 to 60 degree and 60 to 90 degree towers)		No.	15		
16	Steel Grillage Foundation for different type of Foundations including supply of all materials.		MT	3,000		
17	Different Type and Size of Tree Clearance		No.	1,000		
18	Bush Clearance		Sq. Mtr.	1,000		
Total for Schedule No. 4.3 (carried forward to Summary)						

Remarks: The quantity has been assumed for 5 KM of route length.

**Schedule 4.4.1: Breakdown for Day work Rates: Labor**

Item no.	Description	Unit	Nominal quantity	Unit Rate (US\$)	Amount (US\$)
1	Erection of all type of towers/Poles	MT	1,000		
2	Stringing of ACSR Quad Moose Conductor for Normal, Multicircuit or any other type of Towers <b>including crossing of power lines (medium, high and extra high voltage), rivers, all types of roads, forests, etc.</b> with controlled tension method using Pilot Wire with or without Drones (to reduce tree clearance impact) including fixing of all accessories related to stringing work like disc insulators, hardware fittings, vibration dampers, arcing rings or other corona protection items, spacers, etc. complete in all respect. <b>The work also includes necessary arrangement for scaffolding, power and traffic blocks, etc.</b> For details refer to Section - V - B1/Annex D, Appendix 5 and also consult Section V- B1 Annex H2 for Updated Route.	KM	5		
3	Stringing of OHGW for Normal, Multicircuit and any other type of Towers using Pilot Wire with or without Drones (to reduce tree clearance impact ) <b>including crossing of power lines (medium, high and extra high voltage), rivers, all types of roads, forests, etc.</b> and fixing of all accessories related to stringing work like hardware fittings, vibration dampers, Aviation marker balls, complete in all respect. <b>The work also includes necessary arrangement for scaffolding, power and traffic blocks, etc.</b> For details refer to Section - V B1/Annex D, Appendix 4 and also consult Section V- B1 Annex H2 for Updated Route.	KM	5		

**Lot 1: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Lapsiphidi to Ratmate Substation (approx. Route Length: 59 KM) (b) Ratmate to New Hetauda Substation of NEA (approx. Route Length: 58 KM)**

**Breakdown of Rates and Prices Schedule No. 4. Installation and Other Services Included all Related Civil Works**

4	Stringing of OPGW for Normal, Multicircuit and any other type of Towers using Pilot Wire with or without Drones (to reduce tree clearance impact ) <b>including crossing of power lines (medium, high and extra high voltage), rivers, all types of roads, forests, etc. and</b> fixing of all accessories related to stringing work like hardware fittings, vibration dampers, Aviation marker balls, Splicing etc. complete in all respect. <b>The work also includes necessary arrangement for scaffolding, power and traffic blocks, etc..</b> For details refer to Section - V B1/Annex D, Appendix 3 and also consult Section V- B1 Annex H2 for Updated Route.	KM	5		
Subtotal					
Total for Day work: Labor					
(carried forward to Day work Summary)					

Remarks: The quantity has been assumed for 5 KM of route length.

**Schedule of 4.4.2: Breakdown for Day work Rates: Materials**

Item no.	Description	Unit	Nominal quantity	Unit Rate (US\$)	Amount (US\$)
1	Self-supporting lattice towers, with vertical configuration of phases, two peaks - one OHGW, one OPGW, with or without body and leg extensions suitable for live line maintenance as per the design submitted by the Contractor and approved by the Engineer. For Details refer to Section V	MT	1,000		
2	Tower stubs and all necessary accessories, with anticlimbing devices, bird guard, bird reflectors, bird nesting platforms, step bolts and all kind of plates, etc. along with templates or props for stub setting for different type of foundations with or without body and leg extensions suitable for live line maintenance as per the design submitted by the Contractor and approved by the Engineer. For Details refer to Section V	MT	100		
3	ACSR Moose conductor.	KM	150		
4	Spacer damper for conductor.	No	3,000		
5	Rigid Spacer for conductor jumpers.	No	500		
6	Stockbridge Vibration damper.	No	200		

**Lot 1: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Lapsiphidi to Ratmate Substation (approx. Route Length: 59 KM) (b) Ratmate to New Hetauda Substation of NEA (approx. Route Length: 58 KM)**

**Breakdown of Rates and Prices Schedule No. 4. Installation and Other Services Included all Related Civil Works**

7	Aircraft warning spheres		No	100		
8	Tower Painting for aviation requirement		No	15		
9	OPGW 48		Km	5		
10	Suspension assembly for OPGW 48		Set	15		
11	Tension assembly-one side (including clamps for downloads) for OPGW 48		Set	15		
12	Tension assembly-non splicing for OPGW 48		Set	15		
13	Tension assembly-splicing (including clamps for downloads) for OPGW 48		Set	5		
14	Joint boxes OPGW-OPGW		No	5		
15	Joint termination boxes OPGW-U/G FOC		No	5		
16	Vibration damper for OPGW 48		No	30		
17	OHW/Earthwire of aluminum-clad steel wire		Km	5		
18	Suspension assembly for OHGW/Earthwire		No	15		
19	Tension assembly for OHGW/Earthwire		No	15		
20	Vibration damper for OHGW/Earthwire		No	30		
21	Suspension Insulator set (suitable for normal & crossings) for ACSR Quad Moose Conductor		Set	100		
22	Tension Insulator set (suitable for normal & crossings) for ACSR Quad Moose Conductor		Set	200		
23	Auxiliary suspension set-"Pilot" including accessories and counterweight for ACSR Quad Moose Conductor		Set	50		
24	Tower Earthing (normal & counterpoise type including additional tower earthings)		Set	15		
25	Danger Plate / Phase Plate / No plate / Anticlimbing Device / Bird Anti-Nest Spikes / Bird Reflectors / Bird Nesting Platforms,		Set	15		
26	Any essential item which is not included in the list		Lot	1		
	Total for Day work: Materials (carried forward to Day work Summary)					

Remarks: 1. The quantity has been assumed for 5 KM of route length. 2. The detailed specification of different materials is available in Section V of the bid document.

**Schedule 4.4.3: Breakdown for Day work Rates: Contractor's Equipment**

Item no.	Description	Nominal quantity (hours)	Basic hourly rental rate (USD)	Extended Amount (US\$)	Amount (US\$)
1	Excavator	50			
2	Dozer	50			
3	5 Ton Hydra	50			
4	Welding Set with Generator	100			
5	Compactor	300			
6	Concrete Mixer Machine	400			
7	Vibrator	200			
8	Use of Helicopter for Transpotation of Material, Machinery and Erection of Towers	240			
9	Use of Drones for Stringing Work	240			
	Total for Day work: Contractor's Equipment (carried forward to Day work Summary)				

**Lot 1: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Lapsiphidi to Ratmate Substation (approx. Route Length: 59 KM) (b) Ratmate to New Hetauda Substation of NEA (approx. Route Length: 58 KM)**

**Breakdown of Rates and Prices Schedule No. 4. Installation and Other Services Included all Related Civil Works**

**Summary of Breakdown for Schedule 4.4**

<b>Description</b>	<b>Amount in US\$</b>
1. Sub-Total for Day work: Labor	
2. Sub-Total for Day work: Materials	
3. Sub-Total for Day work: Contractor's Equipment	
Total for Day work (Schedule 4.4)	

**Lot 1: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Lapsiphidi to Ratmate Substation (approx. Route Length: 59 KM) (b) Ratmate to New Hetauda Substation of NEA (approx. Route Length: 58 KM)**

**Breakdown of Rates and Prices Schedule No. 4. Installation and Other Services Included all Related Civil Works  
General Summary for Breakdown of Schedule 4.0 - Daywork**

Contract Name:		
Contract No.:		
<b>General Summary</b>	<b>Page</b>	<b>Amount (US\$)</b>
Schedule No. 4.1:		
Schedule No. 4.2:		
Schedule No. 4.3:		
Schedule No. 4.4:		
<b>Total for Schedules 4.1, 4.2, 4.3 and 4.4 (to be carried forward to Schedule 5.0)</b>		

Note

- 1 The quoted Unit Price shall include all the cost required to perform task successfully such as loading, transportation, insurance, unloading and storing at proper storage place and carrying out works as per Employer's requirement and Conditions of Contract.
- 2 Daywork rate for "General Installation and Construction Items" Earthwork", Civil Works" shall include all cost required to carryout the works as per Employer's Requirement and Conditions of Contract and any associated works related cost required to carryout the works successfully.
- 3 Daywork rate for Labour: The labour rate should include all cost needed to provide the Labour at required place, ensuring that the labour is qualified for his/her job and can perform the required task professionally.
- 4 Daywork rate for Material: Unit rate include, transportation of site, loading, unloading, cutting, placing as per intended required task, while insuring the quality of the material and health and safety.
- 5 Daywork rate Contractor's Equipment: The Basic Hourly rates includes all cost that require to run and perform the task, such as maintenance of vehicle, running responsibility, health and safety protection, petrol, diesel, lubricants, driver, assistance etc. required for carrying the task with the equipment.

**Lot 1: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Lapsiphidi to Ratmate Substation (approx. Route Length: 59 KM) (b) Ratmate to New Hetauda Substation of NEA (approx. Route Length: 58 KM)**

**Breakdown of Rates and Prices Schedule No. 5. Grand Summary**

Item	Description	Total Price Currency (US\$)
1	Total Schedule No. 1. Design Services	
2	Total Schedule No. 2. Plant, Tools and Mandatory Spare Parts Supplied from Abroad	
3	Total Schedule No. 3. Plant, Tools and Mandatory Spare Parts Supplied from Within the Employer's Country	
4	Total Schedule No. 4. Installation and Other Services Included all Related Civil Works (Excluding Daywork)	
5	<b>TOTAL (to Bid Form - Resulting contract Price after correction if any)</b>	
6	Output VAT (if applicable)	
7	<b>Total including Output VAT (5+6)</b>	
8	Total Schedule No. 4. Schedule 4.0 - Daywork only (excluding VAT)	
9	<b>Grand Total Including Daywork for Evaluation and Comparison Purpose (5+8)</b>	

Name of Bidder :
Signature of Bidder :

Note

- The quoted Unit Price shall include all the cost required to perform task successfully such as loading, transportation, insurance, unloading and storing at proper storage place and carrying out works as per Employer's requirement and Conditions of Contract.



**Lot 1: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Lapsiphidi to Ratmate Substation (approx. Route Length: 59 KM) (b) Ratmate to New Hetauda Substation of NEA (approx. Route Length: 58 KM)**

**Breakdown of Rates and Prices Schedule No. 6. Recommended Spare Parts**

Item	Description	Qty.	Unit Price		Total Price
			CIP (USD)	EXW (NPR)	
			(foreign parts)	(local parts)	
		<i>1</i>	<i>2</i>	<i>3</i>	<i>(1) x (2) or(3)</i>

Name of Bidder :

Signature of Bidder :

Note:

- The price of recommended spare parts quoted in Price Schedule No. 6 shall not be considered for evaluation. This is because such spare parts would normally be used after long time durations beyond the MCC Compact end date, and could not be financed from the Compact funds.

## **Revised Price Schedule for Lot 2**

**Lot2: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from Ratmate to New Damauli Substation of NEA**  
**(approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices Schedule No. 1. Design Services**

Item	Description	Unit	Qty.	Unit Rate (US\$)	Total Price (US\$)
			1	2	(1) x (2)
1	<b>Design services and Engineering</b>				
1.1	Detailed design (Tower Design & Foundation Design including design of Double Circuit and Quad Circuit Towers ) and delivery of all documents, drawings and plans for final approval.	LS	1		
1.2	Proto Type Testing of Transmission Towers and approval including manufacturing of prototype towers and accessories and transport the same to the proto test lab.	LS	1		
1.3	Detailed line survey including check survey , preparation of plans and longitudinal profiles, cross sectional profile for individual locations, route maps, spotting of towers, staking of tower locations using suitable softwares (PLS CADD) and approval by the Engineer.	LS	1		
<b>TOTAL (Carried Forward to Schedule No. 5. Grand Summary)</b>					

Name of Bidder :

Signature of Bidder :

**Note:**

1. The design available in Section V (Employer's Requirement) is indicative only.
2. The responsibility of the design according to the Employer's Requirement lies with the Contractor.
3. The line length and no. of towers indicated in the BID document and in Price Schedule is tentative only. **The Bidder should properly examine the latest KMZ file and other documents available in section V - B1 annex H2 for quoting their price.**

**Lot2: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from Ratmate to New Damauli Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices Schedule No. 2. Plant, Goods, Materials and Mandatory Tools and Spare Parts Supplied from Abroad**

Item	Description	Country of origin	Unit	Qty.	Unit Rate	Total Price	Remarks
					(US\$)	(USD)	
					DDP *	(1) x (2)	
1	Self-supporting lattice towers including double circuit and Quad Circuit Towers etc. as appropriate with vertical configuration of phases, two peaks - one OHGW, one OPGW, complete with stubs and all necessary accessories, with anticlimbing devices, Bird Anti-Nest Spikes, bird reflectors, bird nesting platforms, step bolts and all kind of plates, etc. along with templates or props for stub setting for different type of foundations with or without body and leg extensions suitable for live line maintenance as per approved design by the Engineer. A tentative Tower schedule along with other relevant information is available in Section V - B1/Annex C & Annex H . The Accessment for length, type, height, No. of Towers, etc. to be done from Annex H2 which is the latest document.		Lot	1			<i>Price Adjustment clause is applicable as per Price Adjustment Sub-clause 13.8 as well as Tower weight from the approved Bills of Quantites provided by the Contractor and the unit rates of tower material from the LME.</i>
2	Conductor, Compression joints and other accessories. Details description is available in Section V/Annexure D Appendix 5 and also consult Annex H2 for latest informations.		Lot	1			<i>Price Adjustment clause is applicable only on Conductor (on Aluminium and Steel Component)as per Price Adjustment Sub-clause 13.8 as well as unit weight of the Conductor from the approved Bills of Quantites provided by the Contractor and the unit rates of conductor components from the LME.</i>
3	Aircraft Warning System. Details description is available in Section V - B1/Annex D, Appendix 11.		Lot	1			
4	OPGW system. Details description is available in Section V -B1/Annex D, Appendix 3 and also consult Annex H2 for latest informations.		Lot	1			<i>For Quad Circuit Towers OPGW has to be considered in both peaks of the Tower, instead of one OPGW and one OHGW.</i>
5	OHGW, Compression joints and Accessories. Details description is available in Section V - B1/Annex D, Appendix 4 and also consult Annex H2 for latest informations.		Lot	1			
6	Insulator sets (included: Disc Insulators, Assembly fittings, Phase conductor fittings. Details description is available in Section V - B1/Annex D, Appendix 8 and Appendix 9 and also consult Annex H2 for latest informations.		Lot	1			

**Lot2: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from Ratmate to New Damauli Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices Schedule No. 2. Plant, Goods, Materials and Mandatory Tools and Spare Parts Supplied from Abroad**

7	Tower Earthing (normal & counterpoise type including additional tower earthings). Details description is available in Section V - B1/Annex D, Appendix 10 and also consult Annex H2 for latest informations.		Lot	1				
8	Danger Plate / Phase Plate / No. plate / Anticlimbing Device / Bird Anti-Nest Spikes / Bird Reflectors / Bird Nesting Patforms. Details description is available in Section V - B1/Annex D, Appendix 6 and Appendix 11 and also consult Annex H2 for latest information.		Lot	1				
9	Mandatory Spare parts. Details description is available in Section V (Employer's Requirement) B0 Annex 2		Lot	1				
10	Mandatory Tools. Details description is available in Section V (Employer's Requirement) B0 Annex 7		Lot	1				
		<b>TOTAL (Carried Forward to Schedule No. 5. Grand</b>						

Name of Bidder :

Signature of Bidder :

Country of Origin Declaration Form

\* DDP-Works Site in Nepal: All Plant and Mandatory Spare Parts Supplied from Abroad shall be quoted as DDP- Works Site in Nepal basis. The Contractor shall also be responsible for custom clearance,

**Lot2: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from Ratmate to New Damauli Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices Schedule No. 2. Plant, Goods, Materials and Mandatory Tools and Spare Parts Supplied from Abroad**

<b>Item</b>	<b>Description</b>	<b>Code</b>	<b>Country</b>

Note  
1

Bidders shall enter the full name of the country of origin of all imported plant and equipment.

**Lot2: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from Ratmate to New Damauli Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices Schedule No. 3. Plant, Goods, Materials and Mandatory Tools and Mandatory Spare Parts Supplied from Within the Employer's Country**

Item	Description	Qty.	EXW Unit Price (US\$)	EXW Total Price (US\$)
		<i>1</i>	<i>2</i>	<i>(1) x (2)</i>
1	Contractor may list the items available locally (Employer's country) provided it meets the Employer's requirement of the project.			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
		TOTAL (Carried Forward to Schedule No. 5. Grand Summary)		

Name of Bidder :
Signature of Bidder :

Note

1 EXW Price – The Contractor shall also be responsible for loading, unloading, transit insurance (if any) and any other associate charges to bring all goods and equipment to Site, unloading, staking and storing/storage properly at Site. The bidder shall include all cost in their bid price. During Contract implementation, Employer shall not be responsible for paying any extra/additional cost.

**Lot 2: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Ratmate to New Damauli Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices A30**

Item	Description	Unit	Qty.	Unit Price	Total Price
				Currency (US\$)	Currency (US\$)
				<i>1</i>	<i>(1) x (2)</i>
1	Preliminary Works, Site Preparation and General Facilities				
1.1	Submission of plans and documents/drawings of the approved tower to the Engineer.	Lot	1		
1.2	Geo Technical investigation including Ground Motion values for the area, Seismic Analysis, measurement of soil resistivity, tower footing resistance, Standard Penetration Test (SPT) / slope and soil stability as required, laboratory tests and submission of report. Refer to Section V - B1/Annex D, Appendix 2 and Appendix 2A, for Geo Technical investigation report (conducted earlier by Employer) for reference only. Also consult Section V-B1 Annex H2 for Updated Route.	Lot	1		
1.3	Setting up of laydown area / Store yard / Helipad (if contractor intends to use helicopter). For details refer to the latest EIA document available in MCA-Nepal website- <a href="http://www.mcanp.org">www.mcanp.org</a>	Lot	1		
1.4	Site office (and O&M cost of Site Office) including setting up of Site Office for Employer & Engineer including all necessary facilities (such as furnitures, computer and communication equipment etc.). For details refer to Section - V (Employer's Requirement).	Lot	1		



**Lot 2: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Ratmate to New Damauli Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices A30**

1.5	Arrangement of living accommodation for Contractor & Engineer's employees including all necessary amenities (at Contractor's cost). For details refer to Section - V (Employer's Requirement).	Lot	1		
1.6	Employer & Engineers transport facilities with drivers (including fuel, running and maintenance costs, statutory charges for cars etc.) - 4 Wheel Drive Pick up 2 No + 4 Wheel Drive SUV - 2 No as per Details available in Section V (Employer's Requirement), B0, Annex 9	Lot	1		
1.7	Concrete Design Mix preparation & Testing and approval by the Engineer.	LS	1		
1.8	Upgradation of existing roads without widening and without tree cutting and re-instatement of the road as specified in Section V (Employer's Requirement).	LS	1		
1.9	Construction of new access trails of 1.5 m width without tree cutting as specified in Section V (Employer's Requirement).	LS	1		
1.10	Arrangement of working area required during construction (by contractor) – considering the movement of workers and machineries during foundation, erection and stringing activities.	LS	1		
2	Tower (including Double Circuit and Quad Circuits) Foundations (including rock anchoring, Piling, Micro- Piling, etc. ) along with setting of stubs for towers using templates or props and other related works like Benching / Grading, excavations, dewatering, shoring and shuttering, reinforcement, concreting, curing, backfilling, compaction, Revetment, Stone Gabion Wall, Stone / Brick masonry Wall, Stone/Concrete Drainage Ditch etc. as per requirement, complete in all respect under different types of soil conditions . Contractor should provide suitable corrosion protection and flood protection for tower foundations as required. For details refer to Section - V - B0 and B1/Annex D, Appendix 11 and also consult Section V- B1 Annex H2 for Updated Route .	Lot	1		

**Lot 2: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Ratmate to New Damauli Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices A30**

3	Erosion Protection (include removal of excess material, site stabilisation with selected fill and drainage gravel package, geotextile and filter wrap, vertiver grass). For details refer to Section - V - B0.	Lot	1		
4	Tower (Including Double and Quad Circuits) Erection - For all type of Towers (Base Body & extensions including leg extensions) including Broad Base, Narrow Base , with or without extensions, including fixing of all accessories associated with Tower body, Aviation Lights as per requirements, tack welding / anti theft bolting after final tightening up-to bottom cross arm. For details refer to Section - V - B1/Annex D, Appendix 6 and also consult Section V- B1 Annex H2 for Updated Route.	Lot	1		
5	Stringing of ACSR Quad Moose Conductor for Normal, Multicircuit or any other type of Towers <b>including crossing of power lines (medium, high and extra high voltage), rivers, all types of roads, forests, etc.</b> with controlled tension method using Pilot Wire with or without Drones (to reduce tree clearance impact) including fixing of all accessories related to stringing work like disc insulators, hardware fittings, vibration dampers, arcing rings or other corona protection items, spacers, etc. complete in all respect. <b>The work also includes necessary arrangement for scaffolding, power and traffic blocks, etc.</b> For details refer to Section - V - B1/Annex D, Appendix 5 and also consult Section V- B1 Annex H2 for Updated Route.	Lot	1		
6	Stringing of OHGW for Normal, Multicircuit and any other type of Towers using Pilot Wire with or without Drones (to reduce tree clearance impact ) <b>including crossing of power lines (medium, high and extra high voltage), rivers, all types of roads, forests, etc. and</b> fixing of all accessories related to stringing work like hardware fittings, vibration dampers, Aviation marker balls, complete in all respect. <b>The work also includes necessary arrangement for scaffolding, power and traffic blocks, etc.</b> For details refer to Section - V B1/Annex D, Appendix 4 and also consult Section V- B1 Annex H2 for Updated Route.	Lot	1		

**Lot 2: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Ratmate to New Damauli Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices A30**

7	Stringing of OPGW for Normal, Multicircuit and any other type of Towers using Pilot Wire with or without Drones (to reduce tree clearance impact ) <b>including crossing of power lines (medium, high and extra high voltage), rivers, all types of roads, forests, etc. and</b> fixing of all accessories related to stringing work like hardware fittings, vibration dampers, Aviation marker balls, Splicing etc. complete in all respect. <b>The work also includes necessary arrangement for scaffolding, power and traffic blocks, etc..</b> For details refer to Section - V B1/Annex D, Appendix 3 and also consult Section V- B1 Annex H2 for Updated Route.	Lot	1		
8	Tower Earthing Works which includes Earthing with one or multiple rod per foundation, Continuous counterpoise across one line span as well as earthing of the 5 Towers closest to Substation	Lot	1		
9	Environmental, Health & Safety, Social and Gender Requirements. For Details refer to Section V (Employer's Requirement) Annex 6 and EIA Document.	Lot	1		
10	FAT Witness. For details refer to Section - V (Employer's Requirement) Annex 3.	Lot	1		
11	Testing, Commissioning and Energizing. For details refer to Section - V (Employer's Requirement ).	Lot	1		
12	Tree Clearance Work during Survey & Geo-tech investigation, Foundation, Erection & Stringing Work. For details refer to EIA document Section - V (Employer's Requirement).	Lot	1		
13	Demolition of Building in ROW 46 Meter For details refer to EIA document attached in Section - V (Employer's Requirement).	Lot	1		

Name of Bidder :
Signature of Bidder :

**Lot 2: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Ratmate to New Damauli Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices A30**

**DAYWORK**

**Schedule No. 4.1: Breakdown of General Installation and Construction Items**

<b>Item no.</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Unit Rate (US\$)</b>	<b>Amount (US\$)</b>
1	Site Clearance and Preparation - Bush cutting, leveling of undulated ground for stacking of Construction Materials etc.	Per Tower	15		
2	Upgrading of existing road and temporary access road/foot-trail	Per Tower	15		
3	Construction of Temporary Camps for worker - Ladies & Gents	Per Tower	15		
4	Installation of safety caution tapes/bars, sign and boards in construction sites	Per Tower	15		
Total for Schedule No. 4.1 (Carried Forward to Summary)					

Remarks: The quantity has been assumed for 5 KM of route length.

**Schedule No. 4.2: Breakdown of Earthworks**

<b>Item no.</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Unit Rate (US\$)</b>	<b>Amount (US\$)</b>
1	Excavation in all type of soils except hard rock	cum	8,000		
2	Excavation in hard rock	cum	2,000		
3	Backfilling with carried earth	cum	3,000		
4	Backfilling with excavated earth	cum	10,000		
Total for Schedule No. 4.2 (Carried Forward to Summary)					

Remarks: The quantity has been assumed for 5 KM of route length.

**Lot 2: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Ratmate to New Damauli Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices A30**

**Schedule No. 4.3: Breakdown of Civil Works**

<b>Item no.</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Unit Rate (US\$)</b>	<b>Amount (US\$)</b>
1	Concreting work with supply of M-10 (1:3:6) grade of concrete including all associated work like shuttering, dewatering etc. complete in all respect.	cum	500		
2	Concreting work with supply of M-20 (1:1.5:3) grade of concrete including all associated work like shuttering, dewatering etc. complete in all respect.	cum	1,500		
3	Concreting work with supply of M-30 (as per design mix approved by Engineer) grade of concrete including all associated work like shuttering, dewatering etc. complete in all respect.	cum	1,500		
4	Reinforced Concrete Wall with M20/M30 grade for revetment purpose including supply of all materials complete in all respect	cum	1,000		
5	Stone Gabion Wall with laid steel net caging including supply of all materials	cum	1,500		
6	Stone / Brick masonry Wall including supply of all materials	cum	2,000		
7	Stone/Concrete Drainage Ditch including supply of all materials	cum	1,000		
8	Benching / Grading for tower foundations including supply of all materials				
8.1	Normal dry soil	cum	1,500		
8.2	Fissured Rock	cum	1,000		
8.3	Hard Rock	cum	500		
9	Supply of Tor Steel of different size Fe 500	MT	300		
10	Stub Setting & Template fixing / prop setting Work	Per Tower/Loc.	15		
11	Dewatering including supply of pump with fuel	cum	3,000		
12	Bar Bending for different size of reinforcement	MT	300		

**Lot 2: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Ratmate to New Damauli Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices A30**

13	Detailed line survey, plan, longitudinal and cross sectional profiles, route maps, spotting of towers, staking of tower locations and approval by employer.		Km	5		
14	Soil investigation, including laboratory tests and submission of report.		Km	5		
15	Micropiling for large angle towers (30 to 60 degree and 60 to 90 degree towers)		No.	15		
16	Steel Grillage Foundation for different type of Foundations including supply of all materials.		MT	3,000		
17	Different Type and Size of Tree Clearance		No.	1,000		
18	Bush Clearance		Sq. Mtr.	1,000		
Total for Schedule No. 4.3						
(carried forward to Summary)						

Remarks: The quantity has been assumed for 5 KM of route length.

**Lot 2: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Ratmate to New Damauli Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices A30  
Schedule 4.4.1: Breakdown for Day work Rates: Labor**

<b>Item no.</b>	<b>Description</b>		<b>Unit</b>	<b>Nominal quantity</b>	<b>Unit Rate (US\$)</b>	<b>Amount (US\$)</b>
1	Erection of all type of towers/Poles		MT	1,000		
2	Stringing of ACSR Quad Moose Conductor for Normal, Multicircuit or any other type of Towers <b>including crossing of power lines (medium, high and extra high voltage), rivers, all types of roads, forests, etc.</b> with controlled tension method using Pilot Wire with or without Drones (to reduce tree clearance impact) including fixing of all accessories related to stringing work like disc insulators, hardware fittings, vibration dampers, arcing rings or other corona protection items, spacers, etc. complete in all respect. <b>The work also includes necessary arrangement for scaffolding, power and traffic blocks, etc.</b> For details refer to Section - V - B1/Annex D, Appendix 5 and also consult Section V- B1 Annex <b>H2</b> for Updated Route.		KM	5		
3	Stringing of OHGW for Normal, Multicircuit and any other type of Towers using Pilot Wire with or without Drones (to reduce tree clearance impact ) <b>including crossing of power lines (medium, high and extra high voltage), rivers, all types of roads, forests, etc. and</b> fixing of all accessories related to stringing work like hardware fittings, vibration dampers, Aviation marker balls, complete in all respect. <b>The work also includes necessary arrangement for scaffolding, power and traffic blocks, etc.</b> For details refer to Section - V B1/Annex D, Appendix 4 and also consult Section V- B1 Annex <b>H2</b> for Updated Route.		KM	5		

**Lot 2: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Ratmate to New Damauli Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices A30**

4	Stringing of OPGW for Normal, Multicircuit and any other type of Towers using Pilot Wire with or without Drones (to reduce tree clearance impact ) <b>including crossing of power lines (medium, high and extra high voltage), rivers, all types of roads, forests, etc. and</b> fixing of all accessories related to stringing work like hardware fittings, vibration dampers, Aviation marker balls, Splicing etc. complete in all respect. <b>The work also includes necessary arrangement for scaffolding, power and traffic blocks, etc..</b> For details refer to Section - V B1/Annex D, Appendix 3 and also consult Section V- B1 Annex H2 for Updated Route.		KM	5		
					Subtotal	
					Total for Day work: Labor	
					(carried forward to Day work Summary)	

Remarks: The quantity has been assumed for 5 KM of route length.

**Schedule of 4.4.2: Breakdown for Day work Rates: Materials**

Item no.	Description		Unit	Nominal quantity	Unit Rate (US\$)	Amount (US\$)
1	Self-supporting lattice towers, with vertical configuration of phases, two peaks - one OHGW, one OPGW, with or without body and leg extensions suitable for live line maintenance as per the design submitted by the Contractor and approved by the Engineer. For Details refer to Section V		MT	1,000		



**Lot 2: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Ratmate to New Damauli Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices A30**

2	Tower stubs and all necessary accessories, with anticlimbing devices, bird guard, bird reflectors, bird nesting platforms, step bolts and all kind of plates, etc. along with templates or props for stub setting for different type of foundations with or without body and leg extensions suitable for live line maintenance as per the desgin submitted by the Contractor and approved by the Engineer. For Details refer to Section V		MT	100		
3	ACSR Moose conductor.		KM	150		
4	Spacer damper for conductor.		No	3,000		
5	Rigid Spacer for conductor jumpers.		No	500		
6	Stockbridge Vibration damper.		No	200		
7	Aircraft warning spheres		No	100		
8	Tower Painting for aviation requirement		No	15		
9	OPGW 48		Km	5		
10	Suspension assembly for OPGW 48		Set	15		
11	Tension assembly-one side (including clamps for downloads) for OPGW 48		Set	15		
12	Tension assembly-non splicing for OPGW 48		Set	15		
13	Tension assembly-splicing (including clamps for downloads) for OPGW 48		Set	5		
14	Joint boxes OPGW-OPGW		No	5		
15	Joint termination boxes OPGW-U/G FOC		No	5		
16	Vibration damper for OPGW 48		No	30		
17	OHGW/Earthwire of aluminum-clad steel wire		Km	5		
18	Suspension assembly for OHGW/Earthwire		No	15		
19	Tension assembly for OHGW/Earthwire		No	15		
20	Vibration damper for OHGW/Earthwire		No	30		
21	Suspension Insulator set (suitable for normal & crossings) for ACSR Quad Moose Conductor		Set	100		
22	Tension Insulator set (suitable for normal & crossings) for ACSR Quad Moose Conductor		Set	200		

**Lot 2: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Ratmate to New Damauli Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices A30**

23	Auxiliary suspension set-"Pilot" including accessories and counterweight for ACSR Quad Moose Conductor		Set	50		
24	Tower Earthing (normal & counterpoise type including additional tower earthings)		Set	15		
25	Danger Plate / Phase Plate / No plate / Anticlimbing Device / Bird Anti-Nest Spikes / Bird Reflectors / Bird Nesting Patforms,		Set	15		
26	Any essential item which is not included in the list		Lot	1		
Total for Day work: Materials (carried forward to Day work Summary)						

Remarks: 1. The quantity has been assumed for 5 KM of route length. 2. The detailed specification of different materials is available in Section V of the bid document.

**Schedule 4.4.3: Breakdown for Day work Rates: Contractor's Equipment**

Item no.	Description		Nominal quantity (hours)	Basic hourly rental rate (USD)	Extended Amount (US\$)	Amount (US\$)
1	Excavator		50			
2	Dozer		50			
3	5 Ton Hydra		50			
4	Welding Set with Generator		100			
5	Compactor		300			
6	Concrete Mixer Machine		400			
7	Vibrator		200			
8	Use of Helicopter for Transpotation of Material, Machinery and Erection of Towers		240			
9	Use of Drones for Stringing Work		240			
Total for Day work: Contractor's Equipment (carried forward to Day work Summary)						

**Lot 2: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Ratmate to New Damauli Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices A30**

**Summary of Breakdown for Schedule 4.4**

<b>Description</b>	<b>Amount in US\$</b>
1. Sub-Total for Day work: Labor	
2. Sub-Total for Day work: Materials	
3. Sub-Total for Day work: Contractor's Equipment	
Total for Day work (Schedule 4.4)	

**Lot 2: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Ratmate to New Damauli Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices A30**

<b>General Summary for Breakdown of Schedule 4.0 - Daywork</b>		
Contract Name:		
Contract No.:		
<b>General Summary</b>	<b>Page</b>	<b>Amount (US\$)</b>
Schedule No. 4.1:		
Schedule No. 4.2:		
Schedule No. 4.3:		
Schedule No. 4.4:		
<b>Total for Schedules 4.1, 4.2, 4.3 and 4.4 (to be carried forward to Schedule 5.0)</b>		

Note

- 1 The quoted Unit Price shall include all the cost required to perform task successfully such as loading, transportation, insurance, unloading and storing at proper storage place and carrying out works as per Employer's requirement and Conditions of Contract.
- 2 Daywork rate for "General Installation and Construction Items" Earthwork", Civil Works" shall include all cost required to carryout the works as per Employer's Requirement and Conditions of Contract and any associated works related cost required to carryout the works successfully.
- 3 Daywork rate for Labour: The labour rate should include all cost needed to provide the Labour at required place, ensuring that the labour is qualified for his/her job and can perform the required task professionally.
- 4 Daywork rate for Material: Unit rate include, transportation of site, loading, unloading, cutting, placing as per intended required task, while insuring the quality of the material and health and safety.
- 5 Daywork rate Contractor's Equipment: The Basic Hourly rates includes all cost that require to run and perform the task, such as maintenance of vehicle, running responsibility, health and safety protection, petrol, diesel, lubricants, driver, assistance etc. required for carrying the task with the equipment.

**Lot 2: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Ratmate to New Damauli Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices Schedule No. 5. Grand Summary**

Item	Description	Total Price
		Currency (US\$)
1	Total Schedule No. 1. Design Services	
2	Total Schedule No. 2. Plant and Mandatory Tools and Spare Parts Supplied from Abroad	
3	Total Schedule No. 3. Plant and Mandatory Tools and Spare Parts Supplied from Within the Employer's Country	
4	Total Schedule No. 4. Installation and Other Services Included all Related Civil Works (Excluding Daywork)	
5	<b>TOTAL (to Bid Form - Resulting contract Price after correction if any)</b>	
6	VAT (if any)	
7	<b>Total including VAT (5+6)</b>	
8	Total Schedule No. 4. Schedule 4.0 - Daywork only (excluding VAT)	
9	<b>Grand Total Including Daywork for Evaluation and Comparison Purpose (5+8)</b>	

Name of Bidder :

Signature of Bidder :

Note

- The quoted Unit Price shall include all the cost required to perform task successfully such as loading, transportation, insurance, unloading and storing at proper storage place and carrying out works as per Employer's requirement and Conditions of Contract.

**Lot 2: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from (a) Ratmate to New Damauli Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices Schedule No. 6. Recommended Spare Parts**

Item	Description	Qty.	Unit Price		Total Price
			CIP (US\$)	EXW (NPR)	
			(foreign parts)	(local parts)	
		1	2	3	(1) x (2) or(3)

Name of Bidder :

Signature of Bidder :

Note:

- 1 The price of recommended spare parts quoted in Price Schedule No. 6 shall not be considered for evaluation. This is because such spare parts would normally be used after long time durations beyond the MCC Compact end date, and could not be financed from the Compact funds.

## **Revised Price Schedule for Lot 3 – Base**

**Lot 3: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from:  
(a) New Butwal Substation to New Damauli Substation (approx. Route Length: 90 KM) (Base)  
(b) New Butwal Substation to India Border (approx. Route Length: 18 KM) (Option)**

**Breakdown of Rates and Prices Schedule No. 1. Design Services**

Item	Description	Unit	Qty.	Unit Rate (US\$)	Total Price (US\$)
			1	2	(1) x (2)
1	<b>Design services and Engineering</b>				
1.1	Detailed design (Tower Design & Foundation Design including design of Double Circuit and Quad Circuit Towers) and delivery of all documents, drawings and plans for final approval.	LS	1		
1.2	Proto Type Testing of Transmission Towers and approval including manufacturing of prototype towers and accessories and transport the same to the proto test lab.	LS	1		
1.3	Detailed line survey including check survey , preparation of plans and longitudinal profiles, cross sectional profile for individual locations, route maps, spotting of towers, staking of tower locations using suitable softwares (PLS CADD) and approval by the Engineer.	LS	1		
<b>TOTAL (Carried Forward to Schedule No. 5. Grand Summary)</b>					

Name of Bidder :

Signature of Bidder :

**Note:**

1. The design available in Section V (Employer's Requirement) is indicative only.
2. The responsibility of the design according to the Employer's Requirement lies with the Contractor.
3. The line length and no. of towers indicated in the BID document and in Price Schedule is tentative only. **The Bidder should properly examine the latest KMZ file and other documents available in section V - B1 annex H2 for quoting their price.**



**Lot3: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from New Damauli to New Butwal Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices Schedule No. 2. Plant, Goods, Materials and Mandatory Tools and Spare Parts Supplied from Abroad**

Item	Description	Country of origin	Unit	Qty.		Unit Rate (US\$)	Total Price (US\$)	Remarks
				1	2	DDP *	(1) x (2)	
1	Self-supporting lattice towers including double circuit and Quad Circuit Towers etc. as appropriate with vertical configuration of phases, two peaks - one OHGW, one OPGW, complete with stubs and all necessary accessories, with anticlimbing devices, Bird Anti-Nest Spikes, bird reflectors, bird nesting platforms, step bolts and all kind of plates, etc. along with templates or props for stub setting for different type of foundations with or without body and leg extensions suitable for live line maintenance as per approved design by the Engineer. A tentative Tower schedule along with other relevant information is available in Section V - B1/Annex C & Annex H . The Assessment for length, type, height, No. of Towers, etc. to be done from Annex H2 which is the latest document.		Lot	1				<i>Price Adjustment clause is applicable as per Price Adjustment Sub-clause 13.8 as well as Tower weight from the approved Bills of Quantities provided by the Contractor and the unit rates of tower material from the LME.</i>
2	Conductor, Compression joints and other accessories. Details description is available in Section V/Annexure D Appendix 5 and also consult Annex H2 for latest informations.		Lot	1				<i>Price Adjustment clause is applicable only on Conductor (on Aluminium and Steel Component) as per Price Adjustment Sub-clause 13.8 as well as unit weight of the Conductor from the approved Bills of Quantities provided by the Contractor and the unit rates of conductor components from the LME.</i>
3	Aircraft Warning System. Details description is available in Section V -B1/Annex D, Appendix 11.		Lot	1				
4	OPGW system. Details description is available in Section V -B1/Annex D, Appendix 3 and also consult Annex H2 for latest informations.		Lot	1				<i>For Quad Circuit Towers OPGW has to be considered in both peaks of the Tower, instead of one OPGW and one OHGW.</i>
5	OHGW, Compression joints and Accessories. Details description is available in Section V - B1/Annex D, Appendix 4 and also consult Annex H2 for latest informations.		Lot	1				
6	Insulator sets (included: Disc Insulators, Assembly fittings, Phase conductor fittings. Details description is available in Section V - B1/Annex D, Appendix 8 and Appendix 9 and also consult Annex H2 for latest informations.		Lot	1				
7	Tower Earthing (normal & counterpoise type including additional tower earthings). Details description is available in Section V - B1/Annex D, Appendix 10 and also consult Annex H2 for latest informations.		Lot	1				
8	Danger Plate / Phase Plate / No. plate / Anticlimbing Device / Bird Anti-Nest Spikes / Bird Reflectors / Bird Nesting Platforms. Details description is available in Section V - B1/Annex D, Appendix 6 and Appendix 11 and also consult Annex H2 for latest information.		Lot	1				
9	Mandatory Spare parts. Details description is available in Section V (Employer's Requirement) B0 Annex 2		Lot	1				
10	Mandatory Tools. Details description is available in Section V (Employer's Requirement) B0 Annex 7		Lot	1				
<b>TOTAL (Carried Forward to Schedule No. 5. Grand</b>								

**Lot3: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from New Damauli to New Butwal Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices Schedule No. 2. Plant, Goods, Materials and Mandatory Tools and Spare Parts Supplied from Abroad**

Country of Origin Declaration Form

Name of Bidder :
Signature of Bidder :

\* DDP-Works Site in Nepal: All Plant and Mandatory Spare Parts Supplied from Abroad shall be quoted as DDP- Works Site in Nepal basis. The Contractor shall also be responsible for custom clearance, loading, unloading, insurance, transportation, off-loading at Site and any other associate charges (inside or outside Nepal) to bring all goods and equipment to Site and staking and storing properly at Site. However, the tax exemption letter as per MCC Compact provision shall be provided to the winning bidder/future contractor if required documents as per MCA-Nepal tax exemption process attached under Section V (Employer's Requirement) shall be submitted before arrival to Nepal boarder of the Plant and Mandatory Spare Parts Supplied from Abroad. The bidder shall include all cost in their bid price. During Contract implementation, Employer shall not be responsible for paying any extra/additional cost. The successful bidder/Contractor shall be required to submit Pro forma invoice 60 days before arrival of Equipment/Goods to Nepal border and the delivered items shall be exactly same with Pro forma invoice.

Item	Description	Code	Country

Note

- 1 Bidders shall enter the full name of the country of origin of all imported plant and equipment.

**Lot3: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from New Damauli to New Butwal Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices Schedule No. 3. Plant, Goods, Materials and Mandatory Tools and Mandatory Spare Parts Supplied from Within the Employer’s Country**

Item	Description	Qty.	EXW Unit Price (US\$)	EXW Total Price (US\$)
		<i>1</i>	<i>2</i>	<i>(1) x (2)</i>
1	Contractor may list the items available locally (Employer's country) provided it meets the Employer's requirement of the project.			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
<b>TOTAL (Carried Forward to Schedule No. 5. Grand Summary)</b>				

Name of Bidder :
Signature of Bidder :

Note

- 1 EXW Price – The Contractor shall also be responsible for loading, unloading, transit insurance (if any) and any other associate charges to bring all goods and equipment to Site, unloading, staking and storing/storage properly at Site. The bidder shall include all cost in their bid price. During Contract implementation, Employer shall not be responsible for paying any extra/additional cost.

**Lot 3: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from New Damauli to New Butwal Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices Schedule No. 4. Installation and Other Services Included all Related Civil Works**

Item	Description	Unit	Qty.	Unit Price	Total Price
				Currency (US\$)	Currency (US\$)
				1	(1) x (2)
1	Preliminary Works, Site Preparation and General Facilities				
1.1	Submission of plans and documents/drawings of the approved tower to the Engineer.	Lot	1		
1.2	Geo Technical investigation including Ground Motion values for the area, Seismic Analysis, measurement of soil resistivity, tower footing resistance, Standard Penetration Test (SPT) / slope and soil stability as required, laboratory tests and submission of report. Refer to Section V - B1/Annex D, Appendix 2 and Appendix 2A, for Geo Technical investigation report (conducted earlier by Employer) for reference only. Also consult Section V- B1 Annex H2 for Updated Route.	Lot	1		
1.3	Setting up of laydown area / Store yard / Helipad (if contractor intends to use helicopter). For details refer to the latest EIA document available in MCA-Nepal website- www.mcanp.org	Lot	1		
1.4	Site office (and O&M cost of Site Office) including setting up of Site Office for Employer & Engineer including all necessary facilities (such as furnitures, computer and communication equipment etc.). For details refer to Section - V (Employer's Requirement).	Lot	1		
1.5	Arrangement of living accommodation for Contractor & Engineer's employees including all necessary amenities (at Contractor's cost). For details refer to Section - V (Employer's Requirement).	Lot	1		
1.6	Employer & Engineers transport facilities with drivers (including fuel, running and maintenance costs, statutory charges for cars etc.) - 4 Wheel Drive Pick up 2 No + 4 Wheel Drive SUV - 2 No as per Details available in Section V (Employer's Requirement), B0, Annex 9	Lot	1		
1.7	Concrete Design Mix preparation & Testing and approval by the Engineer.	LS	1		
1.8	Upgradation of existing roads without widening and without tree cutting and re-instatement of the road as specified in Section V (Employer's Requirement).	LS	1		
1.9	Construction of new access trails of 1.5 m width without tree cutting as specified in Section V (Employer's Requirement).	LS	1		
1.10	Arrangement of working area required during construction (by contractor) – considering the movement of workers and machineries during foundation, erection and stringing activities.	LS	1		

**Lot 3: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from New Damauli to New Butwal Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices Schedule No. 4. Installation and Other Services Included all Related Civil Works**

2	Tower (including Double Circuit and Quad Circuits) Foundations (including rock anchoring, Piling, Micro- Piling, etc. ) along with setting of stubs for towers using templates or props and other related works like Benching / Grading, excavations, dewatering, shoring and shuttering, reinforcement, concreting, curing, backfilling, compaction, Revetment, Stone Gabion Wall, Stone / Brick masonry Wall, Stone/Concrete Drainage Ditch etc. as per requirement, complete in all respect under different types of soil conditions . Contractor should provide suitable corrosion protection and flood protection for tower foundations as required. For details refer to Section - V - B0 and B1/Annex D, Appendix 11 and also consult Section V- B1 Annex <b>H2</b> for Updated Route .	Lot	1		
3	Erosion Protection (include removal of excess material, site stabilisation with selected fill and drainage gravel package, geotextile and filter wrap, vertiver grass). For details refer to Section - V - B0.	Lot	1		
4	Tower (Including Double and Quad Circuits) Erection - For all type of Towers (Base Body & extensions including leg extensions) including Broad Base, Narrow Base , with or without extensions, including fixing of all accessories associated with Tower body, Aviation Lights as per requirements, tack welding / anti theft bolting after final tightening up-to bottom cross arm. For details refer to Section - V - B1/Annex D, Appendix 6 and also consult Section V- B1 Annex <b>H2</b> for Updated Route.	Lot	1		
5	Stringing of ACSR Quad Moose Conductor for Normal, Multicircuit or any other type of Towers <b>including crossing of power lines (medium, high and extra high voltage), rivers, all types of roads, forests, etc.</b> with controlled tension method using Pilot Wire with or without Drones (to reduce tree clearance impact) including fixing of all accessories related to stringing work like disc insulators, hardware fittings, vibration dampers, arcing rings or other corona protection items, spacers, etc. complete in all respect. <b>The work also includes necessary arrangement for scaffolding, power and traffic blocks, etc.</b> For details refer to Section - V - B1/Annex D, Appendix 5 and also consult Section V- B1 Annex <b>H2</b> for Updated Route.	Lot	1		
6	Stringing of OHGW for Normal, Multicircuit and any other type of Towers using Pilot Wire with or without Drones (to reduce tree clearance impact ) <b>including crossing of power lines (medium, high and extra high voltage), rivers, all types of roads, forests, etc. and</b> fixing of all accessories related to stringing work like hardware fittings, vibration dampers, Aviation marker balls, complete in all respect. <b>The work also includes necessary arrangement for scaffolding, power and traffic blocks, etc.</b> For details refer to Section - V B1/Annex D, Appendix 4 and also consult Section V- B1 Annex <b>H2</b> for Updated Route.	Lot	1		

**Lot 3: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from New Damauli to New Butwal Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices Schedule No. 4. Installation and Other Services Included all Related Civil Works**

7	Stringing of OPGW for Normal, Multicircuit and any other type of Towers using Pilot Wire with or without Drones (to reduce tree clearance impact ) <b>including crossing of power lines(medium, high and extra high voltage), rivers, all types of roads, forests, etc. and</b> fixing of all accessories related to stringing work like hardware fittings, vibration dampers, Aviation marker balls, Splicing etc. complete in all respect. <b>The work also includes necessary arrangement for scaffolding, power and traffic blocks, etc..</b> For details refer to Section - V B1/Annex D, Appendix 3 and also consult Section V- B1 Annex H2 for Updated Route.	Lot	1		
8	Tower Earthing Works which includes Earthing with one or multiple rod per foundation, Continuous counterpoise across one line span as well as earthing of the 5 Towers closest to Substation	Lot	1		
9	Environmental, Health & Safety, Social and Gender Requirements. For Details refer to Section V (Employer's Requirement) Annex 6 and EIA Document.	Lot	1		
10	FAT Witness. For details refer to Section - V (Employer's Requirement) Annex 3.	Lot	1		
11	Testing, Commissioning and Energizing. For details refer to Section - V (Employer's Requirement ) .	Lot	1		
12	Tree Clearance Work during Survey & Geo-tech investigation, Foundation, Erection & Stringing Work. For details refer to EIA document Section - V (Employer's Requirement).	Lot	1		
13	Demolision of Building in ROW 46 Meter For details refer to EIA document attached in Section - V (Employer's Requirement).	Lot	1		

Name of Bidder :
Signature of Bidder :

**Lot 3: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from New Damauli to New Butwal Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices Schedule No. 4. Installation and Other Services Included all Related Civil Works**

**DAYWORK**

**Schedule No. 4.1: Breakdown of General Installation and Construction Items**

Item no.	Description	Unit	Quantity	Unit Rate (US\$)	Amount (US\$)
1	Site Clearance and Preparation - Bush cutting, leveling of undulated ground for stacking of Construction Materials etc.	Per Tower	15		
2	Upgrading of existing road and temporary access road/foot-trail	Per Tower	15		
3	Construction of Temporary Camps for worker - Ladies & Gents	Per Tower	15		
4	Installation of safety caution tapes/bars, sign and boards in construction sites	Per Tower	15		
Total for Schedule No. 4.1					
(Carried Forward to Summary)					

Remarks: The quantity has been assumed for 5 KM of route length.

**Schedule No. 4.2: Breakdown of Earthworks**

Item no.	Description	Unit	Quantity	Unit Rate (US\$)	Amount (US\$)
1	Excavation in all type of soils except hard rock	cum	8,000		
2	Excavation in hard rock	cum	2,000		
3	Backfilling with carried earth	cum	3,000		
4	Backfilling with excavated earth	cum	10,000		
Total for Schedule No. 4.2					
(Carried Forward to Summary)					

Remarks: The quantity has been assumed for 5 KM of route length.

**Lot 3: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from New Damauli to New Butwal Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices Schedule No. 4. Installation and Other Services Included all Related Civil Works  
Schedule No. 4.3: Breakdown of Civil Works**

Item no.	Description	Unit	Quantity	Unit Rate (US\$)	Amount (US\$)
1	Concreting work with supply of M-10 (1:3:6) grade of concrete including all associated work like shuttering, dewatering etc. complete in all respect.	cum	500		
2	Concreting work with supply of M-20 (1:1.5:3) grade of concrete including all associated work like shuttering, dewatering etc. complete in all respect.	cum	1,500		
3	Concreting work with supply of M-30 (as per design mix approved by Engineer) grade of concrete including all associated work like shuttering, dewatering etc. complete in all respect.	cum	1,500		
4	Reinforced Concrete Wall with M20/M30 grade for revetment purpose including supply of all materials complete in all respect	cum	1,000		
5	Stone Gabion Wall with laid steel net caging including supply of all materials	cum	1,500		
6	Stone / Brick masonry Wall including supply of all materials	cum	2,000		
7	Stone/Concrete Drainage Ditch including supply of all materials	cum	1,000		
8	Benching / Grading for tower foundations including supply of all materials				
8.1	Normal dry soil	cum	1,500		
8.2	Fissured Rock	cum	1,000		
8.3	Hard Rock	cum	500		
9	Supply of Tor Steel of different size Fe 500	MT	300		
10	Stub Setting & Template fixing / prop setting Work	Per Tower/Loc.	15		
11	Dewatering including supply of pump with fuel	cum	3,000		
12	Bar Bending for different size of reinforcement	MT	300		
13	Detailed line survey, plan, longitudinal and cross sectional profiles, route maps, spotting of towers, staking of tower locations and approval by employer.	Km	5		
14	Soil investigation, including laboratory tests and submission of report.	Km	5		
15	Micropiling for large angle towers (30 to 60 degree and 60 to 90 degree towers)	No.	15		



**Lot 3: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from New Damauli to New Butwal Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices Schedule No. 4. Installation and Other Services Included all Related Civil Works**

16	Steel Grillage Foundation for different type of Foundations including supply of all materials.	MT	3,000		
17	Different Type and Size of Tree Clearance	No.	1,000		
18	Bush Clearance	Sq. Mtr.	1,000		
Total for Schedule No. 4.3					
(carried forward to Summary)					

Remarks: The quantity has been assumed for 5 KM of route length.

**Schedule 4.4.1: Breakdown for Day work Rates: Labor**

Item no.	Description	Unit	Nominal quantity	Unit Rate (US\$)	Amount (US\$)
1	Erection of all type of towers/Poles	MT	1,000		
2	Stringing of ACSR Quad Moose Conductor for Normal, Multicircuit or any other type of Towers <b>including crossing of power lines (medium, high and extra high voltage), rivers, all types of roads, forests, etc.</b> with controlled tension method using Pilot Wire with or without Drones (to reduce tree clearance impact) including fixing of all accessories related to stringing work like disc insulators, hardware fittings, vibration dampers, arcing rings or other corona protection items, spacers, etc. complete in all respect. <b>The work also includes necessary arrangement for scaffolding, power and traffic blocks, etc.</b> For details refer to Section - V - B1/Annex D, Appendix 5 and also consult Section V- B1 Annex <b>H2</b> for Updated Route.	KM	5		
3	Stringing of OHGW for Normal, Multicircuit and any other type of Towers using Pilot Wire with or without Drones (to reduce tree clearance impact ) <b>including crossing of power lines (medium, high and extra high voltage), rivers, all types of roads, forests, etc. and</b> fixing of all accessories related to stringing work like hardware fittings, vibration dampers, Aviation marker balls, complete in all respect. <b>The work also includes necessary arrangement for scaffolding, power and traffic blocks, etc.</b> For details refer to Section - V B1/Annex D, Appendix 4 and also consult Section V- B1 Annex <b>H2</b> for Updated Route.	KM	5		

**Lot 3: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from New Damauli to New Butwal Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices Schedule No. 4. Installation and Other Services Included all Related Civil Works**

4	Stringing of OPGW for Normal, Multicircuit and any other type of Towers using Pilot Wire with or without Drones (to reduce tree clearance impact ) <b>including crossing of power lines(medium, high and extra high voltage), rivers, all types of roads, forests, etc. and</b> fixing of all accessories related to stringing work like hardware fittings, vibration dampers, Aviation marker balls, Splicing etc. complete in all respect. <b>The work also includes necessary arrangement for scaffolding, power and traffic blocks, etc..</b> For details refer to Section - V B1/Annex D, Appendix 3 and also consult Section V- B1 Annex H2 for Updated Route.	KM	5			
				Subtotal		
				Total for Day work: Labor		
				(carried forward to Day work Summary)		

Remarks: The quantity has been assumed for 5 KM of route length.

**Schedule of 4.4.2: Breakdown for Day work Rates: Materials**

Item no.	Description	Unit	Nominal quantity	Unit Rate (US\$)	Amount (US\$)
1	Self-supporting lattice towers, with vertical configuration of phases, two peaks - one OHGW, one OPGW, with or without body and leg extensions suitable for live line maintenance as per the desgin submitted by the Contractor and approved by the Engineer. For Details refer to Section V	MT	1,000		
2	Tower stubs and all necessary accessories, with anticlimbing devices, bird guard, bird reflectors, bird nesting platforms, step bolts and all kind of plates, etc. along with templates or props for stub setting for different type of foundations with or without body and leg extensions suitable for live line maintenance as per the desgin submitted by the Contractor and approved by the Engineer. For Details refer to Section V	MT	100		
3	ACSR Moose conductor.	KM	150		
4	Spacer damper for conductor.	No	3,000		

**Lot 3: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from New Damauli to New Butwal Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices Schedule No. 4. Installation and Other Services Included all Related Civil Works**

5	Rigid Spacer for conductor jumpers.		No	500		
6	Stockbridge Vibration damper.		No	200		
7	Aircraft warning spheres		No	100		
8	Tower Painting for aviation requirement		No	15		
9	OPGW 48		Km	5		
10	Suspension assembly for OPGW 48		Set	15		
11	Tension assembly-one side (including clamps for downloads) for OPGW 48		Set	15		
12	Tension assembly-non splicing for OPGW 48		Set	15		
13	Tension assembly-splicing (including clamps for downloads) for OPGW 48		Set	5		
14	Joint boxes OPGW-OPGW		No	5		
15	Joint termination boxes OPGW-U/G FOC		No	5		
16	Vibration damper for OPGW 48		No	30		
17	OHGW/Earthwire of aluminum-clad steel wire		Km	5		
18	Suspension assembly for OHGW/Earthwire		No	15		
19	Tension assembly for OHGW/Earthwire		No	15		
20	Vibration damper for OHGW/Earthwire		No	30		
21	Suspension Insulator set (suitable for normal & crossings) for ACSR Quad Moose Conductor		Set	100		
22	Tension Insulator set (suitable for normal & crossings) for ACSR Quad Moose Conductor		Set	200		
23	Auxiliary suspension set-"Pilot" including accessories and counterweight for ACSR Quad Moose Conductor		Set	50		
24	Tower Earthing (normal & counterpoise type including additional tower earthings)		Set	15		
25	Danger Plate / Phase Plate / No plate / Anticlimbing Device / Bird Anti-Nest Spikes / Bird Reflectors / Bird Nesting Platforms,		Set	15		
26	Any essential item which is not included in the list		Lot	1		
	Total for Day work: Materials					
	(carried forward to Day work Summary)					

Remarks: 1. The quantity has been assumed for 5 KM of route length. 2. The detailed specification of different materials is available in Section V of the bid document.

**Lot 3: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from New Damauli to New Butwal Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices Schedule No. 4. Installation and Other Services Included all Related Civil Works**

**Schedule 4.4.3: Breakdown for Day work Rates: Contractor's Equipment**

Item no.	Description		Nominal quantity (hours)	Basic hourly rental rate (USD)	Extended Amount (US\$)	Amount (US\$)
1	Excavator		50			
2	Dozer		50			
3	5 Ton Hydra		50			
4	Welding Set with Generator		100			
5	Compactor		300			
6	Concrete Mixer Machine		400			
7	Vibrator		200			
8	Use of Helicopter for Transpotation of Material, Machinery and Erection of Towers		240			
9	Use of Drones for Stringing Work		240			
Total for Day work: Contractor's Equipment (carried forward to Day work Summary)						

**Summary of Breakdown for Schedule 4.4**

Description	Amount in US\$
1. Sub-Total for Day work: Labor	
2. Sub-Total for Day work: Materials	
3. Sub-Total for Day work: Contractor's Equipment	
Total for Day work (Schedule 4.4)	

**Lot 3: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from New Damauli to New Butwal Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices Schedule No. 4. Installation and Other Services Included all Related Civil Works**

**Lot 3: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from New Damauli to New Butwal Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices Schedule No. 4. Installation and Other Services Included all Related Civil Works**

General Summary for Breakdown of Schedule 4.0 - Daywork		
Contract Name		
Contract No.:		
General Summary	Page	Amount (US\$)
Schedule No. 4.1:		
Schedule No. 4.2:		
Schedule No. 4.3:		
Schedule No. 4.4:		
<b>Total for Schedules 4.1, 4.2, 4.3 and 4.4 (to be carried forward to Schedule 5.0)</b>		

Note

- 1 The quoted Unit Price shall include all the cost required to perform task successfully such as loading, transportation, insurance, unloading and storing at proper storage place and carrying out works as per Employer's requirement and Conditions of Contract.
- 2 Daywork rate for "General Installation and Construction Items" Earthwork", Civil Works" shall include all cost required to carryout the works as per Employer's Requirement and Conditions of Contract and any associated works related cost required to carryout the works successfully.
- 3 Daywork rate for Labour: The labour rate should include all cost needed to provide the Labour at required place, ensuring that the labour is qualified for his/her job and can perform the required task professionally.
- 4 Daywork rate for Material: Unit rate include, transportation of site, loading, unloading, cutting, placing as per intended required task, while insuring the quality of the material and health and safety.
- 5 Daywork rate Contractor's Equipment: The Basic Hourly rates includes all cost that require to run and perform the task, such as maintenance of vehicle, running responsibility, health and safety protection, petrol, diesel, lubricants, driver, assistance etc. required for carrying the task with the equipment.

**Lot 3: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from New Damauli to New Butwal Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices Schedule No. 5. Grand Summary**

<b>Item</b>	<b>Description</b>	<b>Total Price Currency (US\$)</b>
1	Total Schedule No. 1. Design Services	
2	Total Schedule No. 2. Plant, Tools and Mandatory Spare Parts Supplied from Abroad	
3	Total Schedule No. 3. Plant, Tools and Mandatory Spare Parts Supplied from Within the Employer's Country	
4	Total Schedule No. 4. Installation and Other Services Included all Related Civil Works (Excluding Daywork)	
5	<b>TOTAL (to Bid Form - Resulting contract Price after correction if any)</b>	
6	VAT (if any)	
7	<b>Total including VAT (5+6)</b>	
8	Total Schedule No. 4. Schedule 4.0 - Daywork only (excluding VAT)	
9	<b>Grand Total Including Daywork for Evaluation and Comparison Purpose (5+8)</b>	

Name of Bidder :

Signature of Bidder :

Note

- 1 The quoted Unit Price shall include all the cost required to perform task successfully such as loading, transportation, insurance, unloading and storing at proper storage place and carrying out works as per Employer's requirement and Conditions of Contract.

**Lot 3: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from New Damauli to New Butwal Substation of NEA (approx. Route Length: 90 KM)**

**Breakdown of Rates and Prices Schedule No. 6. Recommended Spare Parts**

Item	Description	Qty.	Unit Price		Total Price
			CIP (US\$)	EXW (NPR)	
			(foreign parts)	(local parts)	
		<i>1</i>	<i>2</i>	<i>3</i>	<i>(1) x (2) or(3)</i>

Name of Bidder :
Signature of Bidder :

**Note:**

1 The price of recommended spare parts quoted in Price Schedule No. 6 shall not be considered for evaluation. This is because such spare parts would normally be used after long time durations beyond the MCC Compact end date, and could not be financed from the Compact funds.



## **Revised Price Schedule for Lot 3 – Option**

## OPTION

**Lot3: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from New Butwal Substation of NEA to Indo Nepal Border (approx. Route Length: 18 KM)**

**Breakdown of Rates and Prices Schedule No. 2. Plant, Goods, Materials and Mandatory Tools and Spare Parts Supplied from Abroad**

Item	Description	Country of origin	Unit	Qty.	Unit Rate (US\$)	Total Price (US\$)	Remarks
					DDP *		
				1	2	(1) x (2)	
1	Self-supporting lattice towers including double circuit and Quad Circuit Towers etc. as appropriate with vertical configuration of phases, two peaks one OHGW, one OPGW, complete with stubs and all necessary accessories, with anticlimbing devices, Bird Anti-Nest Spikes, bird reflectors, bird nesting platforms, step bolts and all kind of plates, etc. along with templates or props for stub setting for different type of foundations with or without body and leg extensions suitable for live line maintenance as per approved design by the Engineer. A tentative Tower schedule along with other relevant information is available in Section V - B1/Annex C & Annex H . The Accessment for length, type, height, No. of Towers, etc. to be done from Annex H2 which is the latest document.		Lot	1			<i>Price Adjustment clause is applicable as per Price Adjustment Sub-clause 13.8 as well as Tower weight from the approved Bills of Quantities provided by the Contract and the unit rates of tower material from the LME.</i>
2	Conductor, Compression joints and other accessories. Details description is available in Section V/Annexure D Appendix 5 and also consult Annex H2 for latest informations.		Lot	1			<i>Price Adjustment clause is applicable only on Conductor (on Aluminium and Steel Component) as per Price Adjustment Sub-clause 13.8 as well as unit weight of the Conductor from the approved Bills of Quantities provided by the Contractor and the unit rates of conductor components from the LME.</i>
3	Aircraft Warning System. Details description is available in Section V - B1/Annex D, Appendix 11.		Lot	1			
4	OPGW system. Details description is available in Section V -B1/Annex D, Appendix 3 and also consult Annex H2 for latest informations.		Lot	1			<i>For Quad Circuit Towers OPGW has to be considered in both peaks of the Tower, instead of one OPGW and one OHGW.</i>
5	OHGW, Compression joints and Accessories. Details description is available in Section V - B1/Annex D, Appendix 4 and also consult Annex H2 for latest informations.		Lot	1			

## OPTION

**Lot3: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from New Butwal Substation of NEA to Indo Nepal Border (approx. Route Length: 18 KM)**

**Breakdown of Rates and Prices Schedule No. 2. Plant, Goods, Materials and Mandatory Tools and Spare Parts Supplied from Abroad**

6	Insulator sets (included: Disc Insulators, Assembly fittings, Phase conductor fittings. Details description is available in Section V - B1/Annex D, Appendix 8 and Appendix 9 and also consult Annex H2 for latest informations.		Lot	1				
7	Tower Earthing (normal & counterpoise type including additional tower earthings). Details description is available in Section V - B1/Annex D, Appendix 10 and also consult Annex H2 for latest informations.		Lot	1				
8	Danger Plate / Phase Plate / No. plate / Anticlimbing Device / Bird Anti-Nest Spikes / Bird Reflectors / Bird Nesting Patforms. Details description is available in Section V - B1/Annex D, Appendix 6 and Appendix 11 and also consult Annex H2 for latest information.		Lot	1				
<b>TOTAL (Carried Forward to Schedule No. 5. Grand Summary)</b>								

Name of Bidder

Signature of Bidder

f Origin Declaration Form

\* DDP-Works Site in Nepal: All Plant and Mandatory Spare Parts Supplied from Abroad shall be quoted as DDP- Works Site in Nepal basis. The Contractor shall also be responsible for custom clearance, loading, unloading, insurance, transportation, off-loading at Site and any other associate charges (inside or outside Nepal) to bring all goods and equipment to Site and staking and storing properly at Site. However, the tax exemption letter as per MCC Compact provision shall be provided to the winning bidder/future contractor if required documents as per MCA-Nepal tax exemption process attached under Section V (Employer's Requirement) shall be submitted before arrival to Nepal boarder of the Plant and Mandatory Spare Parts Supplied from Abroad. The bidder shall include all cost in their bid price. During Contract implementation, Employer shall not be responsible for paying any extra/additional cost. The successful bidder/Contractor shall be required to submit Pro forma invoice 60 days before arrival of Equipment/Goods to Nepal border and the delivered items shall be exactly same with Pro forma invoice.

## OPTION

**Lot3: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from New Butwal Substation of NEA to Indo Nepal Border (approx. Route Length: 18 KM)**

**Breakdown of Rates and Prices Schedule No. 2. Plant, Goods, Materials and Mandatory Tools and Spare Parts Supplied from Abroad**

Item	Description	Code	Country

1. This section of the line may be optional.
2. The award of this section of the line will be at the discretion of the Employer at the price quoted. The bidder must quote for this Option. The price of Option shall be considered during Option.
3. Bidders shall enter the full name of the country of origin of all imported plant and equipment.
4. The line length and no. of towers indicated in the BID document and in Price Schedule is tentative only. **The Bidder should properly examine the latest KMZ file and other documents available in section V - B1 annex H2 for quoting their price.**

**Note:**

**OPTION**

**Lot3: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from New Butwal Substation of NEA to Indo Nepal Border (approx. Route Length: 18 KM)**

**Breakdown of Rates and Prices Schedule No. 3. Plant, Goods, Materials and Mandatory Tools and Mandatory Spare Parts Supplied from Within the Employer's Country**

Item	Description	Qty. <i>1</i>	EXW Unit Price (US\$) <i>2</i>	EXW Total Price (US\$) <i>(1) x (2)</i>
1	Contractor may list the items available locally (Employer's country) provided it meets the Employer's requirement of the project.			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
<b>TOTAL (Carried Forward to Schedule No. 5. Grand Summary)</b>				

Name of Bidder :
Signature of Bidder :

Note

- 1 EXW Price – The Contractor shall also be responsible for loading, unloading, transit insurance (if any) and any other associate charges to bring all goods and equipment to Site, unloading, staking and storing/storage properly at Site. The bidder shall include all cost in their bid price. During Contract implementation, Employer shall not be responsible for paying any extra/additional cost.

**OPTION**

**Lot 3: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from New Butwal Substation to India border ( approx. Route Length 18 KM)**

**Breakdown of Rates and Prices Schedule No. 4. Installation and Other Services Included all Related Civil Works**

Item	Description	Unit	Qty.	Unit Price	Total Price
				Currency (US\$)	Currency (US\$)
				1	(1) x (2)
1	Preliminary Works, Site Preparation and General Facilities				
1.1	Submission of plans and documents/drawings of the approved tower to the Engineer.	Lot	1		
1.2	Geo Technical investigation including Ground Motion values for the area, Seismic Analysis, measurement of soil resistivity, tower footing resistance, Standard Penetration Test (SPT) / slope and soil stability as required, laboratory tests and submission of report. Refer to Section V - B1/Annex D, Appendix 2 and Appendix 2A, for Geo Technical investigation report (conducted earlier by Employer) for reference only. Also consult Section V- B1 Annex H2 for Updated Route.	Lot	1		
1.3	Setting up of laydown area / Store yard / Helipad (if contractor intends to use helicopter). For details refer to the latest EIA document available in MCA-Nepal website- www.mcanp.org	Lot	1		
1.4	Upgradation of existing roads without widening and without tree cutting and re-instatement of the road as specified in Section V (Employer's Requirement).	LS	1		
1.5	Construction of new access trails of 1.5 m width without tree cutting as specified in Section V (Employer's Requirement).	LS	1		
1.6	Arrangement of working area required during construction (by contractor) – considering the movement of workers and machineries during foundation, erection and stringing activities.	LS	1		

**OPTION**

**Lot 3: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from New Butwal Substation to India border ( approx. Route Length 18 KM)**

**Breakdown of Rates and Prices Schedule No. 4. Installation and Other Services Included all Related Civil Works**

2	Tower (including Double Circuit and Quad Circuits) Foundations (including rock anchoring, Piling, Micro- Piling, etc. ) along with setting of stubs for towers using templates or props and other related works like Benching / Grading, excavations, dewatering, shoring and shuttering, reinforcement, concreting, curing, backfilling, compaction, Revetment, Stone Gabion Wall, Stone / Brick masonry Wall, Stone/Concrete Drainage Ditch etc. as per requirement, complete in all respect under different types of soil conditions . Contractor should provide suitable corrosion protection and flood protection for tower foundations as required. For details refer to Section - V - B0 and B1/Annex D, Appendix 11 and also consult Section V- B1 Annex <b>H2</b> for Updated Route .	Lot	1		
3	Stringing of ACSR Quad Moose Conductor for Normal, Multicircuit or any other type of Towers <b>including crossing of power lines (medium, high and extra high voltage), rivers, all types of roads, forests, etc.</b> with controlled tension method using Pilot Wire with or without Drones (to reduce tree clearance impact) including fixing of all accessories related to stringing work like disc insulators, hardware fittings, vibration dampers, arcing rings or other corona protection items, spacers, etc. complete in all respect. <b>The work also includes necessary arrangement for scaffolding, power and traffic blocks, etc.</b> For details refer to Section - V - B1/Annex D, Appendix 5 and also consult Section V- B1 Annex <b>H2</b> for Updated Route	Lot	1		

**OPTION**

**Lot 3: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from New Butwal Substation to India border ( approx. Route Length 18 KM)**

**Breakdown of Rates and Prices Schedule No. 4. Installation and Other Services Included all Related Civil Works**

4	Stringing of OHGW for Normal, Multicircuit and any other type of Towers using Pilot Wire with or without Drones (to reduce tree clearance impact ) <b>including crossing of power lines(medium, high and extra high voltage), rivers, all types of roads, forests, etc. and</b> fixing of all accessories related to stringing work like hardware fittings, vibration dampers, Aviation marker balls, complete in all respect. <b>The work also includes necessary arrangement for scaffolding, power and traffic blocks, etc..</b> For details refer to Section - V B1/Annex D, Appendix 4 and also consult Section V- B1 Annex <b>H2</b> for Updated Route.	Lot	1		
5	Stringing of OPGW for Normal, Multicircuit and any other type of Towers using Pilot Wire with or without Drones (to reduce tree clearance impact ) <b>including crossing of power lines(medium, high and extra high voltage), rivers, all types of roads, forests, etc. and</b> fixing of all accessories related to stringing work like hardware fittings, vibration dampers, Aviation marker balls, Splicing etc. complete in all respect. <b>The work also includes necessary arrangement for scaffolding, power and traffic blocks, etc..</b> For details refer to Section - V B1/Annex D, Appendix 3 and also consult Section V- B1 Annex <b>H2</b> for Updated Route.	Lot	1		
6	Tower Earthing Works which includes Earthing with one or multiple rod per foundation, Continuous counterpoise across one line span as well as earthing of the 5 Towers closest to Substation	Lot	1		
7	Environmental, Health & Safety, Social and Gender Requirements. For Details refer to Section V (Employer's Requirement) Annex 6 and EIA Document.	Lot	1		
8	FAT Witness . For details refer to Section - V (Employer's Requirement) Annex 3.	Lot	1		
9	Testing, Commissioning and Energizing. For details refer to Section - V (Employer's Requirement ) .	Lot	1		



**OPTION**

**Lot 3: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from New Butwal Substation to India border ( approx. Route Length 18 KM)**

**Breakdown of Rates and Prices Schedule No. 4. Installation and Other Services Included all Related Civil Works**

10	Tree Clearance Work during Survey & Geo-tech investigation, Foundation, Erection & Stringing Work. For details refer to EIA document Section - V (Employer's Requirement).	Lot	1		
11	Demolition of Building in ROW 46 Meter For details refer to EIA document attached in Section - V (Employer's Requirement).	Lot	1		
<b>TOTAL (to Schedule No. 5. Grand Summary)</b>					

Name of Bidder :
Signature of Bidder :

Note

- 1 The quoted Unit Price shall include all the cost required to perform task successfully such as loading, transportation, insurance, unloading and storing at proper storage place and carrying out works as per Employer's requirement and Conditions of Contract.

## OPTION

**Lot 3: Construction of 400kV Double Circuit ACSR Quad Moose Transmission Line from New Butwal Substation to India border ( approx. Route Length 18 KM)**

**Breakdown of Rates and Prices Schedule No. 5. Grand Summary**

Item	Description	Total Price Currency (US\$)
1	Total Schedule No. 1. Design Services	
2	Total Schedule No. 2. Plant, Tools and Mandatory Spare Parts Supplied from Abroad	
3	Total Schedule No. 3. Plant, Tools and Mandatory Spare Parts Supplied from Within the Employer's Country	
4	Total Schedule No. 4. Installation and Other Services Included all Related Civil Works (Excluding Daywork)	
5	<b>TOTAL (to Bid Form - Resulting contract Price after correction if any)</b>	
6	VAT (if any)	
7	<b>Total including VAT (5+6)</b>	
8	Total Schedule No. 4. Schedule 4.0 - Daywork only (excluding VAT)	
9	<b>Grand Total Including Daywork for Evaluation and Comparison Purpose (5+8)</b>	

	Name of Bidder :
	Signature of Bidder :

Note

- 1 The quoted Unit Price shall include all the cost required to perform task successfully such as loading, transportation, insurance, unloading and storing at proper storage place and carrying out works as per Employer's requirement and Conditions of Contract.



## **ATTACHMENT 2**

### **Revised Breakdown of Price for Price Reasonability**



230307\_Price\_Reasonability - Rev 1.xlsx

**BOQ for Schedule No. 1. Design Services**

<b>Item</b>	<b>Description</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as Considered by the Bidder</b>	<b>Total Price</b>	<b>Remarks</b>
1	<b>Design services and Engineering</b>					
1.1	Detailed design (Tower Design & Foundation Design) and delivery of all documents, drawings and plans for final approval	No				
1.1.1	Design of D1A Type Tower - Tangent Suspension (0 to 2 Degree)- Tower Category: Suspension	No				
1.1.2	Design of D1A Type Tower - Light Angle Suspension (2 to 5 Degree)- Tower Category: Suspension	No				
1.1.3	Design of D1B Type Tower - Small Line Angle Deviation (0 to 15 Degree)- Tower Category: Strain	No				
1.1.4	Design of D1B - ALT Type Tower - Small Line Angle Deviation (0 to 15 Degree)- Tower Category: RA Suspension	No				
1.1.5	Design of D1C Type Tower (15 to 30 Degree) Medium Line Angle Deviation - Tower Category : Strain	No				
1.1.6	Design of D1C -ALT Type Tower (15 to 30 Degree) Medium Line Angle Deviation- Tower Category : RA Suspension	No				
1.1.7	Design of D1D Type Tower (0 to 30 Degree) Line Angle Deviation / DE Anchor / Terminal DE - Tower Category : Full Dead End	No				
1.1.8	Design of D1E Type Tower (30 to 90 Degree) Light Angle Deviation / DE Anchor / Terminal DE - Tower Category : Full Dead End	No				
1.1.9	Design of D1FS Type Tower (0 to 35 Degree) DE Anchor - Tower Category : Full Dead End - Near Large Crossings	No				
1.1.10	Design of D1FL Type Tower (35 to 60 Degree) DE Anchor - Tower Category : Full Dead End - Near Large Crossings	No				

**BOQ for Schedule No. 1. Design Services**

<b>Item</b>	<b>Description</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as Considered by the Bidder</b>	<b>Total Price</b>	<b>Remarks</b>
1.1.11	Design of Any other Type or types of Towers as considered by the bidder.	No				The Contractor has the flexibility to design and make their own tower classification in compliance to the codes and standards and other required project specific parameters as mentioned in Employer's Requirement.
1.1.12						This row is intentionally left blank for bidder. The bidder may add more rows if required for any other type of towers they envisaged.
1.2	Proto Type Testing of Transmission Towers and approval including manufacturing of prototype towers and accessories and transport the same to the proto test lab.	No				
1.2.1	Proto Type Testing of D1A Type Tower - Tangent Suspension (0 to 2 Degree)- Tower Category: Suspension	No				
1.2.2	Proto Type Testing of D1A Type Tower - Light Angle Suspension (2 to 5 Degree)- Tower Category: Suspension	No				
1.2.3	Proto Type Testing of D1B Type Tower - Small Line Angle Deviation (0 to 15 Degree)- Tower Category: Strain	No				
1.2.4	Proto Type Testing of D1B - ALT Type Tower - Small Line Angle Deviation (0 to 15 Degree)- Tower Category: RA Suspension	No				
1.2.5	Proto Type Testing of D1C Type Tower (15 to 30 Degree) Medium Line Angle Deviation - Tower Category : Strain	No				
1.2.6	Proto Type Testing of D1C -ALT Type Tower (15 to 30 Degree) Medium Line Angle Deviation- Tower Category : RA Suspension	No				
1.2.7	Proto Type Testing of D1D Type Tower (0 to 30 Degree) Line Angle Deviation / DE Anchor / Terminal DE - Tower Category : Full Dead End	No				
1.2.8	Proto Type Testing of D1E Type Tower (30 to 90 Degree) Light Angle Deviation / DE Anchor / Terminal DE - Tower Category : Full Dead End	No				

**BOQ for Schedule No. 1. Design Services**

<b>Item</b>	<b>Description</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as Considered by the Bidder</b>	<b>Total Price</b>	<b>Remarks</b>
1.2.9	Proto Type Testing of D1FS Type Tower (0 to 35 Degree) DE Anchor - Tower Category : Full Dead End - Near Large Crossings	No				
1.2.10	Proto Type Testing of D1FL Type Tower (35 to 60 Degree) DE Anchor - Tower Category : Full Dead End - Near Large Crossings	No				
1.2.11	Proto Type Testing of Any other Type or types of Towers as considered by the bidder.	No				
1.2.12						This row is intentionally left blank for bidder. The bidder may add more rows if required for any other type of towers they envisaged.
1.3	Detailed line survey including check survey , preparation of plans and longitudinal profiles, cross sectional profile for individual locations, route maps, spotting of towers, staking of tower locations using suitable softwares (PLS CADD) and approval by the Engineer.	KM				

<u>Name of Bidder :</u>  Signature of Bidder : _____  
--

**BOQ for Schedule No. 2 (Plant, Mandatory Spares)**

Item	Description	Country of origin	Unit	Qty. as considered by the bidder	Unit Price as considered by the bidder	Total Price	Remarks
1	<b>Self-supporting lattice towers, with vertical configuration of phases, two peaks - one OHGW, one OPGW, complete with stubs and all necessary accessories, with anticlimbing devices, Bird Anti-Nest Spikes, Bid Diverter, Bird Reflector, Bird Nesting Platform, step bolts and all kind of plates, etc. along with templates or props for stub setting for different type of foundations with or without body and leg extensions suitable for live line maintenance as per approved design by the Engineer.</b>						
1.1	DIA Type Tower - Tangent Suspension (0 to 2 Degree)- Tower Category: Suspension						
1.1.1	For 0 mtr. Basic Body		No.				
1.1.2	For +9 mtr. Body Extension		No.				
1.1.3	For +18 mtr. Body Extension		No.				
1.1.4	For +27 mtr. Body Extension		No.				
1.1.5	For +36 mtr. Body Extension		No.				
1.1.6	For +45 mtr. Body Extension		No.				
1.1.7	0 mtr. Leg Extension		No.				
1.1.8	1.5 mtr. Leg Extension		No.				
1.1.9	3.0 mtr. Leg Extension		No.				
1.1.10	4.5 mtr. Leg Extension		No.				
1.1.11	6.0 mtr. Leg Extension		No.				
1.1.12	7.5 mtr. Leg Extension		No.				
1.1.13	9.0 mtr. Leg Extension		No.				
1.1.14	10.5 mtr. Leg Extension		No.				
1.1.15	12 mtr. Leg Extension		No.				
1.1.16	Any other Type or types of Extension as considered by the bidder.		No.				
							This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.



**BOQ for Schedule No. 2 (Plant, Mandatory Spares)**

Item	Description	Country of origin	Unit	Qty. as considered by the bidder	Unit Price as considered by the bidder	Total Price	Remarks
1.2	D1A Type Tower - Large Angle Suspension (2 to 5 Degree)- Tower Category: Suspension						
1.2.1	For 0 mtr. Basic Body		No.				
1.2.2	For +9 mtr. Body Extension		No.				
1.2.3	For +18 mtr. Body Extension		No.				
1.2.4	For +27 mtr. Body Extension		No.				
1.2.5	For +36 mtr. Body Extension		No.				
1.2.6	For +45 mtr. Body Extension		No.				
1.2.7	0 mtr. Leg Extension		No.				
1.2.8	1.5 mtr. Leg Extension		No.				
1.2.9	3.0 mtr. Leg Extension		No.				
1.2.10	4.5 mtr. Leg Extension		No.				
1.2.11	6.0 mtr. Leg Extension		No.				
1.2.12	7.5 mtr. Leg Extension		No.				
1.2.13	9.0 mtr. Leg Extension		No.				
1.2.14	10.5 mtr. Leg Extension		No.				
1.2.15	12 mtr. Leg Extension		No.				
1.2.16	Any other Type or types of Extension as considered by the bidder.		No.				
							This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.

**BOQ for Schedule No. 2 (Plant, Mandatory Spares)**

Item	Description	Country of origin	Unit	Qty. as considered by the bidder	Unit Price as considered by the bidder	Total Price	Remarks
1.3	D1B Type Tower - Small Line Angle Deviation (0 to 15 Degree)- Tower Category: Strain						
1.3.1	For 0 mtr. Basic Body		No.				
1.3.2	For +9 mtr. Body Extension		No.				
1.3.3	For +18 mtr. Body Extension		No.				
1.3.4	For +27 mtr. Body Extension		No.				
1.3.5	For +36 mtr. Body Extension		No.				
1.3.6	For +45 mtr. Body Extension		No.				
1.3.7	0 mtr. Leg Extension		No.				
1.3.8	1.5 mtr. Leg Extension		No.				
1.3.9	3.0 mtr. Leg Extension		No.				
1.3.10	4.5 mtr. Leg Extension		No.				
1.3.11	6.0 mtr. Leg Extension		No.				
1.3.12	7.5 mtr. Leg Extension		No.				
1.3.13	9.0 mtr. Leg Extension		No.				
1.3.14	10.5 mtr. Leg Extension		No.				
1.3.15	12 mtr. Leg Extension		No.				
1.3.16	Any other Type or types of Extension as considered by the bidder.		No.				
							This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.

**BOQ for Schedule No. 2 (Plant, Mandatory Spares)**

Item	Description	Country of origin	Unit	Qty. as considered by the bidder	Unit Price as considered by the bidder	Total Price	Remarks
1.4	D1B - ALT Type Tower - Small Line Angle Deviation (0 to 15 Degree)- Tower Category: RA Suspension						
1.4.1	For 0 mtr. Basic Body		No.				
1.4.2	For +9 mtr. Body Extension		No.				
1.4.3	For +18 mtr. Body Extension		No.				
1.4.4	For +27 mtr. Body Extension		No.				
1.4.5	For +36 mtr. Body Extension		No.				
1.4.6	For +45 mtr. Body Extension		No.				
1.4.7	0 mtr. Leg Extension		No.				
1.4.8	1.5 mtr. Leg Extension		No.				
1.4.9	3.0 mtr. Leg Extension		No.				
1.4.10	4.5 mtr. Leg Extension		No.				
1.4.11	6.0 mtr. Leg Extension		No.				
1.4.12	7.5 mtr. Leg Extension		No.				
1.4.13	9.0 mtr. Leg Extension		No.				
1.4.14	10.5 mtr. Leg Extension		No.				
1.4.15	12 mtr. Leg Extension		No.				
1.4.16	Any other Type or types of Extension as considered by the bidder.		No.				
							This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.

**BOQ for Schedule No. 2 (Plant, Mandatory Spares)**

<b>Item</b>	<b>Description</b>	<b>Country of origin</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as considered by the bidder</b>	<b>Total Price</b>	<b>Remarks</b>
1.5	D1C Type Tower (15 to 30 Degree) Medium Line Angle Deviation - Tower Category : Strain						
1.5.1	For 0 mtr. Basic Body		No.				
1.5.2	For +9 mtr. Body Extension		No.				
1.5.3	For +18 mtr. Body Extension		No.				
1.5.4	For +27 mtr. Body Extension		No.				
1.5.5	For +36 mtr. Body Extension		No.				
1.5.6	For +45 mtr. Body Extension		No.				
1.5.7	0 mtr. Leg Extension		No.				
1.5.8	1.5 mtr. Leg Extension		No.				
1.5.9	3.0 mtr. Leg Extension		No.				
1.5.10	4.5 mtr. Leg Extension		No.				
1.5.11	6.0 mtr. Leg Extension		No.				
1.5.12	7.5 mtr. Leg Extension		No.				
1.5.13	9.0 mtr. Leg Extension		No.				
1.5.14	10.5 mtr. Leg Extension		No.				
1.5.15	12 mtr. Leg Extension		No.				
1.5.16	Any other Type or types of Extension as considered by the bidder.		No.				
							This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.

**BOQ for Schedule No. 2 (Plant, Mandatory Spares)**

<b>Item</b>	<b>Description</b>	<b>Country of origin</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as considered by the bidder</b>	<b>Total Price</b>	<b>Remarks</b>
1.6	D1C -ALT Type Tower (15 to 30 Degree) Medium Line Angle Deviation- Tower Category : RA Suspension						
1.6.1	For 0 mtr. Basic Body		No.				
1.6.2	For +9 mtr. Body Extension		No.				
1.6.3	For +18 mtr. Body Extension		No.				
1.6.4	For +27 mtr. Body Extension		No.				
1.6.5	For +36 mtr. Body Extension		No.				
1.6.6	For +45 mtr. Body Extension		No.				
1.6.7	0 mtr. Leg Extension		No.				
1.6.8	1.5 mtr. Leg Extension		No.				
1.6.9	3.0 mtr. Leg Extension		No.				
1.6.10	4.5 mtr. Leg Extension		No.				
1.6.11	6.0 mtr. Leg Extension		No.				
1.6.12	7.5 mtr. Leg Extension		No.				
1.6.13	9.0 mtr. Leg Extension		No.				
1.6.14	10.5 mtr. Leg Extension		No.				
1.6.15	12 mtr. Leg Extension		No.				
1.6.16	Any other Type or types of Extension as considered by the bidder.		No.				
							This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.

**BOQ for Schedule No. 2 (Plant, Mandatory Spares)**

<b>Item</b>	<b>Description</b>	<b>Country of origin</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as considered by the bidder</b>	<b>Total Price</b>	<b>Remarks</b>
1.7	D1D Type Tower (0 to 30 Degree) Line Angle Deviation / DE Anchor / Terminal DE - Tower Category : Full Dead End						
1.7.1	For 0 mtr. Basic Body		No.				
1.7.2	For +9 mtr. Body Extension		No.				
1.7.3	For +18 mtr. Body Extension		No.				
1.7.4	For +27 mtr. Body Extension		No.				
1.7.5	For +36 mtr. Body Extension		No.				
1.7.6	For +45 mtr. Body Extension		No.				
1.7.7	0 mtr. Leg Extension		No.				
1.7.8	1.5 mtr. Leg Extension		No.				
1.7.9	3.0 mtr. Leg Extension		No.				
1.7.10	4.5 mtr. Leg Extension		No.				
1.7.11	6.0 mtr. Leg Extension		No.				
1.7.12	7.5 mtr. Leg Extension		No.				
1.7.13	9.0 mtr. Leg Extension		No.				
1.7.14	10.5 mtr. Leg Extension		No.				
1.7.15	12 mtr. Leg Extension		No.				
1.7.16	Any other Type or types of Extension as considered by the bidder.		No.				
							This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.

**BOQ for Schedule No. 2 (Plant, Mandatory Spares)**

<b>Item</b>	<b>Description</b>	<b>Country of origin</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as considered by the bidder</b>	<b>Total Price</b>	<b>Remarks</b>
1.8	D1E Type Tower (30 to 90 Degree) Light Angle Deviation / DE Anchor / Terminal DE - Tower Category : Full Dead End						
1.8.1	For 0 mtr. Basic Body		No.				
1.8.2	For +9 mtr. Body Extension		No.				
1.8.3	For +18 mtr. Body Extension		No.				
1.8.4	For +27 mtr. Body Extension		No.				
1.8.5	For +36 mtr. Body Extension		No.				
1.8.6	For +45 mtr. Body Extension		No.				
1.8.7	0 mtr. Leg Extension		No.				
1.8.8	1.5 mtr. Leg Extension		No.				
1.8.9	3.0 mtr. Leg Extension		No.				
1.8.10	4.5 mtr. Leg Extension		No.				
1.8.11	6.0 mtr. Leg Extension		No.				
1.8.12	7.5 mtr. Leg Extension		No.				
1.8.13	9.0 mtr. Leg Extension		No.				
1.8.14	10.5 mtr. Leg Extension		No.				
1.8.15	12 mtr. Leg Extension		No.				
1.8.16	Any other Type or types of Extension as considered by the bidder.		No.				
							This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.

**BOQ for Schedule No. 2 (Plant, Mandatory Spares)**

<b>Item</b>	<b>Description</b>	<b>Country of origin</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as considered by the bidder</b>	<b>Total Price</b>	<b>Remarks</b>
1.9	DIFS Type Tower (0 to 35 Degree) DE Anchor - Tower Category : Full Dead End - Near Large Crossings						
1.9.1	For 0 mtr. Basic Body		No.				
1.9.2	For +9 mtr. Body Extension		No.				
1.9.3	For +18 mtr. Body Extension		No.				
1.9.4	For +27 mtr. Body Extension		No.				
1.9.5	For +36 mtr. Body Extension		No.				
1.9.6	For +45 mtr. Body Extension		No.				
1.9.7	0 mtr. Leg Extension		No.				
1.9.8	1.5 mtr. Leg Extension		No.				
1.9.9	3.0 mtr. Leg Extension		No.				
1.9.10	4.5 mtr. Leg Extension		No.				
1.9.11	6.0 mtr. Leg Extension		No.				
1.9.12	7.5 mtr. Leg Extension		No.				
1.9.13	9.0 mtr. Leg Extension		No.				
1.9.14	10.5 mtr. Leg Extension		No.				
1.9.15	12 mtr. Leg Extension		No.				
1.9.16	Any other Type or types of Extension as considered by the bidder.		No.				
							This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.



**BOQ for Schedule No. 2 (Plant, Mandatory Spares)**

Item	Description	Country of origin	Unit	Qty. as considered by the bidder	Unit Price as considered by the bidder	Total Price	Remarks
1.10	DIFL Type Tower (35 to 60 Degree) DE Anchor - Tower Category : Full Dead End - Near Large Crossings						
1.10.1	For 0 mtr. Basic Body		No.				
1.10.2	For +9 mtr. Body Extension		No.				
1.10.3	For +18 mtr. Body Extension		No.				
1.10.4	For +27 mtr. Body Extension		No.				
1.10.5	For +36 mtr. Body Extension		No.				
1.10.6	For +45 mtr. Body Extension		No.				
1.10.7	0 mtr. Leg Extension		No.				
1.10.8	1.5 mtr. Leg Extension		No.				
1.10.9	3.0 mtr. Leg Extension		No.				
1.10.10	4.5 mtr. Leg Extension		No.				
1.10.11	6.0 mtr. Leg Extension		No.				
1.10.12	7.5 mtr. Leg Extension		No.				
1.10.13	9.0 mtr. Leg Extension		No.				
1.10.14	10.5 mtr. Leg Extension		No.				
1.10.15	12 mtr. Leg Extension		No.				
1.10.16	Any other Type or types of Extension as considered by the bidder.		No.				
							This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.
1.11	Any other Type or types of Tower as considered by the bidder.						
							This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.

**BOO for Schedule No. 2 (Plant, Mandatory Spares)**

Item	Description	Country of origin	Unit	Qty. as considered by the bidder	Unit Price as considered by the bidder	Total Price	Remarks
<b>2</b>	<b>Conductor, Compression joints and other accessories.</b>						
2.1	ACSR Moose Conductor		KM				
2.2	Spacer Damper for Quad ACSR Moose, Frame Style		No				
2.3	Mid-Span Joint for ACSR Moose		No				
2.4	Repair Sleeve for ACSR Moose		No				
2.5	Suspension Fitting with accessories like Corona Ring		Set				
2.6	Tension Fitting with accessories like Corona Ring		Set				
2.7	Jumper String Assembly with accessories		Set				
2.8	Any other item associated with ACSR Moose Conductor considered by the Bidder.						
2.9							This row is intentionally left blank for the Bidder. The Bidder may add more rows if required for other type of items associated with ACSR Moose Conductor they envisaged.
<b>3</b>	<b>Aircraft Warning System.</b>						
3.1	Marker Ball OPGW		No				
3.2	Marker Ball OHGW		No				
3.3	Painting on Tower		No				
3.4	Aircraft Warning Light on Tower with Solar Power Supply with Battery Back-up		Set				
3.5	Any other item associated with Aircraft Warning System considered by the Bidder.		No				
							This row is intentionally left blank for the Bidder. The Bidder may add more rows if required for other type of items associated with Aircraft Warning System they envisaged.

**BOO for Schedule No. 2 (Plant, Mandatory Spares)**

Item	Description	Country of origin	Unit	Qty. as considered by the bidder	Unit Price as considered by the bidder	Total Price	Remarks
<b>4</b>	<b>OPGW System.</b>						
4.1	OPGW (2x24F=48F, 66 kA2*sec)		KM				For Quad Circuit Towers OPGW has to be considered in both peaks of the Tower, instead of one OPGW and one OHGW.
4.2	Stockbridge Damper for OPGW (2x24F=48F)		No				
4.3	Splice Box for OPGW (2x24F=48F)		No				
4.4	Down Lead Clamp for OPGW (2x24F=48F)		No				
4.5	OPGW Suspension Assembly with accessories		Set				
4.6	OPGW Tension Assembly with accessories		Set				
4.7	Joint boxes OPGW-OPGW		No				
4.8	Joint termination boxes OPGW-U/G FOC		No				
4.9	Any other item associated with OPGW System considered by the Bidder.						
							This row is intentionally left blank for the Bidder. The Bidder may add more rows if required for other type of items associated with OPGW System they envisaged.
<b>5</b>	<b>OHGW, Compression joints and Accessories.</b>						
5.1	OHGW 7No5 AW: 7/4.62 mm		KM				
5.2	Mid-Span Joint for OHGW 7No5 AW		No				
5.3	Stockbridge Damper for OHGW 7 No5 AW		No				
5.4	OHGW Suspension Assembly with accessories		Set				
5.5	OHGW Tension Assembly with accessories		Set				
5.6	Any other item associated with OHGW System considered by the Bidder.						

**BOO for Schedule No. 2 (Plant, Mandatory Spares)**

Item	Description	Country of origin	Unit	Qty. as considered by the bidder	Unit Price as considered by the bidder	Total Price	Remarks
							This row is intentionally left blank for the Bidder. The Bidder may add more rows if required for other type of items associated with OHGW System they envisaged.
<b>6</b>	<b>Insulator sets (included: Disc Insulators, Assembly fittings, Phase conductor fittings.)</b>						
6.1	Bidder to propose For Tangent Tower (D1A)		Set				For Tangent Tower (D1A)
6.2	Bidder to propose For Tangent Tower (D1A)		Set				For Tangent Tower (D1A)
6.3	Bidder to propose AngleTension+D.E.Tension+S/S(only 1 span) (D1B,D1C,D1D,D1E,D1F, S/S)		Set				AngleTension+D.E.Tension+S/S(only 1 span) (D1B,D1C,D1D,D1E,D1F, S/S)
6.4	Bidder to propose AngleTension+D.E.Tension+S/S(only 1 span) (D1B,D1C,D1D,D1E,D1F, S/S)		Set				AngleTension+D.E.Tension+S/S(only 1 span) (D1B,D1C,D1D,D1E,D1F, S/S)
6.5	Bidder to propose D.E.Tension (D1D, D1E, D1F) Only on Outside Phase (2 on Rectangular Cross-Arm: D1E; D1F; 1 on Triangle Cross-Arm: D1D)		Set				D.E.Tension (D1D, D1E, D1F) Only on Outside Phase (2 on Rectangular Cross-Arm: D1E; D1F; 1 on Triangle Cross-Arm: D1D)
6.6	Bidder to propose D.E.Tension (D1D, D1E, D1F) Only on Outside Phase (2 on Rectangular Cross-Arm: D1E; D1F; 1 on Triangle Cross-Arm: D1D)		Set				D.E.Tension (D1D, D1E, D1F) Only on Outside Phase (2 on Rectangular Cross-Arm: D1E; D1F; 1 on Triangle Cross-Arm: D1D)
6.7	Any other item associated with Insulator System considered by the Bidder.						
							This row is intentionally left blank for the Bidder. The Bidder may add more rows if required for other type of items associated with Insulator System they envisaged.

**BOO for Schedule No. 2 (Plant, Mandatory Spares)**

Item	Description	Country of origin	Unit	Qty. as considered by the bidder	Unit Price as considered by the bidder	Total Price	Remarks
<b>7</b>	<b>Tower Earthing (normal &amp; counterpoise type including additional tower earthings).</b>						
7.1	Bend Rods & Accessories		Each				
7.2	Grounding Rods 2.5 mtr. And Accessories		Each				
7.3	Ground Conductor and Accessories		Mtr.				
7.4	Counterpoise Conductor with Accessories		Mtr.				
7.5	Any other item associated with Tower Earthing System considered by the Bidder.						
							This row is intentionally left blank for the Bidder. The Bidder may add more rows if required for other type of items associated with Tower Earthing System they envisaged.
<b>8</b>	<b>Tower Accessories: Danger Plate / Phase Plate / No. plate / Anticlimbing Device / Bird Anti-Nest Spikes / Bird Reflectors / Bird Nesting Platforms.</b>						
8.1	Anti Climbing Device		Set				
8.2	Number Plate		Set				
8.3	Circuit Plate		Set				
8.4	Phase Plate		Set				
8.5	Danger Plate		Set				
8.7	Bird Anti-Nest Spikes		No				
8.8	Bird Nesting Platform		No				
8.9	Bird Diverters for OPGW & OHGW		No				
8.10	Fall-Arrest Clips Bolted to Tower Leg at Every 2 Step-Bolts		No				
8.11	Any other item associated with Tower accessories considered by the Bidder.						
							This row is intentionally left blank for the Bidder. The Bidder may add more rows if required for other type of items associated with Tower Accessories they envisaged.

**BOQ for Schedule No. 2 (Plant, Mandatory Spares)**

Item	Description	Country of origin	Unit	Qty. as considered by the bidder	Unit Price as considered by the bidder	Total Price	Remarks
<b>9</b>	<b>Mandatory Spare parts. (Per B0 Annex 2)</b>						
9.1	D1A Type Tower - Tangent Suspension (0 to 2 Degree)- Tower Category: Suspension						As Bidder has the flexibility to design their own tower classification, the Bidder may propose spare of their own tower classification.
9.1.1	Basic Body		No.				
9.1.2	+45 mtr. Body Extension		No.				
9.1.3	+36 mtr. Body Extension		No.				
9.1.4	+27 mtr. Body Extension		No.				
9.1.5	+18 mtr. Body Extension		No.				
9.1.6	+9 mtr. Body Extension		No.				
9.1.7	1.5 mtr. Leg Extension		No.				
9.1.8	3.0 mtr. Leg Extension		No.				
9.1.9	4.5 mtr. Leg Extension		No.				
9.1.10	6.0 mtr. Leg Extension		No.				
9.1.11	7.5 mtr. Leg Extension		No.				
9.1.12	9.0 mtr. Leg Extension		No.				
9.1.13	10.5 mtr. Leg Extension		No.				
9.1.14	12 mtr. Leg Extension		No.				
9.1.15	Any other Type or types of Extension as considered by the bidder.		No.				
							This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.

**BOO for Schedule No. 2 (Plant, Mandatory Spares)**

<b>Item</b>	<b>Description</b>	<b>Country of origin</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as considered by the bidder</b>	<b>Total Price</b>	<b>Remarks</b>
9.2	D1A Type Tower - Light Angle Suspension (2 to 5 Degree)- Tower Category: Suspension						
9.2.1	Basic Body		No.				
9.2.2	+45 mtr. Body Extension		No.				
9.2.3	+36 mtr. Body Extension		No.				
9.2.4	+27 mtr. Body Extension		No.				
9.2.5	+18 mtr. Body Extension		No.				
9.2.6	+9 mtr. Body Extension		No.				
9.2.7	1.5 mtr. Leg Extension		No.				
9.2.8	3.0 mtr. Leg Extension		No.				
9.2.9	4.5 mtr. Leg Extension		No.				
9.2.10	6.0 mtr. Leg Extension		No.				
9.2.11	7.5 mtr. Leg Extension		No.				
9.2.12	9.0 mtr. Leg Extension		No.				
9.2.13	10.5 mtr. Leg Extension		No.				
9.2.14	12 mtr. Leg Extension		No.				
9.2.15	Any other Type or types of Extension as considered by the bidder.		No.				
							This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.

**BOQ for Schedule No. 2 (Plant, Mandatory Spares)**

<b>Item</b>	<b>Description</b>	<b>Country of origin</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as considered by the bidder</b>	<b>Total Price</b>	<b>Remarks</b>
9.3	D1B Type Tower - Small Line Angle Deviation (0 to 15 Degree)- Tower Category: Strain						
9.3.1	Basic Body		No.				
9.3.2	+45 mtr. Body Extension		No.				
9.3.3	+36 mtr. Body Extension		No.				
9.3.4	+27 mtr. Body Extension		No.				
9.3.5	+18 mtr. Body Extension		No.				
9.3.6	+9 mtr. Body Extension		No.				
9.3.7	1.5 mtr. Leg Extension		No.				
9.3.8	3.0 mtr. Leg Extension		No.				
9.3.9	4.5 mtr. Leg Extension		No.				
9.3.10	6.0 mtr. Leg Extension		No.				
9.3.11	7.5 mtr. Leg Extension		No.				
9.3.12	9.0 mtr. Leg Extension		No.				
9.3.13	10.5 mtr. Leg Extension		No.				
9.3.14	12 mtr. Leg Extension		No.				
9.3.15	Any other Type or types of Extension as considered by the bidder.		No.				
							This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.



**BOQ for Schedule No. 2 (Plant, Mandatory Spares)**

<b>Item</b>	<b>Description</b>	<b>Country of origin</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as considered by the bidder</b>	<b>Total Price</b>	<b>Remarks</b>
9.4	D1B - ALT Type Tower - Small Line Angle Deviation (0 to 15 Degree)- Tower Category: RA Suspension						
9.4.1	Basic Body		No.				
9.4.2	+45 mtr. Body Extension		No.				
9.4.3	+36 mtr. Body Extension		No.				
9.4.4	+27 mtr. Body Extension		No.				
9.4.5	+18 mtr. Body Extension		No.				
9.4.6	+9 mtr. Body Extension		No.				
9.4.7	1.5 mtr. Leg Extension		No.				
9.4.8	3.0 mtr. Leg Extension		No.				
9.4.9	4.5 mtr. Leg Extension		No.				
9.4.10	6.0 mtr. Leg Extension		No.				
9.4.11	7.5 mtr. Leg Extension		No.				
9.4.12	9.0 mtr. Leg Extension		No.				
9.4.13	10.5 mtr. Leg Extension		No.				
9.4.14	12 mtr. Leg Extension		No.				
9.4.15	Any other Type or types of Extension as considered by the bidder.		No.				
							This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.

**BOO for Schedule No. 2 (Plant, Mandatory Spares)**

<b>Item</b>	<b>Description</b>	<b>Country of origin</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as considered by the bidder</b>	<b>Total Price</b>	<b>Remarks</b>
9.5	D1C Type Tower (15 to 30 Degree) Medium Line Angle Deviation - Tower Category : Strain						
9.5.1	Basic Body		No.				
9.5.2	+45 mtr. Body Extension		No.				
9.5.3	+36 mtr. Body Extension		No.				
9.5.4	+27 mtr. Body Extension		No.				
9.5.5	+18 mtr. Body Extension		No.				
9.5.6	+9 mtr. Body Extension		No.				
9.5.7	1.5 mtr. Leg Extension		No.				
9.5.8	3.0 mtr. Leg Extension		No.				
9.5.9	4.5 mtr. Leg Extension		No.				
9.5.10	6.0 mtr. Leg Extension		No.				
9.5.11	7.5 mtr. Leg Extension		No.				
9.5.12	9.0 mtr. Leg Extension		No.				
9.5.13	10.5 mtr. Leg Extension		No.				
9.5.14	12 mtr. Leg Extension		No.				
9.5.15	Any other Type or types of Extension as considered by the bidder.		No.				
							This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.

**BOO for Schedule No. 2 (Plant, Mandatory Spares)**

<b>Item</b>	<b>Description</b>	<b>Country of origin</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as considered by the bidder</b>	<b>Total Price</b>	<b>Remarks</b>
9.6	D1C -ALT Type Tower (15 to 30 Degree) Medium Line Angle Deviation- Tower Category : RA Suspension						
9.6.1	Basic Body		No.				
9.6.2	+45 mtr. Body Extension		No.				
9.6.3	+36 mtr. Body Extension		No.				
9.6.4	+27 mtr. Body Extension		No.				
9.6.5	+18 mtr. Body Extension		No.				
9.6.6	+9 mtr. Body Extension		No.				
9.6.7	1.5 mtr. Leg Extension		No.				
9.6.8	3.0 mtr. Leg Extension		No.				
9.6.9	4.5 mtr. Leg Extension		No.				
9.6.10	6.0 mtr. Leg Extension		No.				
9.6.11	7.5 mtr. Leg Extension		No.				
9.6.12	9.0 mtr. Leg Extension		No.				
9.6.13	10.5 mtr. Leg Extension		No.				
9.6.14	12 mtr. Leg Extension		No.				
9.6.15	Any other Type or types of Extension as considered by the bidder.		No.				
							This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.

**BOO for Schedule No. 2 (Plant, Mandatory Spares)**

<b>Item</b>	<b>Description</b>	<b>Country of origin</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as considered by the bidder</b>	<b>Total Price</b>	<b>Remarks</b>
9.7	D1D Type Tower (0 to 30 Degree) Line Angle Deviation / DE Anchor / Terminal DE - Tower Category : Full Dead End						
9.7.1	Basic Body		No.				
9.7.2	+45 mtr. Body Extension		No.				
9.7.3	+36 mtr. Body Extension		No.				
9.7.4	+27 mtr. Body Extension		No.				
9.7.5	+18 mtr. Body Extension		No.				
9.7.6	+9 mtr. Body Extension		No.				
9.7.7	1.5 mtr. Leg Extension		No.				
9.7.8	3.0 mtr. Leg Extension		No.				
9.7.9	4.5 mtr. Leg Extension		No.				
9.7.10	6.0 mtr. Leg Extension		No.				
9.7.11	7.5 mtr. Leg Extension		No.				
9.7.12	9.0 mtr. Leg Extension		No.				
9.7.13	10.5 mtr. Leg Extension		No.				
9.7.14	12 mtr. Leg Extension		No.				
9.7.15	Any other Type or types of Extension as considered by the bidder.		No.				
							This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.

**BOO for Schedule No. 2 (Plant, Mandatory Spares)**

<b>Item</b>	<b>Description</b>	<b>Country of origin</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as considered by the bidder</b>	<b>Total Price</b>	<b>Remarks</b>
9.8	D1E Type Tower (30 to 90 Degree) Light Angle Deviation / DE Anchor / Terminal DE - Tower Category : Full Dead End						
9.8.1	Basic Body		No.				
9.8.2	+45 mtr. Body Extension		No.				
9.8.3	+36 mtr. Body Extension		No.				
9.8.4	+27 mtr. Body Extension		No.				
9.8.5	+18 mtr. Body Extension		No.				
9.8.6	+9 mtr. Body Extension		No.				
9.8.7	1.5 mtr. Leg Extension		No.				
9.8.8	3.0 mtr. Leg Extension		No.				
9.8.9	4.5 mtr. Leg Extension		No.				
9.8.10	6.0 mtr. Leg Extension		No.				
9.8.11	7.5 mtr. Leg Extension		No.				
9.8.12	9.0 mtr. Leg Extension		No.				
9.8.13	10.5 mtr. Leg Extension		No.				
9.8.14	12 mtr. Leg Extension		No.				
9.8.15	Any other Type or types of Extension as considered by the bidder.		No.				
							This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.

**BOO for Schedule No. 2 (Plant, Mandatory Spares)**

<b>Item</b>	<b>Description</b>	<b>Country of origin</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as considered by the bidder</b>	<b>Total Price</b>	<b>Remarks</b>
9.9	D1FS Type Tower (0 to 35 Degree) DE Anchor - Tower Category : Full Dead End - Near Large Crossings						
9.9.1	Basic Body		No.				
9.9.2	+45 mtr. Body Extension		No.				
9.9.3	+36 mtr. Body Extension		No.				
9.9.4	+27 mtr. Body Extension		No.				
9.9.5	+18 mtr. Body Extension		No.				
9.9.6	+9 mtr. Body Extension		No.				
9.9.7	1.5 mtr. Leg Extension		No.				
9.9.8	3.0 mtr. Leg Extension		No.				
9.9.9	4.5 mtr. Leg Extension		No.				
9.9.10	6.0 mtr. Leg Extension		No.				
9.9.11	7.5 mtr. Leg Extension		No.				
9.9.12	9.0 mtr. Leg Extension		No.				
9.9.13	10.5 mtr. Leg Extension		No.				
9.9.14	12 mtr. Leg Extension		No.				
9.9.15	Any other Type or types of Extension as considered by the bidder.		No.				
							This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.

**BOQ for Schedule No. 2 (Plant, Mandatory Spares)**

Item	Description	Country of origin	Unit	Qty. as considered by the bidder	Unit Price as considered by the bidder	Total Price	Remarks
9.10	D1FL Type Tower (35 to 60 Degree) DE Anchor - Tower Category : Full Dead End - Near Large Crossings						
9.10.1	Basic Body		No.				
9.10.2	+45 mtr. Body Extension		No.				
9.10.3	+36 mtr. Body Extension		No.				
9.10.4	+27 mtr. Body Extension		No.				
9.10.5	+18 mtr. Body Extension		No.				
9.10.6	+9 mtr. Body Extension		No.				
9.10.7	1.5 mtr. Leg Extension		No.				
9.10.8	3.0 mtr. Leg Extension		No.				
9.10.9	4.5 mtr. Leg Extension		No.				
9.10.10	6.0 mtr. Leg Extension		No.				
9.10.11	7.5 mtr. Leg Extension		No.				
9.10.12	9.0 mtr. Leg Extension		No.				
9.10.13	10.5 mtr. Leg Extension		No.				
9.10.14	12 mtr. Leg Extension		No.				
9.10.15	Any other Type or types of Extension as considered by the bidder.		No.				
							This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.
9.11	Any other Type or types of Tower as considered by the bidder.						
							This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.

**BOQ for Schedule No. 2 (Plant, Mandatory Spares)**

Item	Description	Country of origin	Unit	Qty. as considered by the bidder	Unit Price as considered by the bidder	Total Price	Remarks
9.16	Conductor ACSR "MOOSE"		KM				
9.17	Compression joint for Conductor ACSR "Moose"		Set				
9.18	Repair sleeve for Conductor ACSR "Moose"		Set				
9.19	Spacer damper for conductor ACSR "Moose"		Set				
9.2	Rigid Spacer for conductor jumpers (for ACSR "Moose")		Set				
9.21	OPGW (in single Drum)		KM				
9.22	OPGW joint box		Set				
9.23	Vibration damper for OPGW		Set				
9.24	Suspension assembly for OPGW		Set				
9.25	Tension assembly for OPGW		Set				
9.26	OPGW download clamps		Set				
9.27	Earth wire of aluminium-clad steel wire 93 mm <sup>2</sup>		KM				
9.28	Compression joint for earth wire		Set				
9.29	Suspension assembly for earth wire		Set				
9.3	Tension assembly for earth wire		Set				
9.31	Vibration damper for earth wire ACS 93		Set				
9.32	Insulator sets (included: Disc insulator units / toughened glass insulator units, Assembly fittings, Phase conductor fittings)		Set				
9.33	Suspension set (for normal span & crossing span)		Set				
9.34	Tension set (for normal span & crossing span)		Set				
9.35	Danger Plate / Phase Plate / No plate / Anticlimbing Device / Bird Anti-Nest Spikes/ bird reflectors, bird nesting platforms		Set				
9.36	Stockbridge Conductor Dampers		Set				
9.37	Any other item associated with Mandatory Spare Parts considered by the Bidder.						
							This row is intentionally left blank for the Bidder. The Bidder may add more rows if required for other type of items associated with Tower Accessories they envisaged.



**BOO for Schedule No. 2 (Plant, Mandatory Spares)**

<b>Item</b>	<b>Description</b>	<b>Country of origin</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as considered by the bidder</b>	<b>Total Price</b>	<b>Remarks</b>
<b>10</b>	<b>Mandatory Tools. (Per B0 Annex 7)</b>						
10.1	Tool box Mechanical (open spanners 16mm - 38mm; ring spanners 16mm - 38mm; Combination pliers; screw driver sets ,steel punch, flat &round file 250mm ,hammer 1.5kg,sledge hammer 5kg, knife steel brush measuring tapes 30m & 50m. Bow saw and saw blades, spirit level, plug box spanner size 64mm, pipe wrench, veneer calipers)		Set				
10.2	Tool Kit ACSR "MOOSE" and OHGW 7 No5 AW. Shall include conductor strand cutter, hydraulic press, press forms for ACSR "MOOSE" (steel core and aluminium outer strands) and for OHGW 7 No5 AW, generator power source		Set				
10.3	Wire rope – steel wire Ø16mm, 230 KN, Length: 150m, Tapered end, Hooked end, with reel		No				
10.4	Conductor trimmer with one popular bushing & more bushings for ACSR "MOOSE"		No				
10.5	Swivel Grips for conductors ACSR "MOOSE"		No				
10.6	Two bundled conductors' pulley (model, as agreed with NEA)		No				

**BOO for Schedule No. 2 (Plant, Mandatory Spares)**

<b>Item</b>	<b>Description</b>	<b>Country of origin</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as considered by the bidder</b>	<b>Total Price</b>	<b>Remarks</b>
10.7	The head-type temporary mesh sock joints for conductor ACSR "MOOSE"		No				
10.8	Double head-type temporary mesh sock joints for conductor ACSR "MOOSE"		No				
10.9	Self-gripping (Come along) clamps for conductor ACSR "MOOSE"		No				
10.10	Self-gripping (Come along) clamps for OHGW 7 No5 AW		No				
10.11	Inspection Trolley (model, as agreed with client)		No				
10.12	Service Snatch Blocks (model, as agreed with client)		No				
10.13	Lifting Hoists (model/capacity, as agreed with client)		No				
10.14	Tirfor with rope (model/breaking load, as agreed with client)		No				
10.15	Suspension Ladders (aluminium alloy, 6 m)		No				
10.16	Anchoring Ladders (aluminium alloy, 8 m)		No				
10.17	Splice Kit OPGW. Shall include fiber optic cutter, fiber jointing device, FC/PC connectors, pigtails, cleaning and cleaver tools		Set				
10.18	Tool Kit OPGW. Shall include fusion splicer, optical level meter, optical time domain reflector (OTDR), laser power source		Set				
10.19	Any other item associated with Mandatory Tools considered by the Bidder.						
							This row is intentionally left blank for the Bidder. The Bidder may add more rows if required for other type of items associated with Tower Accessories they envisaged.

**Breakdown of Rates and Prices Schedule No. 3. Plant, Tools and Mandatory Spare Parts Supplied from Within the Employer's Country**

Item	Description	Unit	Qty. as considered by the bidder	Unit Price as considered by the bidder	Total Price	Remarks
1.1						The Bidder may list the items they considered in Price Schedule (which are available in Employer's Country)
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						

Name of Bidder  Signature of Bidder
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**BOQ for Schedule No. 4. Installation and Other Services Included all Related Civil Works**

<b>Item</b>	<b>Description</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as considered by the bidder</b>	<b>Total Price</b>	<b>Remarks</b>
<b>1</b>	<b>Preliminary Works, Site Preparation and General Facilities, upgradation of existing road and temporary access road/foot-trail etc.</b>					
<b>1.1</b>	Submission of plans and documents/drawings of the approved tower to the Engineer.	No. of Documents/Drawings				
1.1.1	Any other Type of activity not described above but the Bidder considered by the bidder					
						This row is intentionally left blank for bidder. The bidder may add more rows if required for any other type facility they envisaged.
<b>1.2</b>	<b>Geo Technical investigation including Ground Motion values for the area, Seismic Analysis, measurement of soil resistivity, tower footing resistance, Standard Penetration Test (SPT) / slope and soil stability as required, laboratory tests and submission of report.</b>	LS				
1.2.1	Any other Type of activity not described above but the Bidder considered by the bidder					
						This row is intentionally left blank for bidder. The bidder may add more rows if required for any other work they envisaged related to Geo Tech Work.

**BOQ for Schedule No. 4. Installation and Other Services Included all Related Civil Works**

<b>Item</b>	<b>Description</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as considered by the bidder</b>	<b>Total Price</b>	<b>Remarks</b>
<b>1.3</b>	<b>Setting up of laydown area / Store yard / Helipad (if Bidder intends to use helicopter).</b>					
1.3.1	Lay Down Area					
1.3.2	Store Area (Covered)	No and Sq. Mtr.for each area				
1.3.3	Store Area (Uncovered)	No and Sq. Mtr.for each area				
1.3.4	Helipad Area	No and Sq. Mtr.for each area				
1.3.5	Any other Type facility considered by the bidder	No and Sq. Mtr.for each area				
						This row is intentionally left blank for bidder. The bidder may add more rows if required for any other type facility they envisaged.
<b>1.4</b>	<b>Site office (and O&amp;M cost of Site Office) including setting up of Site Office for Employer &amp; Engineer including all necessary facilities (such as furniture, computer and communication equipment etc.).</b>					
1.4.1	Site office for Contractor	LS				
1.4.2	Site Office for Engineer	LS				
1.4.3	Site Office for Employer	LS				
1.4.4	Any other facility considered by the bidder	LS				
						This row is intentionally left blank for bidder. The bidder may add more rows if required for any other type facility they envisaged.

**BOQ for Schedule No. 4. Installation and Other Services Included all Related Civil Works**

Item	Description	Unit	Qty. as considered by the bidder	Unit Price as considered by the bidder	Total Price	Remarks
<b>1.5</b>	<b>Arrangement of living accommodation for Contractor &amp; Engineer's employees including all necessary amenities (at Contractor's cost).</b>					
1.5.1	Living Accommodation for Contractor	No and Sq. Mtr. for each accommodation				
1.5.2	Living Accommodation for Engineer	No and Sq. Mtr. for each accommodation				
1.5.3	Any other facility considered by the bidder	No and Sq. Mtr. for each area				
						This row is intentionally left blank for bidder. The bidder may add more rows if required for any other type facility they envisaged.
<b>1.6</b>	<b>Employer &amp; Engineers transport facilities with drivers (including fuel, running and maintenance costs, statutory charges for cars etc.) - 4 Wheel Drive Pick up &amp; SUV</b>					
1.6.1	4 Wheel Drive Pick up (2 No )	LS				
1.6.2	4 Wheel Drive SUV (2 No)	LS				
1.6.3	Any other facility considered by the bidder					
						This row is intentionally left blank for bidder. The bidder may add more rows if required for any other type facility they envisaged.
1.7	Concrete Design Mix preparation & Testing and approval by the Engineer.	No of Grade of Concrete				
1.7.1	Any other facility considered by the bidder					
						This row is intentionally left blank for bidder. The bidder may add more rows if required for any other type facility they envisaged.
1.8	<b>Upgradation of existing road, construction of new access trails and arrangement of working area.</b>					
1.8.1	Upgradation of existing roads without widening and without tree cutting and reinstatement of the road as specified in Section V (Employer's Requirement).	Km				
1.8.2	Construction of new access trails of 1.5 m width without tree cutting as specified in Section V (Employer's Requirement).	Km				

**BOQ for Schedule No. 4. Installation and Other Services Included all Related Civil Works**

Item	Description	Unit	Qty. as considered by the bidder	Unit Price as considered by the bidder	Total Price	Remarks	
1.8.3	Arrangement of working area required during construction (by contractor) – considering the movement of workers and machineries during foundation, erection and stringing activities.	Sq. Mtr.					
1.8.4	Any other facility considered by the bidder						
						This row is intentionally left blank for bidder. The bidder may add more rows if required for any other type facility they envisaged.	

**BOQ for Schedule No. 4. Installation and Other Services Included all Related Civil Works**

Item	Description	Unit	Qty. as considered by the bidder	Unit Price as considered by the bidder	Total Price	Remarks
2	<b>Tower Foundations (including rock anchoring) along with setting of stubs using templates or props and other related works like Benching / Grading, excavations, dewatering, shoring and shuttering, reinforcement, concreting, curing, backfilling, compaction, Revetment, Stone Gabion Wall, Stone / Brick masonry Wall, Stone/Concrete Drainage Ditch etc. as per requirement, complete in all respect under different types of soil conditions . Contractor should provide suitable corrosion protection and flood protection for tower foundations as required.</b>					
2.1	<b>In Soil Type - 1 ( Normal Dry Soil)</b>					
2.1.1	D1A Type Tower - Tangent Suspension (0 to 2 Degree)- Tower Category: Suspension	No.				
2.1.2	D1A Type Tower - Large Angle Suspension (2 to 5 Degree)- Tower Category: Suspension	No.				
2.1.3	D1B Type Tower - Small Line Angle Deviation (0 to 15 Degree)- Tower Category: Strain	No.				
2.1.4	D1B - ALT Type Tower - Small Line Angle Deviation (0 to 15 Degree)- Tower Category: RA Suspension	No.				
2.1.5	D1C Type Tower (15 to 30 Degree) Medium Line Angle Deviation - Tower Category : Strain	No.				
2.1.6	D1C -ALT Type Tower (15 to 30 Degree) Medium Line Angle Deviation- Tower Category : RA Suspension	No.				
2.1.7	D1D Type Tower (0 to 30 Degree) Line Angle Deviation - DE Anchor / Terminal DE - Tower Category : Full Dead End	No.				
2.1.8	D1E Type Tower (30 to 90 Degree) Light Angle Deviation / DE Anchor / Terminal DE - Tower Category : Full Dead End	No.				
2.1.9	D1FS Type Tower (0 to 35 Degree) DE Anchor - Tower Category : Full Dead End - Near Large Crossings	No.				
2.1.10	D1FL Type Tower (35 to 60 Degree) DE Anchor - Tower Category : Full Dead End - Near Large Crossings	No.				
2.1.11	Any other Type or types of Tower Foundations as considered by the bidder.					
						This row is intentionally left blank for bidder. The bidder may add more rows if required for any other type facility they envisaged.



**BOQ for Schedule No. 4. Installation and Other Services Included all Related Civil Works**

<b>Item</b>	<b>Description</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as considered by the bidder</b>	<b>Total Price</b>	<b>Remarks</b>
<b>2.2</b>	<b>In Soil Type - 2 (Wet Soil)</b>					
2.2.1	D1A Type Tower - Tangent Suspension (0 to 2 Degree)- Tower Category: Suspension	No.				
2.2.2	D1A Type Tower - Large Angle Suspension (2 to 5 Degree)- Tower Category: Suspension	No.				
2.2.3	D1B Type Tower - Small Line Angle Deviation (0 to 15 Degree)- Tower Category: Strain	No.				
2.2.4	D1B - ALT Type Tower - Small Line Angle Deviation (0 to 15 Degree)- Tower Category: RA Suspension	No.				
2.2.5	D1C Type Tower (15 to 30 Degree) Medium Line Angle Deviation - Tower Category : Strain	No.				
2.2.6	D1C -ALT Type Tower (15 to 30 Degree) Medium Line Angle Deviation- Tower Category : RA Suspension	No.				
2.2.7	D1D Type Tower (0 to 30 Degree) Line Angle Deviation - DE Anchor / Terminal DE - Tower Category : Full Dead End	No.				
2.2.8	D1E Type Tower (30 to 90 Degree) Light Angle Deviation / DE Anchor / Terminal DE - Tower Category : Full Dead End	No.				
2.2.9	D1FS Type Tower (0 to 35 Degree) DE Anchor - Tower Category : Full Dead End - Near Large Crossings	No.				
2.2.10	D1FL Type Tower (35 to 60 Degree) DE Anchor - Tower Category : Full Dead End - Near Large Crossings	No.				
2.2.11	Any other Type or types of Tower Foundations as considered by the bidder.					
						This row is intentionally left blank for bidder. The bidder may add more rows if required for any other type facility they envisaged.

**BOQ for Schedule No. 4. Installation and Other Services Included all Related Civil Works**

<b>Item</b>	<b>Description</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as considered by the bidder</b>	<b>Total Price</b>	<b>Remarks</b>
<b>2.3</b>	<b>In Soil Type - 3 (Soft Rock/Fissured Rock)</b>					
2.3.1	D1A Type Tower - Tangent Suspension (0 to 2 Degree)- Tower Category: Suspension	No.				
2.3.2	D1A Type Tower - Large Angle Suspension (2 to 5 Degree)- Tower Category: Suspension	No.				
2.3.3	D1B Type Tower - Small Line Angle Deviation (0 to 15 Degree)- Tower Category: Strain	No.				
2.3.4	D1B - ALT Type Tower - Small Line Angle Deviation (0 to 15 Degree)- Tower Category: RA Suspension	No.				
2.3.5	D1C Type Tower (15 to 30 Degree) Medium Line Angle Deviation - Tower Category : Strain	No.				
2.3.6	D1C -ALT Type Tower (15 to 30 Degree) Medium Line Angle Deviation- Tower Category : RA Suspension	No.				
2.3.7	D1D Type Tower (0 to 30 Degree) Line Angle Deviation - DE Anchor / Terminal DE - Tower Category : Full Dead End	No.				
2.3.8	D1E Type Tower (30 to 90 Degree) Light Angle Deviation / DE Anchor / Terminal DE - Tower Category : Full Dead End	No.				
2.3.9	D1FS Type Tower (0 to 35 Degree) DE Anchor - Tower Category : Full Dead End - Near Large Crossings	No.				
2.3.10	D1FL Type Tower (35 to 60 Degree) DE Anchor - Tower Category : Full Dead End - Near Large Crossings	No.				
2.3.11	Any other Type or types of Tower Foundations as considered by the bidder.					
						This row is intentionally left blank for bidder. The bidder may add more rows if required for any other type facility they envisaged.

**BOQ for Schedule No. 4. Installation and Other Services Included all Related Civil Works**

<b>Item</b>	<b>Description</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as considered by the bidder</b>	<b>Total Price</b>	<b>Remarks</b>
<b>2.4</b>	<b>In Soil Type - 4 (Sandy Soil)</b>					
2.4.1	D1A Type Tower - Tangent Suspension (0 to 2 Degree)- Tower Category: Suspension	No.				
2.4.2	D1A Type Tower - Large Angle Suspension (2 to 5 Degree)- Tower Category: Suspension	No.				
2.4.3	D1B Type Tower - Small Line Angle Deviation (0 to 15 Degree)- Tower Category: Strain	No.				
2.4.4	D1B - ALT Type Tower - Small Line Angle Deviation (0 to 15 Degree)- Tower Category: RA Suspension	No.				
2.4.5	D1C Type Tower (15 to 30 Degree) Medium Line Angle Deviation - Tower Category : Strain	No.				
2.4.6	D1C -ALT Type Tower (15 to 30 Degree) Medium Line Angle Deviation- Tower Category : RA Suspension	No.				
2.4.7	D1D Type Tower (0 to 30 Degree) Line Angle Deviation - DE Anchor / Terminal DE - Tower Category : Full Dead End	No.				
2.4.8	D1E Type Tower (30 to 90 Degree) Light Angle Deviation / DE Anchor / Terminal DE - Tower Category : Full Dead End	No.				
2.4.9	D1FS Type Tower (0 to 35 Degree) DE Anchor - Tower Category : Full Dead End - Near Large Crossings	No.				
2.4.10	D1FL Type Tower (35 to 60 Degree) DE Anchor - Tower Category : Full Dead End - Near Large Crossings	No.				
2.4.11	Any other Type or types of Tower Foundations as considered by the bidder.					
						This row is intentionally left blank for bidder. The bidder may add more rows if required for any other type facility they envisaged.

**BOQ for Schedule No. 4. Installation and Other Services Included all Related Civil Works**

<b>Item</b>	<b>Description</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as considered by the bidder</b>	<b>Total Price</b>	<b>Remarks</b>
<b>2.5</b>	<b>Micropiling Foundation for all type of soils</b>					
2.5.1	D1A Type Tower - Tangent Suspension (0 to 2 Degree)- Tower Category: Suspension	No.				
2.5.2	D1A Type Tower - Large Angle Suspension (2 to 5 Degree)- Tower Category: Suspension	No.				
2.5.3	D1B Type Tower - Small Line Angle Deviation (0 to 15 Degree)- Tower Category: Strain	No.				
2.5.4	D1B - ALT Type Tower - Small Line Angle Deviation (0 to 15 Degree)- Tower Category: RA Suspension	No.				
2.5.5	D1C Type Tower (15 to 30 Degree) Medium Line Angle Deviation - Tower Category : Strain	No.				
2.5.6	D1C -ALT Type Tower (15 to 30 Degree) Medium Line Angle Deviation- Tower Category : RA Suspension	No.				
2.5.7	D1D Type Tower (0 to 30 Degree) Line Angle Deviation - DE Anchor / Terminal DE - Tower Category : Full Dead End	No.				
2.5.8	D1E Type Tower (30 to 90 Degree) Light Angle Deviation / DE Anchor / Terminal DE - Tower Category : Full Dead End	No.				
2.5.9	D1FS Type Tower (0 to 35 Degree) DE Anchor - Tower Category : Full Dead End - Near Large Crossings	No.				
2.5.10	D1FL Type Tower (35 to 60 Degree) DE Anchor - Tower Category : Full Dead End - Near Large Crossings	No.				
2.5.11	Any other Type or types of Tower Foundations as considered by the bidder.					
						This row is intentionally left blank for bidder. The bidder may add more rows if required for any other type facility they envisaged.

**BOQ for Schedule No. 4. Installation and Other Services Included all Related Civil Works**

<b>Item</b>	<b>Description</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as considered by the bidder</b>	<b>Total Price</b>	<b>Remarks</b>
2.6	<b>Steel Grillage Foundation for all type of soils</b>					
2.6.1	D1A Type Tower - Tangent Suspension (0 to 2 Degree)- Tower Category: Suspension	No.				
2.6.2	D1A Type Tower - Large Angle Suspension (2 to 5 Degree)- Tower Category: Suspension	No.				
2.6.3	D1B Type Tower - Small Line Angle Deviation (0 to 15 Degree)- Tower Category: Strain	No.				
2.6.4	D1B - ALT Type Tower - Small Line Angle Deviation (0 to 15 Degree)- Tower Category: RA Suspension	No.				
2.6.5	D1C Type Tower (15 to 30 Degree) Medium Line Angle Deviation - Tower Category : Strain	No.				
2.6.6	D1C -ALT Type Tower (15 to 30 Degree) Medium Line Angle Deviation- Tower Category : RA Suspension	No.				
2.6.7	D1D Type Tower (0 to 30 Degree) Line Angle Deviation - DE Anchor / Terminal DE - Tower Category : Full Dead End	No.				
2.6.8	D1E Type Tower (30 to 90 Degree) Light Angle Deviation / DE Anchor / Terminal DE - Tower Category : Full Dead End	No.				
2.6.9	D1FS Type Tower (0 to 35 Degree) DE Anchor - Tower Category : Full Dead End - Near Large Crossings	No.				
2.6.10	D1FL Type Tower (35 to 60 Degree) DE Anchor - Tower Category : Full Dead End - Near Large Crossings	No.				
2.6.11	Any other Type or types of Tower Foundations as considered by the bidder.					
						This row is intentionally left blank for bidder. The bidder may add more rows if required for any other type facility they envisaged.

**BOQ for Schedule No. 4. Installation and Other Services Included all Related Civil Works**

Item	Description	Unit	Qty. as considered by the bidder	Unit Price as considered by the bidder	Total Price	Remarks
3	<b>Erosion Protection (include removal of excess material, site stabilisation with selected fill and drainage gravel package, geotextile and filter wrap, vetiver grass).</b>	LS				
3.1	Any other work considered by the Bidder related to Erosion Protection work which is not included in the above list.					
						This row is intentionally left blank for Bidder. The bidder may add more rows if required for any other type work they considered required for erosion protection work.
4	<b>Tower Erection - For all type of Towers (Base Body &amp; extensions including leg extensions) including Broad Base, Narrow Base , with or without extensions, Multicircuit Towers, Special Towers etc. including fixing of all accessories associated with Tower body, tack welding / anti theft bolting after final tightening up-to bottom cross arm.</b>					
4.1	D1A Type Tower - Tangent Suspension (0 to 2 Degree)- Tower Category: Suspension					
4.1.1	For 0 mtr. Basic Body	No.				
4.1.2	For +9 mtr. Body Extension	No.				
4.1.3	For +18 mtr. Body Extension	No.				
4.1.4	For +27 mtr. Body Extension	No.				
4.1.5	For +36 mtr. Body Extension	No.				
4.1.6	For +45 mtr. Body Extension	No.				
4.1.7	0 mtr. Leg Extension	No.				
4.1.8	1.5 mtr. Leg Extension	No.				
4.1.9	3.0 mtr. Leg Extension	No.				
4.1.10	4.5 mtr. Leg Extension	No.				
4.1.11	6.0 mtr. Leg Extension	No.				
4.1.12	7.5 mtr. Leg Extension	No.				
4.1.13	9.0 mtr. Leg Extension	No.				
4.1.14	10.5 mtr. Leg Extension	No.				
.	12 mtr. Leg Extension	No.				
4.1.16	Any other Type or types of Extension as considered by the bidder.	No.				
						This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.

**BOQ for Schedule No. 4. Installation and Other Services Included all Related Civil Works**

Item	Description	Unit	Qty. as considered by the bidder	Unit Price as considered by the bidder	Total Price	Remarks
4.2	D1A Type Tower - Light Angle Suspension (2 to 5 Degree)- Tower Category: Suspension					
4.2.1	For 0 mtr. Basic Body	No.				
4.2.2	For +9 mtr. Body Extension	No.				
4.2.3	For +18 mtr. Body Extension	No.				
4.2.4	For +27 mtr. Body Extension	No.				
4.2.5	For +36 mtr. Body Extension	No.				
4.2.6	For +45 mtr. Body Extension	No.				
4.2.7	0 mtr. Leg Extension	No.				
4.2.8	1.5 mtr. Leg Extension	No.				
4.2.9	3.0 mtr. Leg Extension	No.				
4.2.10	4.5 mtr. Leg Extension	No.				
4.2.11	6.0 mtr. Leg Extension	No.				
4.2.12	7.5 mtr. Leg Extension	No.				
4.2.13	9.0 mtr. Leg Extension	No.				
4.2.14	10.5 mtr. Leg Extension	No.				
4.2.15	12 mtr. Leg Extension	No.				
4.2.16	Any other Type or types of Extension as considered by the bidder.	No.				
						This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.

**BOQ for Schedule No. 4. Installation and Other Services Included all Related Civil Works**

Item	Description	Unit	Qty. as considered by the bidder	Unit Price as considered by the bidder	Total Price	Remarks
4.3	D1B Type Tower - Small Line Angle Deviation (0 to 15 Degree)- Tower Category: Strain					
4.3.1	For 0 mtr. Basic Body	No.				
4.3.2	For +9 mtr. Body Extension	No.				
4.3.3	For +18 mtr. Body Extension	No.				
4.3.4	For +27 mtr. Body Extension	No.				
4.3.5	For +36 mtr. Body Extension	No.				
4.3.6	For +45 mtr. Body Extension	No.				
4.3.7	0 mtr. Leg Extension	No.				
4.3.8	1.5 mtr. Leg Extension	No.				
4.3.9	3.0 mtr. Leg Extension	No.				
4.3.10	4.5 mtr. Leg Extension	No.				
4.3.11	6.0 mtr. Leg Extension	No.				
4.3.12	7.5 mtr. Leg Extension	No.				
4.3.13	9.0 mtr. Leg Extension	No.				
4.3.14	10.5 mtr. Leg Extension	No.				
4.3.15	12 mtr. Leg Extension	No.				
4.3.16	Any other Type or types of Extension as considered by the bidder.	No.				
						This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.



**BOQ for Schedule No. 4. Installation and Other Services Included all Related Civil Works**

<b>Item</b>	<b>Description</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as considered by the bidder</b>	<b>Total Price</b>	<b>Remarks</b>
4.4	D1B - ALT Type Tower - Small Line Angle Deviation (0 to 15 Degree)- Tower Category: RA Suspension					
4.4.1	For 0 mtr. Basic Body	No.				
4.4.2	For +9 mtr. Body Extension	No.				
4.4.3	For +18 mtr. Body Extension	No.				
4.4.4	For +27 mtr. Body Extension	No.				
4.4.5	For +36 mtr. Body Extension	No.				
4.4.6	For +45 mtr. Body Extension	No.				
4.4.7	0 mtr. Leg Extension	No.				
4.4.8	1.5 mtr. Leg Extension	No.				
4.4.9	3.0 mtr. Leg Extension	No.				
4.4.10	4.5 mtr. Leg Extension	No.				
4.4.11	6.0 mtr. Leg Extension	No.				
4.4.12	7.5 mtr. Leg Extension	No.				
4.4.13	9.0 mtr. Leg Extension	No.				
4.4.14	10.5 mtr. Leg Extension	No.				
4.4.15	12 mtr. Leg Extension	No.				
4.4.16	Any other Type or types of Extension as considered by the bidder.	No.				
						This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.

**BOQ for Schedule No. 4. Installation and Other Services Included all Related Civil Works**

<b>Item</b>	<b>Description</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as considered by the bidder</b>	<b>Total Price</b>	<b>Remarks</b>
4.5	D1C Type Tower (15 to 30 Degree) Medium Line Angle Deviation - Tower Category : Strain					
4.5.1	For 0 mtr. Basic Body	No.				
4.5.2	For +9 mtr. Body Extension	No.				
4.5.3	For +18 mtr. Body Extension	No.				
4.5.4	For +27 mtr. Body Extension	No.				
4.5.5	For +36 mtr. Body Extension	No.				
4.5.6	For +45 mtr. Body Extension	No.				
4.5.7	0 mtr. Leg Extension	No.				
4.5.8	1.5 mtr. Leg Extension	No.				
4.5.9	3.0 mtr. Leg Extension	No.				
4.5.10	4.5 mtr. Leg Extension	No.				
4.5.11	6.0 mtr. Leg Extension	No.				
4.5.12	7.5 mtr. Leg Extension	No.				
4.5.13	9.0 mtr. Leg Extension	No.				
4.5.14	10.5 mtr. Leg Extension	No.				
4.5.15	12 mtr. Leg Extension	No.				
4.5.16	Any other Type or types of Extension as considered by the bidder.	No.				
						This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.

**BOQ for Schedule No. 4. Installation and Other Services Included all Related Civil Works**

Item	Description	Unit	Qty. as considered by the bidder	Unit Price as considered by the bidder	Total Price	Remarks
4.6	D1C -ALT Type Tower (15 to 30 Degree) Medium Line Angle Deviation- Tower Category : RA Suspension					
4.6.1	For 0 mtr. Basic Body	No.				
4.6.2	For +9 mtr. Body Extension	No.				
4.6.3	For +18 mtr. Body Extension	No.				
4.6.4	For +27 mtr. Body Extension	No.				
4.6.5	For +36 mtr. Body Extension	No.				
4.6.6	For +45 mtr. Body Extension	No.				
4.6.7	0 mtr. Leg Extension	No.				
4.6.8	1.5 mtr. Leg Extension	No.				
4.6.9	3.0 mtr. Leg Extension	No.				
4.6.10	4.5 mtr. Leg Extension	No.				
4.6.11	6.0 mtr. Leg Extension	No.				
4.6.12	7.5 mtr. Leg Extension	No.				
4.6.13	9.0 mtr. Leg Extension	No.				
4.6.14	10.5 mtr. Leg Extension	No.				
4.6.15	12 mtr. Leg Extension	No.				
4.6.16	Any other Type or types of Extension as considered by the bidder.	No.				
						This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.

**BOQ for Schedule No. 4. Installation and Other Services Included all Related Civil Works**

Item	Description	Unit	Qty. as considered by the bidder	Unit Price as considered by the bidder	Total Price	Remarks
4.7	D1D Type Tower (30 to 90 Degree) Light Angle Deviation / DE Anchor / Terminal DE - Tower Category : Full Dead End					
4.7.1	For 0 mtr. Basic Body	No.				
4.7.2	For +9 mtr. Body Extension	No.				
4.7.3	For +18 mtr. Body Extension	No.				
4.7.4	For +27 mtr. Body Extension	No.				
4.7.5	For +36 mtr. Body Extension	No.				
4.7.6	For +45 mtr. Body Extension	No.				
4.7.7	0 mtr. Leg Extension	No.				
4.7.8	1.5 mtr. Leg Extension	No.				
4.7.9	3.0 mtr. Leg Extension	No.				
4.7.10	4.5 mtr. Leg Extension	No.				
4.7.11	6.0 mtr. Leg Extension	No.				
4.7.12	7.5 mtr. Leg Extension	No.				
4.7.13	9.0 mtr. Leg Extension	No.				
4.7.14	10.5 mtr. Leg Extension	No.				
4.7.15	12 mtr. Leg Extension	No.				
4.7.16	Any other Type or types of Extension as considered by the bidder.	No.				
						This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.

**BOQ for Schedule No. 4. Installation and Other Services Included all Related Civil Works**

Item	Description	Unit	Qty. as considered by the bidder	Unit Price as considered by the bidder	Total Price	Remarks
4.8	DIE Type Tower (30 to 90 Degree) Light Angle Deviation / DE Anchor / Terminal DE - Tower Category : Full Dead End					
4.8.1	For 0 mtr. Basic Body	No.				
4.8.2	For +9 mtr. Body Extension	No.				
4.8.3	For +18 mtr. Body Extension	No.				
4.8.4	For +27 mtr. Body Extension	No.				
4.8.5	For +36 mtr. Body Extension	No.				
4.8.6	For +45 mtr. Body Extension	No.				
4.8.7	0 mtr. Leg Extension	No.				
4.8.8	1.5 mtr. Leg Extension	No.				
4.8.9	3.0 mtr. Leg Extension	No.				
4.8.10	4.5 mtr. Leg Extension	No.				
4.8.11	6.0 mtr. Leg Extension	No.				
4.8.12	7.5 mtr. Leg Extension	No.				
4.8.13	9.0 mtr. Leg Extension	No.				
4.8.14	10.5 mtr. Leg Extension	No.				
4.8.15	12 mtr. Leg Extension	No.				
4.8.16	Any other Type or types of Extension as considered by the bidder.	No.				
						This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.

**BOQ for Schedule No. 4. Installation and Other Services Included all Related Civil Works**

<b>Item</b>	<b>Description</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as considered by the bidder</b>	<b>Total Price</b>	<b>Remarks</b>
4.9	D1FS Type Tower (0 to 35 Degree) DE Anchor - Tower Category : Full Dead End - Near Large Crossings					
4.9.1	For 0 mtr. Basic Body	No.				
4.9.2	For +9 mtr. Body Extension	No.				
4.9.3	For +18 mtr. Body Extension	No.				
4.9.4	For +27 mtr. Body Extension	No.				
4.9.5	For +36 mtr. Body Extension	No.				
4.9.6	For +45 mtr. Body Extension	No.				
4.9.7	0 mtr. Leg Extension	No.				
4.9.8	1.5 mtr. Leg Extension	No.				
4.9.9	3.0 mtr. Leg Extension	No.				
4.9.10	4.5 mtr. Leg Extension	No.				
4.9.11	6.0 mtr. Leg Extension	No.				
4.9.12	7.5 mtr. Leg Extension	No.				
4.9.13	9.0 mtr. Leg Extension	No.				
4.9.14	10.5 mtr. Leg Extension	No.				
4.9.15	12 mtr. Leg Extension	No.				
4.9.16	Any other Type or types of Extension as considered by the bidder.	No.				
						This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.

**BOQ for Schedule No. 4. Installation and Other Services Included all Related Civil Works**

Item	Description	Unit	Qty. as considered by the bidder	Unit Price as considered by the bidder	Total Price	Remarks
4.10	D1FL Type Tower (35 to 60 Degree) DE Anchor - Tower Category : Full Dead End - Near Large Crossings					
4.10.1	For 0 mtr. Basic Body	No.				
4.10.2	For +9 mtr. Body Extension	No.				
4.10.3	For +18 mtr. Body Extension	No.				
4.10.4	For +27 mtr. Body Extension	No.				
4.10.5	For +36 mtr. Body Extension	No.				
4.10.6	For +45 mtr. Body Extension	No.				
4.10.7	0 mtr. Leg Extension	No.				
4.10.8	1.5 mtr. Leg Extension	No.				
4.10.9	3.0 mtr. Leg Extension	No.				
4.10.10	4.5 mtr. Leg Extension	No.				
4.10.11	6.0 mtr. Leg Extension	No.				
4.10.12	7.5 mtr. Leg Extension	No.				
4.10.13	9.0 mtr. Leg Extension	No.				
4.10.14	10.5 mtr. Leg Extension	No.				
4.10.15	12 mtr. Leg Extension	No.				
4.10.16	Any other Type or types of Extension as considered by the bidder.	No.				
						This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.
4.16	Any other Type or types of Towers as considered by the bidder.					
						This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.

**BOQ for Schedule No. 4. Installation and Other Services Included all Related Civil Works**

Item	Description	Unit	Qty. as considered by the bidder	Unit Price as considered by the bidder	Total Price	Remarks
5	<b>Stringing of ACSR Quad Moose Conductor for Normal, Multicircuit or any other type of Towers including crossing of power lines (medium, high and extra high voltage), rivers, all types of roads, forests, etc. with controlled tension method using Pilot Wire with or without Drones (to reduce tree clearance impact) including fixing of all accessories related to stringing work like disc insulators, hardware fittings, vibration dampers, arcing rings or other corona protection items, spacers, etc. complete in all respect. The work also includes necessary arrangement for scaffolding, power and traffic blocks, etc. For details refer to Section - V - B1/Annex D, Appendix 5 and also consult Section V- B1 Annex H2 for Updated Route.</b>					
5.1	Stringing of ACSR Quad Moose Conductor as indicated above (Quad Moose X 3 Phase X 2 Circuit) for Normal Towers and (Quad Moose X 3 Phase X 4 Circuit) for Quad Towers.	KM				
5.2	Fixing of Suspension Fitting	Set				
5.3	Fixing of Tension Fitting	Set				
5.4	Fixing of Pilot Insularor Fitting for jumpers	Set				
5.5	Hoisting of Suspension Disk Insulator String	Set				
5.6	Hoisting of Tension Insulator String	Set				
5.7	Hoisting of Pilot Insulator String	Set				
5.8	Fixing of Vibration Dampers	No				
5.9	Fixing of Spacers	No				
5.10	Fixing of Arcing Rings / Other Corona protection items	Set				
5.11	<b>Crossing of 33kV and below voltage lines including arrangement for scaffolding and arrangement for power/traffic block.</b>	Span				
5.12	<b>Crossing of 66kV and above voltage lines including arrangement for scaffolding and arrangement for power/traffic block.</b>	Span				
5.13	<b>Crossing of all type of roads including arrangement of traffic block</b>	Span				
5.14	<b>Crossing of River</b>	Span				
5.15	Any other work related to stringing as considered by the bidder.					
						This row is intentionally left blank for bidder. The bidder may add more rows if required for other items associated with Tower Structure they envisaged.



**BOQ for Schedule No. 4. Installation and Other Services Included all Related Civil Works**

Item	Description	Unit	Qty. as considered by the bidder	Unit Price as considered by the bidder	Total Price	Remarks
6	<b>Stringing of OHGW for Normal, Multicircuit and any other type of Towers including crossing of power lines (medium, high and extra high voltage), rivers, all types of roads, forests, etc. using Pilot Wire with or without Drones (to reduce tree clearance impact) including fixing of all accessories related to stringing work like hardware fittings, vibration dampers, complete in all respect. The work also includes necessary arrangement for scaffolding, power and traffic blocks, etc.</b>					
6.1	Stringing of OHGW	KM				
6.2	Fixing of Mid-Span Joint for OHGW 7 No5 AW	No				
6.3	Erection of Stockbridge Damper for OHGW 7 No 5 AW	No				
6.4	Erection of OHGW Suspension Assembly with accessories	Set				
6.5	Erection of OHGW Tension Assembly with accessories	Set				
6.6	<b>Crossing of 33kV and below voltage lines including arrangement for scaffolding and arrangement for power/traffic block.</b>	Span				
6.7	<b>Crossing of 66kV and above voltage lines including arrangement for scaffolding and arrangement for power/traffic block.</b>	Span				
6.8	<b>Crossing of all type of roads including arrangement of traffic block</b>	Span				
6.9	Any other work related to stringing as considered by the bidder.					
						This row is intentionally left blank for Bidder. The bidder may add more rows if required for any other type work they considered required for OHGW Stringing work.

**BOQ for Schedule No. 4. Installation and Other Services Included all Related Civil Works**

Item	Description	Unit	Qty. as considered by the bidder	Unit Price as considered by the bidder	Total Price	Remarks
7	<b>Stringing of OPGW for Normal, Multicircuit and any other type of Towers including crossing of power lines (medium, high and extra high voltage), rivers, all types of roads, forests, etc. using Pilot Wire with or without Drones (to reduce tree clearance impact) including fixing of all accessories related to stringing work like hardware fittings, vibration dampers, Splicing etc. complete in all respect. The work also includes necessary arrangement for scaffolding, power and traffic blocks, etc.</b>					
7.1	Stringing of OPGW (2x24F=48F, 66 kA2*sec)	KM				
7.2	Erection of Stockbridge Damper for OPGW (2x24F=48F)	No				
7.3	Erection of Splice Box for OPGW (2x24F=48F)	No				
7.4	Down Lead Clamp for OPGW (2x24F=48F)	No				
7.5	Erection of OPGW Suspension Assembly with accessories	No				
7.6	Erection of OPGW Tension Assembly with accessories	No				
7.7	Joint boxes OPGW-OPGW	No				
7.8	Joint termination boxes OPGW-U/G FOC	No				
7.9	Splicing Work	No				
7.10	Crossing of 33kV and below voltage lines including arrangement for scaffolding and arrangement for power/traffic block.	Span				
7.11	Crossing of 66kV and above voltage lines including arrangement for scaffolding and arrangement for power/traffic block.	Span				
7.12	Crossing of all type of roads including arrangement of traffic block	Span				
7.13	Any other work related to stringing as considered by the bidder.					
						This row is intentionally left blank for Bidder. The bidder may add more rows if required for any other type work they considered required for OPGW Stringing work.

**BOQ for Schedule No. 4. Installation and Other Services Included all Related Civil Works**

<b>Item</b>	<b>Description</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as considered by the bidder</b>	<b>Total Price</b>	<b>Remarks</b>
<b>8</b>	<b>Tower Earthing Works</b>					
8.1	Earthing with one rod per foundation	No				
8.2	Earthing with two rods per foundation	No				
8.3	Earthing with three rods per foundation	No				
8.4	Earthing with four or more rods per foundation	No				
8.5	Continuous counterpoise across one line span	No				
8.6	Earthing of the 5 Towers closest to Substation	No				
8.7	Any other work related to stringing as considered by the bidder.					
						This row is intentionally left blank for Bidder. The bidder may add more rows if required for any other type work they considered required for OPGW Stringing work.
<b>9</b>	<b>Environmental, Health &amp; Safety, Social and Gender Requirements.</b>					
<b>9.1</b>	<b>General Mitigation Measures</b>					
9.1.1	Develop a detailed Environmental, Social, Health, and Safety (ESHS) Management Plan for Contractor's employees.	Lot				
9.1.2	Develop, provide training and enforce a Worker Code of Conduct that includes an anti-sexual harassment policy	Lot				
9.1.3	Conduct Employee Induction Training on H&S and environmental/social/cultural sensitivity <b>as specified in the ESHSMP before commencement of site activities as well as monthly refresher training</b>	Lot				
9.1.4	Implement Community Grievance Redress Plan	Lot				
9.1.5	Outreach activities on environment, social, health and safety in project areas	N.A.				
9.1.6	Capacity building and training for communities such as skill trainings	Lot				

**BOQ for Schedule No. 4. Installation and Other Services Included all Related Civil Works**

<b>Item</b>	<b>Description</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as considered by the bidder</b>	<b>Total Price</b>	<b>Remarks</b>
<b>9.2</b>	<b>Physical Environment Mitigation Measures</b>					
9.2.1	Implement an Erosion and Sediment Control Plan	Lot				
9.2.2	Manage excavated soils	Lot				
9.2.3	Stabilize disturbed areas with native flora	Lot				
9.2.4	Spray disturbed areas with water if substantive off-site fugitive dust impacts occur	Lot				
9.2.5	Provide a pit toilet and bury all organic wastes at tower construction sites	Lot				
9.2.6	Install septic systems/package and proper wastewater disposal system for workers	Lot				
9.2.7	Provide hazardous material training to concerned staff	Lot				
9.2.8	Stockpile materials for use in controlling spills at each Tower Laydown Area	Lot				
9.2.9	Provide secondary containment for any fuel or hazardous materials	Lot				
9.2.10	Collect and segregate all waste for reuse, recycle, or disposal	Lot				
9.2.11	Dispose of solid waste at approved waste disposal facilities	Lot				
<b>9.3</b>	<b>Biological Environmental Mitigation Measures</b>					
9.3.1	Conduct pre-clearance surveys for tree clearance	Lot				
9.3.2	Implement wildlife shepherding protocol	Lot				
9.3.3	Implement invasive alien species management plan	Lot				
9.3.4	Implement forest fire management strategy	Lot				
9.3.5	Implement community programme to prohibit poaching and illegal collection of NTFPs and MAPs	Lot				

**BOQ for Schedule No. 4. Installation and Other Services Included all Related Civil Works**

<b>Item</b>	<b>Description</b>	<b>Unit</b>	<b>Qty. as considered by the bidder</b>	<b>Unit Price as considered by the bidder</b>	<b>Total Price</b>	<b>Remarks</b>
<b>9.4</b>	<b>Socio-economic and Cultural Environment Mitigation Measures</b>					
9.4.1	Implement Workforce Management Plan	Lot				
9.4.2	Implement Worker Access Management Protocol	Lot				
9.4.3	Implement Traffic Management Plan and maintain the damaged roads caused by contractors	Lot				
9.4.4	Implement Cultural Heritage Management Plan	Lot				
9.4.5	Develop and Implement Worker Grievance Redress Mechanism	Lot				
9.4.6	Conduct community training on EMF risks	Lot				
9.4.7	Develop and Implement TIP Risk Management Plan	Lot				
9.4.8	Community sensitization/awareness on HIV/AIDS, STDs, trafficking, sexual harassment, employment opportunities	Lot				
9.5	Any other work considered by the Bidder related to ESHSMP work which is not included in the above list.					
<b>9.6</b>	<b>Health and Safety</b>					
9.6.1	Personal Protective Equipment (PPEs) for Contractor's Employees and for Consultant and Employer's representatives visiting at site	Lot				
9.6.2	Specialized Personal Protective Equipment (PPEs) during erection and stringing activities like safety harness, fall arresters, retro-guard, etc.	Lot				
9.6.3	Smoke and Fire Detectors including fire fighting (fire extinguishers, etc) system at Contractor's, Employer's and Consultants site offices	Lot				
9.6.4	First Aid Kits and necessary Emergency medical items	Lot				
9.6.5	Any other items not mentioned above but the bidder may wish to include as per standard practice and mentioned in ESHSMP document.	Lot				
						This row is intentionally left blank for Bidder. The bidder may add more rows if required for any other type work they considered required for ESHSMP related work.
<b>10</b>	<b>FAT Witness. (Per B0 Annex 3)</b>					
10.1	In country & outside country Factory Inspection (FAT) & Prototype test witness. Contractor to arrange only the transport facility for Employer, Asset Owner & Engineer.	Mandays				
10.2	Any other training considered by the Bidder relevant which is not included in the above list.					
						This row is intentionally left blank for Bidder. The bidder may add more rows if required for any other type work they considered required for Training related work.

**BOQ for Schedule No. 4. Installation and Other Services Included all Related Civil Works**

Item	Description	Unit	Qty. as considered by the bidder	Unit Price as considered by the bidder	Total Price	Remarks
11	<b>Testing, Commissioning and Energizing (The Work includes but not limited to - Line patrolling for final checking against any defects, Checking the line with High Frequency Signal (Signature Analysis) to check any loose jumpering / defective disk insulator string if required, Checking of OPGW System, Energisation of Line)</b>	LS				
11.1	Any other item considered by the Bidder relevant which is not included in the above list.					
						This row is intentionally left blank for Bidder. The bidder may add more rows if required for any other type work they considered required for Testing & Commissioning related work.
12	<b>Tree Clearance Work during Survey &amp; Geo-tech investigation, Foundation, Erection &amp; Stringing Work (The Work includes but not limited to - Bush Cleaning, Tree cutting / Trimming of branches of trees, etc.)</b>	No.				
12.1	Any other Type of activity not described above but the Bidder considered relevant					
						This row is intentionally left blank for bidder. The bidder may add more rows if required for any other type of work they envisaged for tree clearance.
13	<b>Demolition of Building in ROW 46 Meter</b>					
13.1	Building to Demolish	No.				
13.2	Any other Type of activity not described above but the Bidder considered relevant					
						This row is intentionally left blank for bidder. The bidder may add more rows if required for any other type of work they envisaged for building demolition.
Name of Bidder :						
Signature of Bidder :						

## **ATTACHMENT 3**

### **Revised Annex\_6\_ESHSMP\_BoQ\_exl**



230321\_Annex\_6\_ES  
HSMP\_BoQ\_exl.xlsx

**Annex 6b**  
**ESHSMP BOQ: PRICING GUIDE**

S No.	ESHSMP-related work	Unit	No (estimate)	Expectation	Milestone guide *
<b>1.</b>	<b>General Mitigation Measures</b>				
1.01	Develop a detailed Environmental, Social, Health, and Safety (ESHS) Management Plan for Contractor's employees.	Lot	1 per contract	A detailed CESHSMP that uses the Employer's ESHSMP as its basis and either meets or exceeds its requirements; obtain approval for the plan from both the Engineer and the Employer; meeting the Employer's ESHSMP is a legal requirement under the project's Environmental Permit.	On completion of plan; before site works commence.
1.02	Biological Environmental Mitigation Measures	Lot	1 course, 25 training events per contract	A Contractor's Worker Code of Conduct that meets or exceeds the requirements of section E.7.2 of the Employer's ESHSMP; training of all staff in its use; refresher training of staff and new training for new staff; and evidence from regular reporting that it is being implemented effectively.	Monthly on evidence of verification, as relevant, according to agreed schedule.
1.03	Conduct Employee Induction Training on H&S and environmental/social/cultural sensitivity	Lot	1 course, 500 training events per contract	An appropriate training course and training materials on these matters that comply with or exceed the requirements of sections 6, 7 and 8 of the Employer's ESHSMP; competent delivery of the training to all of the Contractor's staff; refresher training of staff and new training for new staff; and evidence from regular reporting that it is being implemented effectively.	Monthly on evidence of verification, as relevant, according to agreed schedule.
1.04	Implement Community Grievance Redress Plan	Lot	Allow for 100 grievances per contract	Full participation by the Contractor in the Project's Grievance Redress Mechanism as described in sections 4.5 and C.4.4 of the Employer's ESHSMP; and evidence from regular reporting that it is being implemented effectively.	Monthly on evidence of verification, as relevant, according to agreed schedule.



**Annex 6b**  
**ESHSMP BOQ: PRICING GUIDE**

S No.	ESHSMP-related work	Unit	No (estimate)	Expectation	Milestone guide *
2.	<b>Physical Environment Mitigation Measures</b>				
2.01	Implement an Erosion and Sediment Control Plan	Lot	1 per tower site, 1 per every other of the Contractor's facilities	Effective structures for erosion prevention and sediment capture at all Contractor's work sites (including all tower sites and entire substation areas, as appropriate), camps, stores and accommodation areas, etc.; and evidence from the Engineer's ESHS monitoring and reporting that the measures are effective.	Monthly on evidence of verification, as relevant, according to agreed schedule.
2.02	Manage excavated soils	Lot	1 per tower site, 1 per every other of the Contractor's facilities	All topsoil and subsoil required to be removed in sites disturbed by the Contractor's activities are stored and replaced on site as required in sections E8.1 and E5.14b of the Employer's ESHSMP; and evidence from the Engineer's ESHS monitoring and reporting that the measures are effective.	Monthly on evidence of verification, as relevant, according to agreed schedule.
2.03	Stabilize disturbed areas with native flora	Lot	1 per tower site, 1 per every other of the Contractor's facilities	All bare soils in sites disturbed by the Contractor's activities are effectively protected from erosion using native plants as required in sections 5.14 and E5.14a to 5.14f of the Employer's ESHSMP; and evidence from the Engineer's ESHS monitoring and reporting that the measures are effective.	Monthly on evidence of verification, as relevant, according to agreed schedule.
2.04	Spray disturbed areas with water if substantive off-site fugitive dust impacts occur	Lot	Allow for 100 spray events of 1000m <sup>2</sup> each per contract	All surfaces from where dust is otherwise blowing are watered as necessary in the dry season, according to the Engineer's instruction (which the Contractor may also recommend).	Monthly on evidence of verification, as relevant, according to agreed schedule.

**Annex 6b**  
**ESHSMP BOQ: PRICING GUIDE**

<b>S No.</b>	<b>ESHSMP-related work</b>	<b>Unit</b>	<b>No (estimate)</b>	<b>Expectation</b>	<b>Milestone guide *</b>
2.05	Provide a pit toilet and bury all organic wastes at tower construction sites	Lot	1 per tower site/2	Provision of pit latrines at all tower sites, as per the specification in section E.9.2d of the Employer's ESHSMP; management of waste at all tower sites, as per the specifications in sections E.9.3a and E.9.3b of the Employer's ESHSMP; and evidence from the Engineer's ESHS monitoring and reporting that the measures are effective.	Monthly on evidence of verification, as relevant, according to agreed schedule.
2.06	Install septic systems/package and proper wastewater disposal system for workers	Lot	Per Contractor's planned facilities	Provision of sewage systems at all Contractor's facilities other than tower sites, as per the specification in section E.9.2d of the Employer's ESHSMP; and evidence from the Engineer's ESHS monitoring and reporting that the measures are effective.	In month of completion of each sewage system.
2.07	Provide hazardous material training to concerned staff	Lot	1 course, 25 training events per contract	An appropriate training course and training materials on these matters that comply with or exceed the requirements of section 9.2 of the Employer's ESHSMP; competent delivery of the training to all relevant Contractor's staff; refresher training of staff and new training for new staff; and evidence from regular reporting that it is being implemented effectively.	Monthly on evidence of verification, as relevant, according to agreed schedule.
2.08	Stockpile materials for use in controlling spills at each Tower Laydown Area	Lot	Per Contractor's planned facilities	Compliance by the Contractor of the requirement in section 9.1 of the Employer's ESHSMP to maintain stocks of spill control materials, as approved by the Engineer; and evidence from regular reporting of the use and replacement of such materials.	Monthly on evidence of verification, as relevant, according to agreed schedule.

**Annex 6b**  
**ESHSMP BOQ: PRICING GUIDE**

S No.	ESHSMP-related work	Unit	No (estimate)	Expectation	Milestone guide *
2.09	Provide secondary containment for any fuel or hazardous materials	Lot	Per Contractor's planned facilities	Compliance by the Contractor of the requirement in sections E.9.2a and E.9.2b of the Employer's ESHSMP to provide double containment of hazardous materials, especially fuels, as approved by the Engineer; and evidence from regular reporting of the diligent management of such facilities.	Monthly on evidence of verification, as relevant, according to agreed schedule.
2.10	Collect and segregate all waste for reuse, recycle, or disposal	Lot	Per Contractor's planned facilities	Management of waste by the Contractor according to the requirements of sections 9.3 and E.9.3 of the Employer's ESHSMP; and evidence from the Engineer's ESHS monitoring and reporting that the measures are effective.	Monthly on evidence of verification, as relevant, according to agreed schedule.
2.11	Dispose of solid waste at approved waste disposal facilities	Lot	Per Contractor's planned facilities	Disposal of solid waste by the Contractor according to the requirements of sections 9.3 and E.9.3 of the Employer's ESHSMP; and evidence from the Engineer's ESHS monitoring and reporting that the measures are effective.	Monthly on evidence of verification, as relevant, according to agreed schedule.

**Annex 6b**  
**ESHSMP BOQ: PRICING GUIDE**

S No.	ESHSMP-related work	Unit	No (estimate)	Expectation	Milestone guide *
<b>3.</b>	<b>Biological Environmental Mitigation Measures</b>				
3.01	Conduct pre-clearance surveys for tree clearance	Lot	1 survey per 5 km of TL	Undertake pre-clearance surveys of trees approved to be felled, as directed by the Engineer and in accordance with Government of Nepal regulations; and evidence from the Engineer's ESHS monitoring and reporting that the activity has been undertaken diligently.	In month of completion of each pre-clearance survey.
3.02	Implement wildlife shepherding protocol	Lot	10 events per contract	Undertake wildlife shepherding as instructed by the Engineer and in accordance with sections 8.6 and C.8.6b of the Employer's ESHSMP; and evidence from the Engineer's ESHS monitoring and reporting that the actions have been undertaken diligently.	Monthly on evidence of verification, as relevant, according to agreed schedule.
3.03	Implement invasive alien species management plan	Lot	10 events per contract	Undertake measures to control alien species as instructed by the Engineer; and evidence from the Engineer's ESHS monitoring and reporting that the actions have been undertaken diligently.	Monthly on evidence of verification, as relevant, according to agreed schedule.
3.04	Implement forest fire management strategy	Lot	10 events per contract	Undertake forest fire management measures as instructed by the Engineer and in accordance with section 8.6 of the Employer's ESHSMP; and evidence from the Engineer's ESHS monitoring and reporting that the actions have been undertaken diligently.	Monthly on evidence of verification, as relevant, according to agreed schedule.
3.05	Implement community programme to prohibit poaching and illegal collection of NTFPs and MAPs	Lot	1 programme, 25 events per contract	Undertake a programme that engages communities in appropriate actions to protect biodiversity locally, in accordance with sections 8.6 and C.8.6a of the Employer's ESHSMP; and evidence from the Engineer's ESHS monitoring and reporting that the actions have been undertaken diligently.	Monthly on evidence of verification, as relevant, according to agreed schedule.

**Annex 6b**  
**ESHSMP BOQ: PRICING GUIDE**

S No.	ESHSMP-related work	Unit	No (estimate)	Expectation	Milestone guide *
<b>4.</b>	<b>Socio-economic and Cultural Environment Mitigation Measures</b>				
4.01	Implement Workforce Management Plan	Lot	1 per contract	A Contractor's Workforce Management Plan that meets or exceeds the requirements of section 7 of the Employer's ESHSMP; and evidence from regular reporting that it is being implemented effectively.	Monthly on evidence of verification, as relevant, according to agreed schedule.
4.02	Implement Worker Access Management Protocol	Lot	1 per contract	A Contractor's procedure for the implementation of the protocol in section C.5.1b of the Employer's ESHSMP; and evidence from the Engineer's ESHS monitoring and reporting that it has been effective.	Monthly on evidence of verification, as relevant, according to agreed schedule.
4.03	Implement Traffic Management Plan and maintain the damaged roads caused by contractors	Lot	1 per contract	A Contractor's Traffic Management Plan in accordance with sections 6.4 and E.6.4 of the Employer's ESHSMP; and evidence from the Engineer's ESHS monitoring and reporting that it is being implemented effectively.	Monthly on evidence of verification, as relevant, according to agreed schedule.
4.04	Implement Cultural Heritage Management Plan	Lot	1 per contract	A Contractor's Cultural Heritage Management Plan in accordance with section 7.5 of the Employer's ESHSMP that in particular demonstrates how the chance find procedure (section E.7.5 of the Employer's ESHSMP) will be implemented; and evidence from the Engineer's ESHS monitoring and reporting that both plan and procedure are being implemented effectively.	Monthly on evidence of verification, as relevant, according to agreed schedule.

**Annex 6b**  
**ESHSMP BOQ: PRICING GUIDE**

<b>S No.</b>	<b>ESHSMP-related work</b>	<b>Unit</b>	<b>No (estimate)</b>	<b>Expectation</b>	<b>Milestone guide *</b>
4.05	Develop and Implement Worker/Internal Grievance Redress Mechanism	Lot	1 per contract	A Contractor's Worker's Grievance Redress Mechanism in accordance with section E.7.1 of the Employer's ESHSMP; and evidence from the Engineer's ESHS monitoring and reporting that it is being implemented effectively.	Monthly on evidence of verification, as relevant, according to agreed schedule.
4.06	Conduct community training on EMF risks	Lot	1 course, 25 training events per contract	An appropriate training course and training materials on these matters that comply with or exceed the instructions issued by the Employer's ESHS staff; competent delivery of the training to communities as instructed by the Employer; and evidence from the Engineer's ESHS reporting that it has been implemented effectively.	Monthly on evidence of verification, as relevant, according to agreed schedule.
<b>5</b>	<b>Gender, Social Inclusion and Counter-TIP Measures</b>				
5.01	Develop and implement Anti-Sexual Harassment Policy, provide orientation to the entire workers	Lot	1 per contract	Contractor's Anti-Sexual Harassment Policy meeting the requirements of MCC's Guidance Note on Sexual Harassment; Obtain approval from both the Engineer and the Employer.	On completion of plan; before site works commence.
5.02	Conduct awareness raising and community meetings to encourage women, socially excluded, historically marginalized, vulnerable groups to apply for jobs	Lot	1 programme, 20 events per year per contract	An appropriate information dissemination materials through outreach events on these matters at communities, municipalities, workers associations that comply with or exceed the instructions issued by the Employer's GSI staff; and evidence from the Engineer's ESHS reporting that it has been implemented effectively.	Monthly on evidence of verification, as relevant, according to agreed schedule.

**Annex 6b**  
**ESHSMP BOQ: PRICING GUIDE**

<b>S No.</b>	<b>ESHSMP-related work</b>	<b>Unit</b>	<b>No (estimate)</b>	<b>Expectation</b>	<b>Milestone guide *</b>
5.03	Develop and Implement TIP Risk Management Plan	Lot	1 per contract	A detailed Contractor's Trafficking in Persons Risk Management Plan that uses the Employer's TIP Risk Management Plan in accordance with sections 7.3, C.6.3 of the Employer's ESHSMP and Employer's TIP Risk Management Plan Obtain approval from both the Engineer and the Employer; and evidence from the Engineer's ESHS monitoring and reporting that it is being implemented effectively.	On completion of plan; before site works commence.
5.04	Training to the Contractor's employees on Gender and Social Inclusion, prevention on sexual harassment, gender-based violence, child labor and TIP	Lot	1 course, 25 training events per contract	Training to all staff in its operation and implementation of the Anti-Sexual Harassment Policy, Internal Grievance System ; refresher training of staff and new training for new staff; and evidence from regular reporting that it is being implemented effectively.	Monthly on evidence of verification, as relevant, according to agreed schedule.
5.05	Community TIP risk prevention sensitization and community consultation	Lot	minimum 50 events, covering at least 2 km periphery from the work camps	Appropriate awareness raising campaign as in 7.2, 7.3, 7.4, 7.5, C.6.3 of ESHSMP	Monthly on evidence of verification, as relevant, according to agreed schedule.
5.06	Community Grievance Redress Plan must have system of Anonymous reporting for TIP suspected cases	Lot	50 complaints per contract	In line with 4.5, C 4.4 of employers ESHSMP, the GRM system must incorporate the requirement under section 7.5 in the same document.	Monthly on evidence of verification, as relevant, according to agreed schedule.

**Annex 6b  
ESHSMF BOQ: PRICING GUIDE**

S No.	ESHSMF-related work	Unit	No (estimate)	Expectation	Milestone guide *
<b>6</b>	<b>Health and Safety</b>				
6.01	Personal Protective Equipment (PPEs) for Contractor's Employees and for Consultant and Employer's representatives visiting at site	Lot	Covering Contractor's Employees and for Consultant and Employer's representatives visiting at site	As per ESHSMF document	Before site works commence and also during site activities.
6.02	Specialized Personal Protective Equipment (PPEs) during erection and stringing activities like safety harness, fall arresters, retro-guard, etc.	Lot	For Contractor's Employees engaged in erection and stringing activities	As per ESHSMF document	Before commencement of erection and stringing activities.
6.03	Smoke and Fire Detectors including fire fighting (fire extinguishers, etc) system at Contractor's, Employer's and Consultants site offices	Lot	1 set for each site office of Contractor, Consultant and Employer.	As per ESHSMF document	Before site works commence and also during site activities.
6.04	First Aid Kits and necessary Emergency medical items	Lot	1 set for each site office of Contractor, Consultant and Employer as well as one set each at all the working sites.	As per ESHSMF document	Before site works commence and also during site activities.
6.05	Any other items not mentioned above but the bidder may wish to include as per standard practice and mentioned in ESHSMF document.	Lot			

\*Note on Milestones for ESHSMF works. Some ESHSMF actions will be paid against deliverables at the end of the month in which they are certified as complete: these are the creation of a satisfactory CESHSMF, construction of sewage plants (at camps, laydown areas, etc.) and pre-clearance tree surveys. A monthly schedule will be agreed with the Engineer for all other ESHSMF activities, and the completed items may be billed as per that schedule as part of each regular monthly claim. All bills (for all works implemented by the contractor) will require an ESHS certificate for payment (as well as other certificates). ESHS certificates will be dependent on the Contractor meeting the agreed ESHSMF schedule.



## ESHSMP BOQ

S. No.	ESHSMP related Work	Unit	No
<b>1.</b>	<b>General Mitigation Measures</b>		
1.01	Develop a detailed Environmental, Social, Health, and Safety (ESHS) Management Plan for Contractor's employees.	Lot	1
1.02	Develop, provide training and enforce a Worker Code of Conduct	Lot	1
1.03	Conduct Employee Induction Training on H&S and environmental/social/cultural sensitivity <b>as specified in the ESHSMP before commencement of site activities as well as monthly refresher training</b>	Lot	1
1.04	Implement Community Grievance Redress Plan	Lot	1
<b>2.</b>	<b>Physical Environment Mitigation Measures</b>		
2.01	Implement an Erosion and Sediment Control Plan	Lot	1
2.02	Manage excavated soils	Lot	1
2.03	Stabilize disturbed areas with native flora	Lot	1
2.04	Spray disturbed areas with water if substantive off-site fugitive dust impacts occur	Lot	1
2.05	Provide a pit toilet and bury all organic wastes at tower construction sites	Lot	1
2.06	Install septic systems/package and proper wastewater disposal system for workers	Lot	1
2.07	Provide hazardous material training to concerned staff	Lot	1
2.08	Stockpile materials for use in controlling spills at each Tower Laydown Area	Lot	1
2.09	Provide secondary containment for any fuel or hazardous materials	Lot	1
2.10	Collect and segregate all waste for reuse, recycle, or disposal	Lot	1
2.11	Dispose of solid waste at approved waste disposal facilities	Lot	1
<b>3.</b>	<b>Biological Environmental Mitigation Measures</b>	Lot	1
3.01	Conduct pre-clearance surveys for tree clearance	Lot	1
3.02	Implement wildlife shepherding protocol	Lot	1
3.03	Implement invasive alien species management plan	Lot	1
3.04	Implement forest fire management strategy	Lot	1
3.05	Implement community programme to prohibit poaching and illegal collection of NTFPs and MAPs	Lot	1
<b>4.</b>	<b>Socio-economic and Cultural Environment Mitigation Measures</b>		
4.01	Implement Workforce Management Plan	Lot	1
4.02	Implement Worker Access Management Protocol	Lot	1
4.03	Implement Traffic Management Plan and maintain the damaged roads caused by contractors	Lot	1
4.04	Implement Cultural Heritage Management Plan	Lot	1
4.05	Develop and Implement Worker/Internal Grievance Redress Mechanism	Lot	1
4.06	Conduct community training on EMF risks	Lot	1
<b>5</b>	<b>Gender, Social Inclusion and Counter-TIP Measures</b>		
5.01	Develop and implement Anti-Sexual Harassment Policy, provide orientation to the entire workers	Lot	1
5.02	Conduct awareness raising and community meetings to encourage women, socially excluded, historically marginalized, vulnerable groups to apply for jobs	Lot	1
5.03	Develop and Implement TIP Risk Management Plan	Lot	1
5.04	Training to the Contractor's employees/staff on Gender and Social Inclusion, prevention on sexual harassment, gender-based violence, child labor and TIP	Lot	1
5.05	Community TIP risk prevention sensitization and community consultation	Lot	1
5.06	Community Grievance Redress Plan must have system of Anonymous reporting for TIP suspected cases	Lot	1

## ESHSMP BOQ

<b>S. No.</b>	<b>ESHSMP related Work</b>	<b>Unit</b>	<b>No</b>
<b>6</b>	<b>Health and Safety</b>		
6.01	Personal Protective Equipment (PPEs) for Contrator's Employees and for Consultant and Employer's representatives visiting at site	Lot	1
6.02	Specialized Personal Protective Equipment (PPEs) during erection and stringing activities like safety harness, fall arresters, retro-guard, etc.	Lot	1
6.03	Smoke and Fire Detectors including fire fighting (fire extinguishers, etc) system at Contractor's, Employer's and Consultants site offices	Lot	1
6.04	First Aid Kits and necessary Emergency medical items	Lot	1
6.05	Any other items not mentioned above but the bidder may wish to include as per standard practice and mentioned in ESHSMP document.	Lot	1