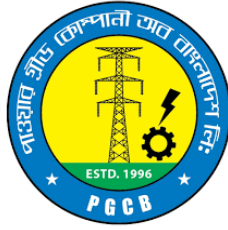


POWER GRID COMPANY OF BANGLADESH LIMITED



Tender Documents for Procurement of

**Design, Supply, Installation, Testing & Commissioning of 400kV and 230kV
River Crossing Transmission Lines on Turnkey Basis (Lot-1 & 2)**

(Contract No. PGCB/400KV&230kV/RCTL/Lot-1/2)

Volume 3 of 3

Invitation for Bids No.: 27.21.0000.101.07.316.22.435, January 23, 2022

Employer: Power Grid Company of Bangladesh Limited

Country: People's Republic of Bangladesh

Employer:



Power Grid Company of Bangladesh (PGCB) IEB
Head Office, Avenue-03, Jahurul Islam City
Aftabnagar, Badda, Dhaka-1212, Bangladesh

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Schedule A: Introduction and Preamble to the Price and Technical Schedules

1. Scope of Works and General Information

Please refer to Volume 2 of the Bid Documents.

Schedule B: Bid Prices & Schedules

1. General

1. The Price Schedules are divided as follows:

Schedule No. 1: Plant and Mandatory Spare Parts Supplied from Abroad
Schedule No. 2: Plant and Mandatory Spare Parts Supplied from within the Employer's Country
Schedule No. 3: Design Services
Schedule No. 4: Installation and Other Services
Schedule No. 5: Grand Summary
Schedule No. 6: Recommended Spare Parts

2. The Schedules do not generally give a full description of the plant to be supplied and the services to be performed under each item. Bidders shall be deemed to have read the Employer's Requirements and other sections of the Bidding Document and reviewed the Drawings to ascertain the full scope of the requirements included in each item prior to filling in the rates and prices. The entered rates and prices shall be deemed to cover the full scope as previously mentioned, including overheads and profit.
3. If Bidders are unclear or uncertain as to the scope of any item, they shall seek clarification in accordance with ITB 7 prior to submitting their bid.

2. Pricing

4. The units and rates in figures entered into the price schedules should be typewritten or if written by hand, must be in print form. Price schedules not presented accordingly may be considered nonresponsive. Any alterations necessary due to errors, etc., shall be initialed by the Bidder.

As specified in the bid data sheet and special conditions of contract, prices shall be fixed and firm for the duration of the contract, or prices shall be subject to adjustment in accordance with the corresponding appendix (price adjustment) to the contract agreement.

5. Bid prices shall be quoted in the manner indicated and in the currencies specified in the Instructions to Bidders in the bidding document.

For each item, Bidders shall complete each appropriate column in the respective schedules, giving the price breakdown as indicated in the schedules.

Prices given in the schedules against each item shall be for the scope covered by that item as detailed in Volume II (Employer's Requirements) or elsewhere in the bidding document.

6. Payments will be made to the Contractor in the currency or currencies indicated under each respective item.
7. When requested by the Employer for the purposes of making payments or part payments, valuing variations or evaluating claims, or for such other purposes as the Employer may reasonably require, the Contractor shall provide the Employer with a breakdown of any composite or lump sum items included in the schedules.
8. Bidders shall quote price for costs and expenses related to test witness in the respective price schedule. Bidders shall not keep the price blank and shall not write "included" for these items. Total price for costs and expenses related to test witness is fixed for a particular item and shall be quoted in lot basis for each item. Payments will be made from the quoted amount in the price schedule on the basis of percentage of test and inspection completed for an item upon submission of relevant documents.

3. Schedules of Rates and Prices

Schedule No. 1: Plant and Mandatory Spare Parts Supply from Abroad

Schedule No. 2: Plant and Mandatory Spare Parts Supplied from Within the Employer's Country

Schedule No. 3: Design Services

Schedule No. 4: Installation and Other Services

Schedule No. 5: Grand Summary

Schedule No. 6: Recommended Spare Parts

Please see the separate EXCEL file for the above.

The Bidder shall fill, sign and stamp the attached price schedules and shall attach them to the bid.

(Price schedules are attached at the end of this document.)

Schedule C: Bar Chart Program of Key Activities - Delivery & Completion Time Schedule

The Bidder shall fill, sign and stamp the attached time schedule and shall attach it to the bid.

Time for completion of the whole facilities shall be 720 (Seven Hundred Twenty) days for each lot separately from the effective date as described in Section 8 - Special Conditions of Contract, Sub-Clause 8.2.

The Bidder shall provide

- filled general time schedule, provided below and as Appendix 4 to the Section 9: Contract Forms,
- a detailed proposal for mobilization schedule, Section 4: Bidding Forms, item 5.3. and
- a detailed proposal for the construction schedule, Section 4: Bidding Forms, item 5.4.

Please find the time schedule attached.

Time Schedule (Show Activity in Bar Chart for 24 months for each Lot separately)

Work under this contract shall be completed within 24(twenty four) months from contract effective date for each lot.

400kV & 230kV River Crossing Transmission Line Project	Duration	Month																							
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Line Route Survey																									
Geotechnical Investigation																									
Line Design																									
Approval of the Line Design																									
Civil Design																									
Approval of the Civil Design																									
Manufacturing of the Towers																									
Tower Testing																									
Manufacturing of Conductor, Insulator, Earthwire, OPGW & Accessories																									
Testing of Conductor, Insulator, Earthwire, OPGW & Accessories																									
Civil Works																									
Tower Erection																									
Stringing																									
Testing & Commissioning																									

Schedule D: Manufacturers, Places of Manufacture and Testing

The following form shall be filled and attached to the bid. Bidders are free to propose more than one Manufacturer for each item.

Manufacturers

Item	Description	Manufacturer	Place of Manufacture	Place of Testing and Inspection	Country of Origin
1.	Tower				
	Nuts, bolts, washers etc.				
2.	Conductor (ACCC)				
3.	Earthwire				
4.	OPGW				
5.	Insulator				
6.	Hardware fittings for ACCC conductor, earthwire& Insulator				
7.	Hardware fittings for OPGW				

Name of Bidder:_____

Signature of Bidder:_____

Schedule E: Technical Particulars and Guarantees

1. General

The technical data schedules hereafter provide more details on the specific technical criteria and complement the Information given in the bidding document.

They form an essential part of bid submission and will be used in bid evaluation.

They should be fully completed and submitted with the bid.

2. Technical Data Schedules

The technical data schedules hereafter provide more details on the specific technical criteria and complement the Information given in the bidding documents.

They form an essential part of bid submission and will be used in bid evaluation.

They should be fully completed and submitted with the bid.

2.1 Towers

2.1.1 400 kV Tower-For Quad ACCC Dhaka Conductor (ACSR Finch equivalent)(No need to fill if tower design is provided by the Employer)

Fill out 1 form for each manufacturer

Parameters	Unit	Tower Type						
		4DL	4D1	4D25	4D45-NA	4DT6	4DR	4DAX
Total height of tower (standard)	(mm)							
Vertical spacing between conductor-earthwire	(mm)							
Horizontal phase separation	(mm)							
Vertical phase separation	(mm)							
Total approx. mass of standard height tower without stub & cleat*	(kg)							
Total approx. mass of E1.5 tower*	(kg)							
Total approx. mass of E3.0 tower*	(kg)							
Total approx. mass of E4.5 tower*	(kg)							
Total approx. mass of E6.0 tower*	(kg)							
Total approx. mass of E9.0 tower*	(kg)							
Total approx. mass of E12.0 tower*	(kg)							
Total approx. mass of E15.0 tower*	(kg)							
Total approx. mass of E20.0 tower*	(kg)							
Total approx. mass of E25.0 tower*	(kg)							
Total approx. mass of E30.0 tower*	(kg)							
Total approx. mass of E40.0 tower*	(kg)							
Total approx. mass of stub & cleat*	(kg)							
Approximate ultimate compression load/leg (highest extension)*	(kN)							
Approximate ultimate uplift load/leg (highest extension)*	(kN)							

* The final figures will be obtained during detailed design of towers and the approval thereof afteraward of contract, and the towers shall be supplied accordingly within the contract price.

	Mild Steel			High Yield Steel		
	Standard	Grade	Yield Stress	Standard	Grade	Yield Stress
Steel standard and grades						
Bolt standard and grades						

Name & Signature of
Manufacturer's Representative:

Stamp of Manufacturer

2.1.2 400 kV Tower-For Quad ACSR Finch Conductor-**Not Applicable**

Fill out 1 form for each manufacturer

Parameters	Unit	Tower Type				
		4DL	4D1	4D25	4D45	4DT6
Total height of tower (standard)	(mm)					
Vertical spacing between conductor-earthwire	(mm)					
Horizontal phase separation	(mm)					
Vertical phase separation	(mm)					
Total approx. mass of standard height tower without stub & cleat*	(kg)					
Total approx. mass of E1.5 tower*	(kg)					
Total approx. mass of E3.0 tower*	(kg)					
Total approx. mass of E4.5 tower*	(kg)					
Total approx. mass of E6.0 tower*	(kg)					
Total approx. mass of E9.0 tower*	(kg)					
Total approx. mass of E12.0 tower*	(kg)					
Total approx. mass of E15.0 tower*	(kg)					
Total approx. mass of E20.0 tower*	(kg)					
Total approx. mass of E25.0 tower*	(kg)					
Total approx. mass of E30.0 tower*	(kg)					
Total approx. mass of E40.0 tower*	(kg)					
Total approx. mass of stub & cleat*	(kg)					
Approximate ultimate compression load/leg (highest extension)*	(kN)					
Approximate ultimate uplift load/leg (highest extension)*	(kN)					

* The final figures will be obtained during detailed design of towers and the approval thereof after award of contract, and the towers shall be supplied accordingly within the contract price.

	Mild Steel			High Yield Steel		
	Standard	Grade	Yield Stress	Standard	Grade	Yield Stress
Steel standard and grades						
Bolt standard and grades						

Name & Signature of
Manufacturer's Representative:

Stamp of Manufacturer

2.1.3 230kV Towers (No need to fill if tower design is provided by the Employer)

Fill out 1 form for each manufacturer

Parameters	Unit	Tower Type						
		2DT6-NA	2QL-NA	2Q1-NA	2Q30-NA	2QT6-NA	2DR	2DAX
Total height of tower (standard)	(mm)							
Vertical spacing between conductor-earthwire	(mm)							
Horizontal phase separation	(mm)							
Vertical phase separation	(mm)							
Total approx. mass of standard height tower without stub & cleat*	(kg)							
Total approx. mass of E1.5 tower*	(kg)							
Total approx. mass of E3.0 tower**	(kg)							
Total approx. mass of E4.5 tower**	(kg)							
Total approx. mass of E6.0 tower**	(kg)							
Total approx. mass of E9.0 tower**	(kg)							
Total approx. mass of E12.0 tower**	(kg)							
Total approx. mass of E15.0 Tower**	(kg)							
Total approx. mass of stub & cleat*	(kg)							
Approximate ultimate compression load/leg (E9.0 & E15)*	(kN)							
Approximate ultimate uplift load/leg (E9.0 & E15)*	(kN)							

- * The final figures will be obtained during detailed design of towers and the approval thereof after award of contract, and the towers shall be supplied accordingly within the contract price.

2.1.4 132kV Towers (No need to fill if tower design is provided by the Employer)-Not Applicable

Fill out 1 form for each manufacturer

Parameters	Unit	Tower Type				
		1DL	1D1	1D25	1DT6	1QT6
Total height of tower (standard)	(mm)					
Vertical spacing between conductor-earthwire	(mm)					
Horizontal phase separation	(mm)					
Vertical phase separation	(mm)					
Total approx. mass of standard height tower without stub & cleat*	(kg)					
Total approx. mass of E1.5 tower*	(kg)					
Total approx. mass of E3.0 tower**	(kg)					
Total approx. mass of E4.5 tower**	(kg)					
Total approx. mass of E6.0 tower**	(kg)					
Total approx. mass of E9.0 tower**	(kg)					
Total approx. mass of E12.0 tower**	(kg)					
Total approx. mass of E15.0 Tower**	(kg)					
Total approx. mass of stub & cleat*	(kg)					
Approximate ultimate compression load/leg (E9.0 & E15)*	(kN)					
Approximate ultimate uplift load/leg (E9.0 & E15)*	(kN)					

- * The final figures will be obtained during detailed design of towers and the approval thereof after award of contract, and the towers shall be supplied accordingly within the contract price.

2.2 Piled Foundation Details

2.2.1 400 kV Towers- For Quad ACCC Dhaka Conductor (ACSR Finch equivalent)

Tower Type Particulars	4DL (Highest extension) N/A	4D1 (Upto 15m extension) N/A	4D1 (above 15m to 30m extension) N/A	4D1 (above 30m to 40m extension) N/A	4D25 (Highest extension) N/A	4D45 (Highest extension) N/A	4DT6 (Highest extension) N/A	4DR	4DAX
Type of piled foundation									
Number of piles per leg*									
Length of pile* (mm)									
Diameter of pile* (mm)									

* The final figures will be obtained during detailed design of tower foundations and the approval thereof after award of contract, and the foundations shall be supplied accordingly within the contract price.

2.2.2 400 kV Towers (For Quad ACSR Finch Conductor-Not Applicable)

Tower Type Particulars	4DL (Highest extension)	4D1 (Upto 25m extension)	4D1 (above 25m to 40m extension)	4D25 (Highest extension)	4D45 (Highest extension)	4DT6 (Highest extension)	4DR1	4DAX
Type of piled								
Number of piles per leg*								
Length of pile* (mm)								
Diameter of pile* (mm)								

* The final figures will be obtained during detailed design of tower foundations and the approval thereof after award of contract, and the foundations shall be supplied accordingly within the contract price.

2.2.3 230kV Towers

Tower Type Particulars	2DT6 (Highest extension)-NA	2QL (Highest Extension)- NA	2Q1 (Highest Extension)-NA	2Q30 (Highest Extension)- NA	2QT6 (Highest Extension)- NA	2DR	2DAX
Type of piled foundation							
Number of piles per leg*							
Length of pile*(mm)							
Diameter of pile* (mm)							

* The final figures will be obtained during detailed design of tower foundations and the approval thereof after award of contract, and the foundations shall be supplied accordingly within the contract price.

2.2.4 132kV Towers-Not Applicable

Tower Type Particulars	1DL (Highest extension)	1D1 (Highest extension)	1D25 (Highest extension)	1DT6 (Highest extension)	1QL (Highest Extension)	1Q15 (Highest Extension)	1QT6 (Highest Extension)
Type of piled foundation							
Number of piles per leg*							
Length of pile*(mm)							
Diameter of pile* (mm)							

* The final figures will be obtained during detailed design of tower foundations and the approval thereof after award of contract, and the foundations shall be supplied accordingly within the contract price.

2.3 Conductor, Earthwire & OPGW

2.3.1 400 kV Line –Quad ACCC Dhaka Conductor (ACSR Finch equivalent)

Fill out 1 form for each manufacturer

	Phase		Earthwire	
Conductor	As per Bid requirement	As per Bid Proposal	As per Bid requirement	As per Bid Proposal
Designation (Code Name)				
Type				
Reference standards				
Aluminium/ Aluminium alloy grade				
Steel grade				
Galvanising Thickness				
Aluminium class (AS wire)				
Aluminium type (AS wire)				
Conductor max. continuous operating temperature (°C)				
Minimum mass of grease (kg/km)				
Creep period of conductor to be considered (years)				
No. and diameter of aluminium wire (No./mm)				
No. and diameter of steel wire (No./mm)				
Overall diameter of conductor (mm)				
Overall sectional area of conductor (mm ²)				
Rated tensile strength of conductor (kN)				
Weight (kg/km)				
Direction of external lay				
Cross Sectional Area of Al (mm ²)				
Cross Sectional Area of Composite Core (mm ²)				
No. of Composite Core (mm)				
Shape of wires				
Diameter of Composite Core (mm)				
Rated tensile strength of core (kN)				
Current carrying capacity at 180 Deg C (amp)				
Max. allowable emergency operating temp. (Deg C)				
Maximum DC Resistance at 20 Deg C (ohm/km)				
Final Modulus of elasticity				
Final coefficient of linear expansion				

Name & Signature of
Manufacturer's Representative:

Stamp of Manufacturer

2.3.2 400kV Line –Quad ACSR Finch Conductor-**Not Applicable**

Conductor	Phase		Earthwire	
	As per Bid requirement	As per Bid Proposal	As per Bid requirement	As per Bid Proposal
Designation (Code Name)				
Type				
Reference standards				
Aluminium/ Aluminium alloy grade				
Steel grade				
Galvanising Thickness				
Aluminium class (AS wire)				
Aluminium type (AS wire)				
Conductor max. continuous operating temperature (°C)				
Minimum mass of grease (kg/km)				
Creep period of conductor to be considered (years)				
No. and diameter of aluminium wire (No./mm)				
No. and diameter of steel wire (No./mm)				
Overall diameter of conductor (mm)				
Overall sectional area of conductor (mm ²)				
Rated tensile strength of conductor (kN)				
Weight (kg/km)				
Direction of external lay				
Cross Sectional Area of Al (mm ²)				
Cross Sectional Area of Composite Core (mm ²)				
No. of Composite Core (mm)				
Shape of wires				
Diameter of Composite Core (mm)				
Rated tensile strength of core (kN)				
Current carrying capacity at 180 Deg C (amp)				
Max. allowable emergency operating temp. (Deg C)				
Maximum DC Resistance at 20 Deg C (ohm/km)				

2.3.3 230kV Line - River Crossing Portion (Twin Mallard equivalent ACCC Conductor)

Fill out 1 form for each manufacturer

Conductor	Phase		Earthwire	
	As per Bid requirement	As per Bid Proposal	As per Bid requirement	As per Bid Proposal
Designation (Code Name)				
Type				
Reference standards				
Aluminium/ Aluminium alloy grade				
Steel grade				
Galvanising Thickness				
Aluminium class (AS wire)				
Aluminium type (AS wire)				
Conductor max. continuous operating temperature (°C)				
Minimum mass of grease (kg/km)				
Creep period of conductor to be considered (years)				
No. and diameter of aluminium wire (No./mm)				
No. and diameter of steel wire (No./mm)				
Overall diameter of conductor (mm)				
Overall sectional area of conductor (mm ²)				
Rated tensile strength of conductor (kN)				
Weight (kg/km)				
Direction of external lay				
Cross Sectional Area of Al (mm ²)				
Cross Sectional Area of Composite Core (mm ²)				
No. of Composite Core (mm)				
Shape of wires				
Diameter of Composite Core (mm)				
Rated tensile strength of core (kN)				
Current carrying capacity at 180 Deg C (amp)				
Max. allowable emergency operating temp. (Deg C)				
Maximum DC Resistance at 20 Deg C (ohm/km)				
Final Modulus of elasticity				
Final coefficient of linear expansion				

Name & Signature of
Manufacturer's Representative:

Stamp of Manufacturer

2.3.4 230 kV Line- Twin 37/4.176 AAAC Conductor-Not Applicable

Fill out 1 form for each manufacturer

Conductor	Phase		Earthwire	
	As per Bid requirement	As per Bid Proposal	As per Bid requirement	As per Bid Proposal
Designation (Code Name)				
Type				
Reference standards				
Aluminium/ Aluminium alloy grade				
Steel grade				
Galvanising Thickness				
Aluminium class (AS wire)				
Aluminium type (AS wire)				
Conductor max. continuous operating temperature (°C)				
Minimum mass of grease (kg/km)				
Creep period of conductor to be considered (years)				
No. and diameter of aluminium wire(No./mm)				
No. and diameter of steel wire (No./mm)				
Overall diameter of conductor (mm)				
Overall sectional area of conductor (mm ²)				
Rated tensile strength of conductor (kN)				
Weight (kg/km)				
Direction of external lay				
Cross Sectional Area of Al (mm ²)				
Cross Sectional Area of Composite Core (mm ²)				
No. of Composite Core (mm)				
Shape of wires				
Diameter of Composite Core (mm)				
Rated tensile strength of core (kN)				
Current carrying capacity at 180 Deg C (amp)				
Max. allowable emergency operating temp. (Deg C)				
Maximum DC Resistance at 20 Deg C (ohm/km)				

Name & Signature of
Manufacturer`s Representative:

Stamp of Manufacturer

2.3.5 132 kV Line - ACCC Grosbeak (ACSR Grosbeak Equivalent)-Not Applicable

Fill out 1 form for each manufacturer

Conductor	Phase		Earthwire	
	As per Bid requirement	As per Bid Proposal	As per Bid requirement	As per Bid Proposal
Designation (Code Name)				
Type				
Reference standards				
Aluminium/ Aluminium alloy grade				
Steel grade				
Galvanising Thickness				
Aluminium class (AS wire)				
Aluminium type (AS wire)				
Conductor max. continuous operating temperature (°C)				
Minimum mass of grease (kg/km)				
Creep period of conductor to be considered (years)				
No. and diameter of aluminium wire (No./mm)				
No. and diameter of steel wire (No./mm)				
Overall diameter of conductor (mm)				
Overall sectional area of conductor (mm ²)				
Rated tensile strength of conductor (kN)				
Weight (kg/km)				
Direction of external lay				
Cross Sectional Area of Al (mm ²)				
Cross Sectional Area of Composite Core (mm ²)				
No. of Composite Core (mm)				
Shape of wires				
Diameter of Composite Core (mm)				
Rated tensile strength of core (kN)				
Current carrying capacity at 180 Deg C (amp)				
Max. allowable emergency operating temp. (Deg C)				
Maximum DC Resistance at 20 Deg C (ohm/km)				

Name & Signature of
Manufacturer's Representative:

Stamp of Manufacturer

2.4 OPGW & Fittings

2.4.1 400kV Line

Fill out 1 form for each manufacturer

Parameter	Unit	Overland Portion		River Crossing Portion (Not Applicable)	
		As per Bid requirement	As per Bid Proposal	As per Bid requirement	As per Bid Proposal
OPGW designation & type					
Number of fibres					
Reference standard					
Number and diameter of aluminium strands	mm				
Number and diameter of steel strands	mm				
Corrosion protection of steel strands					
Internal fibre tube diameter	mm				
Overall diameter	mm				
Guaranteed ultimate tensile strength	kN				
Final modulus of elasticity	N/mm ²				
Coefficient of linear expansion	1/degree				
DC resistance at 20°C	ohms/m				
Maximum short circuit current capacity	kA ² sec				
Assumed temperature rise	°C				
Standard weight	kg/m				
Weight of grease	kg/m				
Standard length on drum*	m				
Weight of complete drum	kg				
Maximum drum length	m				
Installation minimum bending radius	m				
Optical Characteristics:					
Cut-off wave length	nm				
Attenuation at Nm	dB/km				
Zero dispersion wave length	nm				
Chromatic dispersion at nm	ps/km				
Individual splice loss	dB				
Bit error rate					
OPGW Fittings:					
Guaranteed ultimate tensile strength	kN				
• Suspension set	kN				
• Tension set					
Overall length of set					



Parameter	Unit	Overland Portion		River Crossing Portion (Not Applicable)	
		As per Bid requirement	As per Bid Proposal	As per Bid requirement	As per Bid Proposal
• Suspension set	mm				
• Tension set	mm				
Mass of set					
• Suspension set	kg				
• Tension set	kg				
Drawing numbers					
Cross section of OPGW					
Cross section of non-metallic cable					
Joint box					
Fixing clamps					
OPGW suspension set					
OPGW tension set					
OPGW vibration damper					

*Drum length to be finalized after finalization of tower locations as per check survey.

Name & Signature of
Manufacturer`s Representative:

Stamp of Manufacturer

2.4.2 230kV Line

Fill out 1 form for each manufacturer

Parameter	Unit	Overland Portion		River Crossing Portion	
		As per Bid requirement	As per Bid Proposal	As per Bid requirement	As per Bid Proposal
OPGW designation & type					
Number of fibres					
Reference standard					
Number and diameter of aluminium strands	mm				
Number and diameter of steel strands	mm				
Corrosion protection of steel strands					
Internal fibre tube diameter	mm				
Overall diameter	mm				
Guaranteed ultimate tensile strength	kN				
Final modulus of elasticity	N/mm ²				
Coefficient of linear expansion	1/degree				
DC resistance at 20°C	ohms/m				
Maximum short circuit current capacity	kA ² sec				
Assumed temperature rise	°C				
Standard weight	kg/m				
Weight of grease	kg/m				
Standard length on drum*	m				
Weight of complete drum	kg				
Maximum drum length	m				
Installation minimum bending radius	m				
Optical Characteristics:					
Cut-off wave length	nm				
Attenuation at Nm	dB/km				
Zero dispersion wave length	nm				
Chromatic dispersion at nm	ps/km				
Individual splice loss	dB				
Bit error rate					
OPGW Fittings:					
Guaranteed ultimate tensile strength					
• Suspension set	kN				
• Tension set	kN				
Overall length of set					
• Suspension set	mm				
• Tension set	mm				

Parameter	Unit	Overland Portion		River Crossing Portion	
		As per Bid requirement	As per Bid Proposal	As per Bid requirement	As per Bid Proposal
Mass of set					
• Suspension set	kg				
• Tension set	kg				
Drawing numbers					
Cross section of OPGW					
Cross section of non-metallic cable					
Joint box					
Fixing clamps					
OPGW suspension set					
OPGW tension set					
OPGW vibration damper					

*Drum length to be finalized after finalization of tower locations as per check survey.

Name & Signature of
Manufacturer's Representative:

Stamp of Manufacturer

2.4.3 132 kV Line- Not Applicable

Fill out 1 form for each manufacturer

Parameter	Unit	Overland Portion		River Crossing Portion	
		As per Bid requirement	As per Bid Proposal	As per Bid requirement	As per Bid Proposal
OPGW designation & type					
Number of fibres					
Reference standard					
Number and diameter of aluminium strands	mm				
Number and diameter of steel strands	mm				
Corrosion protection of steel strands					
Internal fibre tube diameter	mm				
Overall diameter	mm				
Guaranteed ultimate tensile strength	kN				
Final modulus of elasticity	N/mm ²				
Coefficient of linear expansion	1/degree				
DC resistance at 20°C	ohms/m				
Maximum short circuit current capacity	kA ² sec				
Assumed temperature rise	°C				
Standard weight	kg/m				
Weight of grease	kg/m				
Standard length on drum*	m				
Weight of complete drum	kg				
Maximum drum length	m				
Installation minimum bending radius	m				
Optical Characteristics:					
Cut-off wave length	nm				
Attenuation at Nm	dB/km				
Zero dispersion wave length	nm				
Chromatic dispersion at nm	ps/km				
Individual splice loss	dB				
Bit error rate					
OPGW Fittings:					
Guaranteed ultimate tensile strength					
• Suspension set	kN				
• Tension set	kN				
Overall length of set					
• Suspension set	mm				
• Tension set	mm				

Parameter	Unit	Overland Portion		River Crossing Portion	
		As per Bid requirement	As per Bid Proposal	As per Bid requirement	As per Bid Proposal
Mass of set					
• Suspension set	kg				
• Tension set	kg				
Drawing numbers					
Cross section of OPGW					
Cross section of non-metallic cable					
Joint box					
Fixing clamps					
OPGW suspension set					
OPGW tension set					
OPGW vibration damper					

*Drum length to be finalized after finalization of tower locations as per check survey.

Name & Signature of
Manufacturer's Representative:

Stamp of Manufacturer

2.5 Insulator Sets & Fittings

2.5.1 400kV Line- Quad ACCC Dhaka Conductor (ACSR Finch equivalent)

Fill out 1 form for each manufacturer

Parameter	Unit	As per Bid requirement					As per Bid Proposal				
		Insulator Set Type									
		Suspension	Heavy Suspension	Tension	Low Duty Tension	Jumper Suspension	Suspension	Heavy Suspension	Tension	Low Duty Tension	Jumper Suspension
Insulator unit type no.											
Dielectric material											
Total creepage per unit	mm										
Spacing	mm										
Overall shed diameter	mm										
Puncture voltage	kV										
Electro-mechanical failing load of unit	kN										
Drawing no. of unit											
Type test certificate no.											
Number of units per string	pcs.										
Total creepage of string	mm										
Overall length of set	mm										
Sag adjuster type and step	mm										
Ultimate strength of set	kN										
Mass of set	kg										
Anticipated											
• lightning impulse withstand voltage	kV										
• Positive & negative											
• Power frequency Wet withstand voltage	kV										
• Corona extinction level	kV										
• RIV Test	dB										
• Switching Surge Voltage	KV										
• Power Arc for Insulator Set											
• Current	KA										
• Direction	s										

Name & Signature of
Manufacturer's Representative:

Stamp of Manufacturer



2.5.2 400kV Line- Quad ACSR Finch Conductor-**Not Applicable**

Parameter	Unit	As per Bid requirement		As per Bid Proposal	
		Insulator Set Type			
		Suspension	Tension	Suspension	Tension
Insulator unit type no.					
Dielectric material					
Total creepage per unit	mm				
Spacing	mm				
Overall shed diameter	mm				
Puncture voltage	kV				
Electro-mechanical failing load of unit	kN				
Drawing no. of unit					
Type test certificate no.					
Number of units per string	pcs.				
Total creepage of string	mm				
Overall length of set	mm				
Sag adjuster type and step	mm				
Ultimate strength of set	kN				
Mass of set	kg				
Anticipated					
• lightning impulse withstand voltage	kV				
• Power frequency withstand voltage	kV				
• Corona extinction level	kV				

Name & Signature of
Manufacturer`s Representative:

Stamp of Manufacturer

2.5.3 230kV Line- Twin 37/4.176 AAAC Conductor-**Not Applicable**

Parameter	Unit	As per Bid requirement		As per Bid Proposal	
		Insulator Set Type			
		Suspension	Tension	Suspension	Tension
Insulator unit type no.					
Dielectric material					
Total creepage per unit	mm				
Spacing	mm				
Overall shed diameter	mm				
Puncture voltage	kV				
Electro-mechanical failing load of unit	kN				
Drawing no. of unit					
Type test certificate no.					
Number of units per string	pcs.				
Total creepage of string	mm				
Overall length of set	mm				
Sag adjuster type and step	mm				
Ultimate strength of set	kN				
Mass of set	kg				
Anticipated					
• lightning impulse withstand voltage	kV				
• Power frequency withstand voltage	kV				
• Corona extinction level	kV				

Name & Signature of
Manufacturer`s Representative:

Stamp of Manufacturer

2.5.4 230kV Line (Overland Portion)- For Twin ACCC Conductor of ACSR Mallard equal dia.- **Not Applicable**

Fill out 1 form for each manufacturer

Parameter	Unit	As per Bid requirement				As per Bid Proposal			
		Insulator Set Type							
		Suspension/ Heavy Suspension-NA	Tension	Low Duty Tension-NA	Jumper Suspension-NA	Suspension/ Heavy Suspension-NA	Tension	Low Duty Tension-NA	Jumper Suspension-NA
Insulator unit type no.									
Dielectric material									
Total creepage per unit	mm								
Spacing	mm								
Overall shed diameter	mm								
Puncture voltage	kV		125kV						
Electro-mechanical failing load of unit	kN		2×210						
Drawing no. of unit									
Type test certificate no.									
Number of units per string	pcs.		2×14						
Total creepage of string	mm		4900						
Overall length of set	mm		3600- 3900						
Sag adjuster type and step	mm								
Ultimate strength of set	kN								
Mass of set	kg								
Anticipated									
• lightning impulse withstand voltage	kV								
• Power frequency withstand voltage	kV								
• Corona extinction level	kV								

Name & Signature of
Manufacturer`s Representative:

Stamp of Manufacturer



2.5.5 230kV Line (River Crossing Portion)- For Twin ACCC Conductor of ACSR Mallard equal dia.

Fill out 1 form for each manufacturer

Parameter	Unit	As per Bid requirement				As per Bid Proposal			
		Insulator Set Type							
		Suspension/ Heavy Suspension	Tension	Low Duty Tension	Jumper Suspension	Suspension/ Heavy Suspension	Tension	Low Duty Tension	Jumper Suspension
Insulator unit type no.									
Dielectric material									
Total creepage per unit	mm								
Spacing	mm								
Overall shed diameter	mm								
Puncture voltage	kV								
Electro-mechanical failing load of unit	kN								
Drawing no. of unit									
Type test certificate no.									
Number of units per string	pcs.								
Total creepage of string	mm								
Overall length of set	mm								
Sag adjuster type and step	mm								
Ultimate strength of set	kN								
Mass of set	kg								
Anticipated									
- lightning impulse withstand voltage - Positive & Negative	kV								
Power frequency Wet withstand voltage	kV								
Corona extinction level	kV								
RIV Test	dB								

Name & Signature of
Manufacturer`s Representative:

Stamp of Manufacturer



2.5.6 132kV Line- ACCC Grosbeak (ACSR Grosbeak Equivalent)-**Not Applicable**

Parameter	Unit	As per Bid requirement		As per Bid Proposal	
		Insulator Set Type			
		Suspension	Tension	Suspension	Tension
Insulator unit type no.					
Dielectric material					
Total creepage per unit	mm				
Spacing	mm				
Overall shed diameter	mm				
Puncture voltage	kV				
Electro-mechanical failing load of unit	kN				
Drawing no. of unit					
Type test certificate no.					
Number of units per string	pcs.				
Total creepage of string	mm				
Overall length of set	mm				
Sag adjuster type and step	mm				
Ultimate strength of set	kN				
Mass of set	kg				
Anticipated					
• lightning impulse withstand voltage	kV				
• Power frequency withstand voltage	kV				
• Corona extinction level	kV				

Name & Signature of
Manufacturer's Representative:

Stamp of Manufacturer



2.6 Spacers and Spacer Dampers

Fill out 1 form for each manufacturer

Parameter	Unit	As per Bid requirement	As per Bid Proposal	As per Bid requirement	As per Bid Proposal
		Overland		River Crossing-Not required	
Unit weight	kg				
Material	-				
Number of spacer dampers to be used for each phase per span*	pcs.				
Total quantity of spacer dampers for one basic span*	pcs.				

- * These quantities shall be based on the design of the proposed spacer dampers. The quantities mentioned above may increase at the contractor's cost, if during design approval such increase is necessary.

Name & Signature of
Manufacturer's Representative:

Stamp of Manufacturer

2.7 Vibration Dampers

Fill out 1 form for each manufacturer

Parameter	Unit	As per Bid requirement	As per Bid Proposal	As per Bid requirement	As per Bid Proposal
		Overland		River Crossing -Not required	
Unit weight of vibration dampers					
• for phase conductor	kg				
• for earthwire	kg				
• for OPGW	kg				
Number of vibration dampers to be used for phase conductor per standard span	pcs.				
Number of vibration dampers to be used for earthwire per standard span	pcs.				
Number of vibration dampers to be used for OPGW per standard span	pcs.				
Diameter of each damper mass	mm				
Length of each damper mass	mm				
Weight of each damper mass	kg				
Material of damper					
Material of clamp					
Material of the stranded messenger cable					
Number of strands in stranded messenger cable	nos.				
Lay ratio of stranded messenger cable					
Minimum ultimate tensile strength of stranded messenger cable	KN				
Resonance frequencies	hz				
Designed clamping torque	Nm				

These quantities shall be based on the design of the proposed vibration dampers. Actual number of vibration damper will be decided according to the Manufacturer's recommendation for each span.

Name & Signature of
Manufacturer's Representative:

Stamp of Manufacturer

Attachment-Price Schedule

**Design, Supply, Installation, Testing & Commissioning of 400kV
and 230kV River Crossing Transmission Lines on Turnkey
Basis (Lot-1)**

Design, Supply, Installation, Testing Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-1)

Item	Description	Country of origin ²	Unit	Quantity	Unit Price ¹	Total Price ¹
					Foreign Currency [.....] CIP	Foreign Currency [.....] CIP
1	2	3*	4	5	6	7= 5 x 6
Schedule No. 1A(i) Plant and Mandatory Spare Parts Supplied from Abroad						
1	Supply of 400 kV double circuit towers, complete with all stubs, nuts, bolts, locking nuts, washers, phase conductors and earthwire, swivels/shackles, step bolts, tower notice and identification plates, ACDs, protective coating, earthing, etc.					
1.1	Tower Type "4DR"					
1.1.1	Tower type 4DR+24 m		each	1		
1.1.2	Tower type 4DR+36.6 m		each	1		
1.1.3	Tower type 4DR+50.6 m		each	7		
1.2	Tower Type "4DAX"					
1.2.1	Tower type 4DAX Standard		each	2		
1.3	Tower Foundation Material					
1.3.1	Steel Tube Material for Tower Foundation		Per Tower	11		
1.3.2	Permanent Steel Casing Material for Tower Foundation		Per Tower	4		
2	Phase conductor and OPGW cable, complete with repair sleeves and joints					
2.1	"ACCC 724/71 DHAHA" (double circuit line, both circuits erected, four conductors per phase) [3]		Route km ³	7		
2.2	Two 19 x 3.67 20SA earthwire equivalent OPGW, 48 fibres OPGW, including joint box		Route km ³	7		
3	Insulator strings, with associated suspension and tension clamps for quadruple "ACCC 724/71 DHAHA" Conductor					
3.1	a) Triple suspension I string, having each string 300 kN, total 3X300kN (Suspension) - disc only		Set	54		
	b) 300kN Triple suspension Insulators Fittings set for Quadruple"ACCC 724/71 DHAHA" Conductor (Suspension) - hardware fittings only		Set	54		
3.2	a) Triple tension string, 3 x 400kN -disc only		Set	24		
	b) Triple tension string, 3 x 400kN - hardware fittings only		Set	24		
3.3	a) Single jumper suspension I-string, having each string 1x210 kN-disc only		Set	12		
	b) Single jumper suspension I-string, having each string 1x210 kN - hardware fittings only		Set	12		
4	OPGW sets, complete with all accessories, incl. armour rods and earth bounds					
4.1	Suspension set (including all fittings and accessories for surplus and to guide the OPGW to the joint box)		set	18		
4.2	Tension set (including all fittings and accessories for surplus and to guide the OPGW to the joint box)		set	8		

Design, Supply, Installation, Testing Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-1)

Item	Description	Country of origin ²	Unit	Quantity	Unit Price ¹	Total Price ¹
					Foreign Currency [.....] CIP	Foreign Currency [.....] CIP
1	2	3*	4	5	6	7= 5 x 6
Schedule No. 1A(i) Plant and Mandatory Spare Parts Supplied from Abroad						
5	Dampers					
5.1	Vibration damper for phase conductor		per span	10		
5.2	Spacer damper for phase conductor		per span	10		
5.3	Vibration damper for OPGW		per span	10		
5.4	Spacer for jumper		nos.	36		
6	Aerial Markers					
6.1	Air craft obstruction lights solar powered complete with lamps, solar, panels, batteries, control equipment cables, support framework, tower work platform etc.		Per tower	11		
6.2	Bird diverters		pcs.	20		
6.3	Bird guards, one bird guard per each crossarm applied on intermediate towers		pcs.	54		
6.4	Aircraft warning spheres		pcs.	250		
6.5	Painting of 60 meter and over tower in accordance with the requirements of the Technical Specification		per tower	11		
6.6	Reflecting Paint		Per tower	9		
7	Mandatory Spare Parts and Tools					
7.1	Conductor ACCC 724/71 DHAKA type with two core retainers per drum		km	2		
7.2	19 x 3.67 20SA earthwire equivalent OPGW, 48 fibres,		km	2		
7.3	a) Triple suspension I string, having each string 300 kN, total 3X300kN (Suspension) - disc only		set	3		
	b) Triple suspension I string, having each string 300 kN, total 3x300kN (Suspension) - hardware fittings only		set	3		
7.4	a) Triple tension string, 2x400kN -disc only		set	3		
	b) Triple tension string, 2x400kN - hardware fittings only		set	3		
7.5	OPGW 48 fibres suspension set		set	6		
7.6	OPGW 48 fibres tension set		set	6		
7.7	OPGW junction box		set	4		
7.8	Vibration damper for phase conductor Quadruple "ACCC 724/71 DHAKA" Conductor		each	6		
7.9	Vibration damper for OPGW		each	3		
7.10	Repair sleeve for conductor - Quadruple "ACCC 724/71 DHAKA" Conductor		pcs	3		

Design, Supply, Installation, Testing Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-1)

Item	Description	Country of origin ²	Unit	Quantity	Unit Price ¹	Total Price ¹
					Foreign Currency [.....] CIP	Foreign Currency [.....] CIP
1	2	3*	4	5	6	7= 5 x 6
Schedule No. 1A(i) Plant and Mandatory Spare Parts Supplied from Abroad						
7.11	Midspan joints for conductor Quadruple "ACCC 724/71 DHAKA" Conductor		pcs	3		
7.12	Bird diverters		pcs	2		
7.13	Bird guard		pcs	2		
7.14	Aircraft warning markers		pcs	6		
Total Columns 7 to be carried forward to Schedule No. 5 - Grand Summary						

Name of Bidder _____
Signature of Bidder _____

- 1 Specify currencies in accordance with ITB 19.1 of the BDS. Create additional columns for up to a maximum of two foreign currencies, if so required.
- 2 Bidders shall enter a code representing the country of origin of all imported plant and equipment.
- 3 Definition of route km: Route km is the transmission line distance between two terminal points in plan view. Route km is exclusive sag and other electrical clearances, elevation differences etc. The Contractor shall incorporate all such extra costs in his unit rate.

Country of Origin Declaration Form

Item	Description	Code	Country

Design, Supply, Installation, Testing Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-1)

Item	Description	Country of origin ²	Unit	Quantity	Unit Price ¹	Total Price ¹
					Foreign Currency [.....] CIP	Foreign Currency [.....] CIP
1	2	3*	4	5	6	7= 5 x 6
Schedule No. 1A(ii) Plant and Mandatory Spare Parts Supplied from Abroad						
1	Supply of 400 kV double circuit towers, complete with all stubs, nuts, bolts, locking nuts, washers, phase conductors and earthwire, swivels/shackles, step bolts, tower notice and identification plates, ACDs, protective coating, earthing, etc.-Overland Portion					
1.1	Tower Type "4DR"					
1.1.1	Tower type 4DR+24 m		each	2		
1.2	Tower Type "4DAX"					
1.2.1	Tower type 4DAX Standard		each	2		
1.3	Tower Foundation Material					
1.3.1	Steel Tube Material for Tower Foundation		Per Tower	4		
1.3.2	Permanent Steel Casing Material for Tower Foundation		Per Tower	2		
2	Phase conductor and OPGW cable, complete with repair sleeves and joints					
2.1	"ACCC 724/71 DHAKA" (double circuit line, Single circuit erected, four conductors per phase) [3]		Route km ³	2		
2.2	One 19 x 3.67 20SA earthwire		Route km ³	2		
2.3	One 19 x 3.67 20SA earthwire equivalent OPGW, 48 fibres OPGW, including joint box		Route km ³	2		
3	Insulator strings, with associated suspension and tension clamps for quadruple "ACCC 724/71 DHAKA" Conductor					
3.1	a) Tripple suspension I string, having each string 300 kN, total 3X300kN (Suspension) - disc only		Set	12		
	b) 300kN tripple suspension Insulators Fittings set for Quadruple"ACCC 724/71 DHAKA" Conductor (Suspension) - hardware fittings only		Set	12		
3.3	a) Tripple tension string, 3 x 400kN -disc only		Set	24		
	b) Tripple tension string, 3 x 400kN - hardware fittings only		Set	24		
3.4	a) Single jumper suspension I-string, having each string 1x210 kN-disc only		Set	6		
	b) Single jumper suspension I-string, having each string 1x210 kN - hardware fittings only		Set	6		
3.5	a) a) Single tension string, upright low duty 210kN- disc only		Set	3		
	b) Single tension string, upright low duty 210kN- hardware fittings only		Set	3		
3.6	a) Single tension string, inverted low duty 210kN -discs only		Set	3		
	b) Single tension string, inverted low duty 210kN -discs only - hardware fittings only		Set	3		

Design, Supply, Installation, Testing Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-1)

Item	Description	Country of origin ²	Unit	Quantity	Unit Price ¹	Total Price ¹
					Foreign Currency [.....] CIP	Foreign Currency [.....] CIP
1	2	3*	4	5	6	7= 5 x 6
Schedule No. 1A(ii) Plant and Mandatory Spare Parts Supplied from Abroad						
3.7	Counterweights for 210kN suspension insulator sets complete with yoke plate attachment bolts to be used for 4D1 towers:					
(a)	- 40kg set		each	1		
(b)	- 80kg set		each	1		
(c)	- 120kg set		each	1		
4	OPGW sets, complete with all accessories, incl. armour rods and earth bounds					
4.1	Suspension set (including all fittings and accessories for surplus and to guide the OPGW to the joint box)		set	2		
4.2	Tension set (including all fittings and accessories for surplus and to guide the OPGW to the joint box)		set	4		
5	Earthwire sets, complete with all accessories, incl. armour rods and earth bounds					
5.1	Suspension set (including all fittings and accessories)			2		
5.2	Tension set (including all fittings and accessories)			4		
6	Dampers					
6.1	Vibration damper for phase conductor		per span	3		
6.2	Spacer damper for phase conductor		per span	3		
6.3	Vibration damper for earthwire		per span	3		
6.4	Vibration damper for OPGW		per span	3		
7	Aerial Markers					
7.1	Air craft obstruction lights solar powered complete with lamps, solar, panels, batteries, control equipment cables, support framework, tower work platform etc.		Per tower	4		
7.2	Bird diverters		pcs.	6		
7.3	Bird guards, one bird guard per each crossarm applied on intermediate towers		pcs.	27		
7.4	Aircraft warning spheres		pcs.	40		
7.5	Painting of 60 meter and over tower in accordance with the requirements of the Technical Specification		per tower	4		
7.6	Reflecting Paint		Per tower	4		
8	Mandatory Spare Parts and Tools					
8.1	Conductor ACCC 724/71 DHAKA type with two core retainers per drum		km	2		
8.2	19 x 3.67 20SA earthwire		km	2		
8.3	19 x 3.67 20SA earthwire equivalent OPGW, 48 fibres,		km	2		

Design, Supply, Installation, Testing Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-1)

Item	Description	Country of origin ²	Unit	Quantity	Unit Price ¹	Total Price ¹
					Foreign Currency [.....] CIP	Foreign Currency [.....] CIP
1	2	3*	4	5	6	7= 5 x 6
Schedule No. 1A(ii) Plant and Mandatory Spare Parts Supplied from Abroad						
8.4	a) Triple suspension I string, having each string 300 kN, total 3X300kN (Suspension) - disc only (River Crossing)		set	1		
	b) Triple suspension I string, having each string 300 kN, total 3x300kN (Suspension) - hardware fittings only(River Crossing)		set	1		
8.5	a) Triple tension string, 3x400kN -disc only(River Crossing)		set	1		
	b) Triple tension string, 3x400kN - hardware fittings only(River Crossing)		set	1		
8.6	Earthwire suspension set		set	3		
8.7	Earthwire tension set		set	3		
8.8	OPGW 48 fibres suspension set		set	3		
8.9	OPGW 48 fibres tension set		set	3		
8.10	OPGW junction box		set	4		
8.11	Vibration damper for phase conductor Quadruple "ACCC 724/71 DHAKA" Conductor		each	6		
8.12	Vibration damper for OPGW		each	3		
8.13	Repair sleeve for conductor - Quadruple "ACCC 724/71 DHAKA" Conductor		pcs	3		
8.14	Midspan joints for conductor Quadruple "ACCC 724/71 DHAKA" Conductor		pcs	3		
8.15	Bird diverters		pcs	2		
8.16	Bird guard		pcs	2		
8.17	Aircraft warning markers		pcs	3		
Total Columns 7 to be carried forward to Schedule No. 5 - Grand Summary						

Name of Bidder _____
Signature of Bidder _____

- Specify currencies in accordance with ITB 19.1 of the BDS. Create additional columns for up to a maximum of two foreign currencies, if so required.
- Bidders shall enter a code representing the country of origin of all imported plant and equipment.
- Definition of route km: Route km is the transmission line distance between two terminal points in plan view. Route km is exclusive sag and other electrical clearances, elevation differences etc. The Contractor shall incorporate all such extra costs in his unit rate.

Country of Origin Declaration Form

Item	Description	Code	Country

Design, Supply, Installation, Testing Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-1)

Item	Description	Country of origin ²	Unit	Quantity	Unit Price ¹		Total Price ¹	
					Local Currency [BDT]	Foreign Currency [.....]	Local Currency [BDT]	Foreign Currency [.....]
1	2	3*	4	5	6	7	8=5x6	9= 5 x 7
Schedule No. 2A(i) Plant and Mandatory Spare Parts Supplied from Within the Employer's Country								
1	Supply of 400 kV double circuit towers, complete with all stubs, nuts, bolts, locking nuts, washers, phase conductors and earthwire OPGW, swivels/shackles, step bolts, tower notice and identification plates, ACDs, protective coating, earthing, etc.							
1.1	Tower type "4DR"							
1.1.1	Tower type 4DR+24 m		each	1				
1.1.2	Tower type 4DR+36.6 m		each	1				
1.1.3	Tower type 4DR+50.6 m		each	7				
1.2	Tower Type "4DAX"							
1.2.1	Tower type 4DAX Standard		each	2				
1.3	Tower Foundation Material							
1.3.1	Steel Tube Material for Tower Foundation		Per Tower	11				
1.3.2	Permanent Steel Casing Material for Tower Foundation		Per Tower	4				
2	Phase conductor and OPGW cable, complete with repair sleeves and joints							
2.1	"ACCC 724/71 DHAHA" (double circuit line, both circuits erected, four conductors per phase) [3]		Route km ³	7				
2.2	Two 19 x 3.67 20SA earthwire equivalent OPGW, 48 fibres OPGW, including joint box		Route km ³	7				
3	Insulator strings, with associated suspension and tension clamps for quadruple "ACCC 724/71 DHAHA" Conductor							
3.1	a) Triple suspension I string, having each string 300 kN, total 3X300kN (Suspension) - disc only		Set	54				
	b) 300kN Triple suspension Insulators Fittings set for Quadruple"ACCC 724/71 DHAHA" Conductor (Suspension) - hardware fittings only		Set	54				
3.3	a) Triple tension string, 3 x 400kN -disc only		Set	24				
	b) Triple tension string, 3 x 400kN - hardware fittings only		Set	24				
3.3	a) Single jumper suspension I-string, having each string 1x210 kN-disc only		Set	12				
	b) Single jumper suspension I-string, having each string 1x210 kN - hardware fittings only		Set	12				
4	OPGW sets, complete with all accessories, incl. armour rods and earth bounds							
4.1	Suspension set (including all fittings and accessories for surplus and to guide the OPGW to the joint box)		set	18				
4.2	Tension set (including all fittings and accessories for surplus and to guide the OPGW to the joint box)		set	8				

Design, Supply, Installation, Testing Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-1)

Item	Description	Country of origin ²	Unit	Quantity	Unit Price ¹		Total Price ¹	
					Local Currency [BDT]	Foreign Currency [.....]	Local Currency [BDT]	Foreign Currency [.....]
1	2	3*	4	5	6	7	8=5x6	9= 5 x 7
Schedule No. 2A(i) Plant and Mandatory Spare Parts Supplied from Within the Employer's Country								
5	Dampers							
5.1	Vibration damper for phase conductor		per span	10				
5.2	Spacer damper for phase conductor		per span	10				
5.3	Vibration damper for OPGW		per span	10				
5.4	Spacer for jumper		nos.	36				
6	Aerial Markers							
6.1	Air craft obstruction lights solar powered complete with lamps, solar, panels, batteries, control equipment cables, support framework, tower work platform etc.		Per tower	11				
6.2	Bird diverters		pcs.	20				
6.3	Bird guards, one bird guard per each crossarm applied on intermediate towers		pcs.	54				
6.4	Aircraft warning spheres		pcs.	250				
6.5	Painting of 60 meter and over tower in accordance with the requirements of the Technical Specification		per tower	11				
6.6	Reflecting Paint		Per tower	9				
7	Mandatory Spare Parts and Tools							
7.1	Conductor ACCC 724/71 DHAKA type with two core retainers per drum		km	2				
7.2	19 x 3.67 20SA earthwire equivalent OPGW, 48 fibres,		km	2				
7.3	a) Triple suspension I string, having each string 300 kN, total 3X300kN (Suspension) - disc only		set	3				
	b) Triple suspension I string, having each string 300 kN, total 3x300kN (Suspension) - hardware fittings only		set	3				
7.4	a) Triple tension string, 2x400kN -disc only		set	3				
	b) Triple tension string, 2x400kN - hardware fittings only		set	3				
7.5	OPGW 48 fibres suspension set		set	6				
7.6	OPGW 48 fibres tension set		set	6				
7.7	OPGW junction box		set	4				
7.8	Vibration damper for phase conductor Quadruple "ACCC 724/71 DHAKA" Conductor		each	6				
7.9	Vibration damper for OPGW		each	3				
7.10	Repair sleeve for conductor - Quadruple "ACCC 724/71 DHAKA" Conductor		pcs	3				

Design, Supply, Installation, Testing Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-1)

Item	Description	Country of origin ²	Unit	Quantity	Unit Price ¹		Total Price ¹	
					Local Currency [BDT]	Foreign Currency [.....]	Local Currency [BDT]	Foreign Currency [.....]
1	2	3*	4	5	6	7	8=5x6	9= 5 x 7
Schedule No. 2A(i) Plant and Mandatory Spare Parts Supplied from Within the Employer's Country								
7.11	Midspan joints for conductor Quadruple "ACCC 724/71 DHAKA" Conductor		pcs	3				
7.12	Bird diverters		pcs	2				
7.13	Bird guard		pcs	2				
7.14	Aircraft warning markers		pcs	6				
Total Columns 8 & 9 to be carried forward to Schedule No. 5 - Grand Summary								

Name of Bidder	_____
Signature of Bidder	_____

1 Specify currencies in accordance with ITB 19.1 of the BDS.

2 Bidders shall enter a code representing the country of origin of all imported plant and equipment.

3 Definition of route km: Route km is the transmission line distance between two terminal points in plan view. Route km is exclusive sag and other electrical clearances, elevation differences etc. The Contractor shall incorporate all such extra costs in his unit rate.

4 Price shall include all customs duties and sales and other taxes already paid or payable on the components and raw materials used in the manufacture or assembly of the item or the customs duties and sales and other taxes already paid on previously imported items."

Design, Supply, Installation, Testing Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-1)

Item	Description	Country of origin ²	Unit	Quantity	Unit Price ¹		Total Price ¹	
					Local Currency [BDT]	Foreign Currency [.....]	Local Currency [BDT]	Foreign Currency [.....]
1	2	3*	4	5	6	7	8=5x6	9= 5 x 7
Schedule No. 2A(ii) Plant and Mandatory Spare Parts Supplied from Within the Employer's Country								
1	Supply of 400 kV double circuit towers, complete with all stubs, nuts, bolts, locking nuts, washers, phase conductors and earthwire, swivels/shackles, step bolts, tower notice and identification plates, ACDs, protective coating, earthing, etc.-Overland Portion							
1.1	Tower Type "4DR"							
1.1.1	Tower type 4DR+24 m		each	2				
1.2	Tower Type "4DAX"							
1.2.1	Tower type 4DAX Standard		each	2				
1.3	Tower Foundation Material							
1.3.1	Steel Tube Material for Tower Foundation		Per Tower	4				
1.3.2	Permanent Steel Casing Material for Tower Foundation		Per Tower	2				
2	Phase conductor and OPGW cable, complete with repair sleeves and joints							
2.1	"ACCC 724/71 DHAKA" (double circuit line, Single circuits erected, four conductors per phase) [3]		Route km ³	2				
2.2	One 19 x 3.67 20SA earthwire		Route km ³	2				
2.3	One 19 x 3.67 20SA earthwire equivalent OPGW, 48 fibres OPGW, including joint box		Route km ³	2				
3	Insulator strings, with associated suspension and tension clamps for quadruple "ACCC 724/71 DHAKA" Conductor-River Crossong Portion							
3.1	a) Tripple suspension I string, having each string 300 kN, total 3X300kN (Suspension) - disc only		Set	12				
	b) 210kN twin suspension Insulators Fittings set for Quadruple"ACCC 724/71 DHAKA" Conductor (Suspension) - hardware fittings only		Set	12				
3.3	a) Double tension string, 2 x 400kN -disc only		Set	24				
	b) Double tension string, 2 x 400kN - hardware fittings only		Set	24				
3.4	a) Single jumper suspension I-string, having each string 1x210 kN-disc only		Set	6				
	b) Single jumper suspension I-string, having each string 1x210 kN - hardware fittings only		Set	6				
3.5	a) Single tension string, upright low duty 210kN- disc only		Set	3				
	b) Single tension string, upright low duty 210kN- hardware fittings only		Set	3				
3.6	a) Single tension string, inverted low duty 210kN -discs only		Set	3				
	b) Single tension string, inverted low duty 210kN -discs only - hardware fittings only		Set	3				
3.7	Counterweights for 210kN suspension insulator sets complete with yoke plate attachment bolts to be used for 4D1 towers:							
(a)	- 40kg set		each	1				

Design, Supply, Installation, Testing Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-1)

Item	Description	Country of origin ²	Unit	Quantity	Unit Price ¹		Total Price ¹	
					Local Currency [BDT]	Foreign Currency [.....]	Local Currency [BDT]	Foreign Currency [.....]
1	2	3*	4	5	6	7	8=5x6	9= 5 x 7
Schedule No. 2A(ii) Plant and Mandatory Spare Parts Supplied from Within the Employer's Country								
(b)	- 80kg set		each	1				
(c)	- 120kg set		each	1				
4	OPGW sets, complete with all accessories, incl. armour rods and earth bounds							
4.1	Suspension set (including all fittings and accessories for surplus and to guide the OPGW to the joint box)		set	2				
4.2	Tension set (including all fittings and accessories for surplus and to guide the OPGW to the joint box)		set	4				
5	Earthwire sets, complete with all accessories, incl. armour rods and earth bounds							
5.1	Suspension set (including all fittings and accessories)			2				
5.2	Tension set (including all fittings and accessories)			4				
6	Dampers							
6.1	Vibration damper for phase conductor		per span	3				
6.2	Spacer damper for phase conductor		per span	3				
6.3	Vibration damper for earthwire		per span	3				
6.4	Vibration damper for OPGW		per span	3				
7	Aerial Markers							
7.1	Air craft obstruction lights solar powered complete with lamps, solar, panels, batteries, control equipment cables, support framework, tower work platform etc.		Per tower	4				
7.2	Bird diverters		pcs.	6				
7.3	Bird guards, one bird guard per each crossarm applied on intermediate towers		pcs.	27				
7.4	Aircraft warning spheres		pcs.	40				
7.5	Painting of 60 meter and over tower in accordance with the requirements of the Technical Specification		per tower	4				
7.6	Reflecting Paint		Per tower	4				
8	Mandatory Spare Parts and Tools							
8.1	Conductor ACCC 724/71 DHAKA type with two core retainers per drum		km	2				
8.2	19 x 3.67 20SA earthwire		km	2				
8.3	19 x 3.67 20SA earthwire equivalent OPGW, 48 fibres,		km	2				

Design, Supply, Installation, Testing Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-1)

Item	Description	Country of origin ²	Unit	Quantity	Unit Price ¹		Total Price ¹	
					Local Currency [BDT]	Foreign Currency [.....]	Local Currency [BDT]	Foreign Currency [.....]
1	2	3*	4	5	6	7	8=5x6	9= 5 x 7
Schedule No. 2A(ii) Plant and Mandatory Spare Parts Supplied from Within the Employer's Country								
8.4	a) Tripple tension string, 3 x 400kN -disc only		set	3				
	b) Tripple tension string, 3 x 400kN - hardware fittings only		set	3				
8.5	a) Triple suspension I string, having each string 300 kN, total 3X300kN (Suspension) - disc only (River Crossing)		set	1				
	b) Triple suspension I string, having each string 300 kN, total 3x300kN (Suspension) - hardware fittings only(River Crossing)		set	1				
8.6	Earthwire suspension set		set	3				
8.7	Earthwire tension set		set	3				
8.8	OPGW 48 fibres suspension set		set	3				
8.9	OPGW 48 fibres tension set		set	3				
8.10	OPGW junction box		set	4				
8.11	Vibration damper for phase conductor Quadruple "ACCC 724/71 DHAKA" Conductor		each	6				
8.12	Vibration damper for OPGW		each	3				
8.13	Repair sleeve for conductor - Quadruple "ACCC 724/71 DHAKA" Conductor		pcs	3				
8.14	Midspan joints for conductor Quadruple "ACCC 724/71 DHAKA" Conductor		pcs	3				
8.15	Bird diverters		pcs	2				
8.16	Bird guard		pcs	2				
8.17	Aircraft warning markers		pcs	3				
Total Columns 8 & 9 to be carried forward to Schedule No. 5 - Grand Summary								

Name of Bidder _____

Signature of Bidder _____

1 Specify currencies in accordance with ITB 19.1 of the BDS.

2 Bidders shall enter a code representing the country of origin of all imported plant and equipment.

3 Definition of route km: Route km is the transmission line distance between two terminal points in plan view. Route km is exclusive sag and other electrical clearances, elevation differences etc. The Contractor shall incorporate all such extra costs in his unit rate.

4 Price shall include all customs duties and sales and other taxes already paid or payable on the components and raw materials used in the manufacture or assembly of the item or the customs duties and sales and other taxes already paid on previously imported items."

Design, Supply, Installation, Testing & Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-1)

Item	Description	Unit	Quantity	Unit Price ₁		Total Price ₁	
				Local Currency [BDT]	Foreign Currency [.....]	Local Currency [BDT]	Foreign Currency [....]
1	2	3	4	5	6	7=4x5	8 = 4 x 6
Schedule No. 3A(i & ii) Design Services							
1	Line Design						
1.1	Detailed line design including plan and profiles; conductor, earthwire and OPGW sag tension calculations; tower spotting, establishment of line schedule; Design of insulator strings, OPGW and earthwire attachments	Lump sum	1				
2	Tower Test						
2.1	Proto assembly of all type towers with all extensions to prove compliance with specification. Payment for successful test only.						
(a)	Tower type 4DR	each	1				
(b)	Tower type 4DAX	each	1				
3	Foundation Design						
3.1	Foundation design for all soil types including additional soil investigation and additional soil resistivity measurement	Lump sum	1				
Total Columns 7 & 8 to be carried forward to Schedule No. 5 - Grand Summary							

Name of Bidder	_____
Signature of Bidder	_____

- Specify currencies in accordance with ITB 19.1 of the BDS. Create additional columns for up to a maximum of three foreign currencies, if so required.
- Bidder shall quote the amount considering clause 14.1 of section 8(Special Conditions of Contract), Volume 1 of 3 of the bidding document. The amount quoted by bidder is subject to arithmetic correction by Employer as required.

Design, Supply, Installation, Testing Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-1)

Item	Description	Unit	Quantity	Unit Price1		Total Price1	
				Local Currency [BDT]	Foreign Currency [.....]	Local Currency [BDT]	Foreign Currency [.....]
1	2	3	4	5	6	7=4x5	8= 4 x 6
Schedule No. 4A(i) Installation and Other Services							
1	Survey and soil investigation works-Land Part						
1.1	Survey Work						
1.1.1	Check survey in accordance with the requirements of the technical specification, incl. Full ground survey with change of route, if any, tower plotting and preparation and submission of route maps, profile drawings, SIMM documents, etc.	Km	7				
1.2	Geotechnical Investigations incl. taking samples, logging and lab testing						
1.2.1	Boreholes for geotechnical investigation, incl. laboratory test, borehole logs, sampling and interpretive report as per geotechnical specification						
(a)	Level 2	borehole	NIL				
(b)	Level 4	borehole	NIL				
1.2.2	Soil resistivity tests (one per tower)	unit	11				
2	River Crossing Foundations for towers						
2.1	River Crossing Foundations for towers on river bed (All works under article no. 7.1.4.6.1 & 7.1.4.6.2 including all setting out, Concrete, Reinforcement, Excavation, Pumping, Stub-Setting, Geotechnical Investigation (Level 4), Shuttering, Leveling, Pile Driving Monitoring, supply & Installation of foundation steelwork, Earthing Materials, Backfilling, approved Protective Coating, site clearing & any other required work etc.)-excluding supply of steel tube materials						
2.1.1.	Pile Foundation for 4DR	per tower	7				
2.2	River Crossing Foundations for towers on river bank (All works under article no. 7.1.4.6.3 & 7.1.4.6.4 including all setting out, Concrete, Reinforcement, Excavation, Pumping, Stub-Setting, Geotechnical Investigation (Level 4), Shuttering, Leveling, Pile Driving Monitoring, supply & Installation of foundation steelwork, Earthing Materials, Backfilling, approved Protective Coating, site clearing & any other required work etc.)-excluding supply of steel tube materials						
2.2.1	Pile Foundation for 4DR	per tower	2				
2.2.2	Pile Foundation for 4DAX	per tower	2				
3	Erection of 400kV double circuit towers complete with all stubs, nuts, bolts, locking nuts, washers, phase conductor and earthwire swivels/shackles, step bolts, tower notice and identification plates, ACDs, protective coating, earthing etc.						
3.1	Tower type "4DR"						
3.1.1	Tower type 4DR+24 m	each	1				
3.1.2	Tower type 4DR+36.6 m	each	1				
3.1.3	Tower type 4DR+50.6 m	each	7				
3.2	Tower Type "4DAX"						
3.2.1	Tower type 4DAX Standard	each	2				

Design, Supply, Installation, Testing Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-1)

Item	Description	Unit	Quantity	Unit Price1		Total Price1	
				Local Currency [BDT]	Foreign Currency [.....]	Local Currency [BDT]	Foreign Currency [.....]
1	2	3	4	5	6	7=4x5	8= 4 x 6
Schedule No. 4A(i) Installation and Other Services							
4	Testing of Piles						
4.1	Individual Test Pile (steel tube pile) including necessary soil testing, design, supply, installation, monitoring and testing to prove compliance with theoretical design, payment for successful test only: -including supply of steel tube materials						
(a)	Test pile for Uplift load	per test	1				
(b)	Test pile for Compression load	per test	1				
4.2	Individual Working Pile (cast in situ pile) test including design, supply, installation and testing to prove compliance with technical specification, payment for successful test only (applicable for all tower types selected by the Employer's Engineer):						
(a)	Compression test	per test	1				
(b)	Uplift test	per test	1				
4.3	Pile Integrity test (PIT)	per test	16				
5	Stringing of double circuit line, four conductors per phase and two OPGW (length approx. Route km)						
5.1	Conductor "ACCC 724/71 DHAKA" (Double circuit line, both circuits erected, FOUR conductor per phase) including: Installation of insulation strings, compressed dead-ends, compression junction sleeves, suspension clamps, Sagging and clipping, Installation of armour rods and Dampers, Pilot strings and jumpers and any other works required as per specification.	route km	7				
5.2	Two 19 x 3.67 20SA earthwire equivalent OPGW, 48 fibres OPGW, including joint box, including:Tension and semi-tension joints, suspension clamps, armour rods and dampers,Sagging and clipping, Installation of intermediate junction boxes and terminal junction boxes at substation gantries ,Earthing jumpers	route km	7				
6	Costs and Expenses related to test witness³						
6.1	Tower	Lot	1				
6.2	Conductor	Lot	1				
6.3	Insulator	Lot	1				
6.4	Conductor, Insulator & earthwire fittings	Lot	1				
6.5	OPGW & fittings	Lot	1				
7	Documentation						
7.1	Establishment of as-built drawings, manuals and all requested documents as per specifications	lump sum	1				

Design, Supply, Installation, Testing Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-1)

Item	Description	Unit	Quantity	Unit Price1		Total Price1	
				Local Currency [BDT]	Foreign Currency [.....]	Local Currency [BDT]	Foreign Currency [.....]
1	2	3	4	5	6	7=4x5	8= 4 x 6
Schedule No. 4A(i) Installation and Other Services							
8	Miscellaneous						
8.1	Transport of the material and equipment supplied from Employer's Country	lump sum	1				
8.2	Insurance of material and equipment supplied from Employer's Country during transport	lump sum	1				
8.3	Painting of bottom part of towers in accordance with Section 21	lump sum	1				
8.4	Additional counterpoise earthing in accordance with requirement of the Technical specification	per meter	30				
8.5	Miscellaneous Rates for works certified by the Engineer in accordance with method of Payment						
(a)	Additional Excavation	cu.m	300				
(b)	Additional Concrete	cu.m	150				
(c)	Additional Reinforcement	kg	2500				
(d)	Additional Boring (500mm diameter)	rm	350				
(e)	Additional Boring (600mm diameter)	rm	350				
(f)	Additional Boring (750mm diameter)	rm	350				
(g)	Additional Boring (900mm diameter)	rm	350				
(h)	Additional Boring (1000mm diameter)	rm	350				
(i)	Additional Boring (1200mm diameter)	rm	350				
(j)	Back Filling of foundation	cu.m	350				
Total Columns 7 & 8 to be carried forward to Schedule No. 5 - Grand Summary							

Name of Bidder _____

Signature of Bidder _____

1 Specify currencies in accordance with ITB 19.1 of the BDS. Create additional columns for up to a maximum of three foreign currencies, if so required. 

2 As described in SCC 22.2.7

3 These costs are fixed ceiling and will be included in total price. But the payment shall be at actual upon submission of relevant documents.

4. Bidder shall quote the amount considering clause 14.1 of section 8 (Special Conditions of Contract), Volume 1 of 3 of the bidding document. The amount quoted by bidder is subject to arithmetic correction by Employer as required.

Design, Supply, Installation, Testing Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-1)

Item	Description	Unit	Quantity	Unit Price1		Total Price1	
				Local Currency [BDT]	Foreign Currency [.....]	Local Currency [BDT]	Foreign Currency [.....]
1	2	3	4	5	6	7=4x5	8= 4 x 6
Schedule No. 4A(ii) Installation and Other Services							
1	Survey and soil investigation works-Land Part						
1.1	Survey Work						
1.1.1	Check survey in accordance with the requirements of the technical specification, incl. Full ground survey with change of route, if any, tower plotting and preparation and submission of route maps, profile drawings, SIMM documents, etc.	Km	6				
1.2	Geotechnical Investigations incl. taking samples, logging and lab testing						
1.2.1	Boreholes for geotechnical investigation, incl. laboratory test, borehole logs, sampling and interpretive report as per geotechnical specification						
(a)	Level 2	borehole	NIL				
(b)	Level 4	borehole	NIL				
1.2.2	Soil resistivity tests (one per tower)	unit	14				
2	River Crossing Foundation for towers						
2.1	River Crossing Foundations for towers on river bed (All works under article no. 7.1.4.6.1 & 7.1.4.6.2 including all setting out, Concrete, Reinforcement, Excavation, Pumping, Stub-Setting, Geotechnical Investigation (Level 4), Shuttering, Leveling, Pile Driving Monitoring, supply & Installation of foundation steelwork, Earthing Materials,Backfilling, approved Protective Coating, site clearing & any other required work etc.)-excluding supply of steel tube materials						
2.1.1	Pile Foundation for 4DR	per tower	2				
2.1.2	Pile Foundation for 4DAX	per tower	1				
2.2	River Crossing Foundations for towers on river bank (All works under article no. 7.1.4.6.3 & 7.1.4.6.4 including all setting out, Concrete, Reinforcement, Excavation, Pumping, Stub-Setting, Geotechnical Investigation (Level 4), Shuttering, Leveling, Pile Driving Monitoring, supply & Installation of foundation steelwork, Earthing Materials,Backfilling, approved Protective Coating, site clearing& any other required work etc.)-excluding supply of steel tube materials						
2.2.1	Pile Foundation for 4DAX	per tower	1				
3	Erection of 400kV double circuit towers complete with all stubs, nuts, bolts, locking nuts, washers, phase conductor and earthwire swivels/shackles, step bolts, tower notice and identification plates, ACDs, ptotective coating, earthing etc.-River Crossing Portion						
3.1	Tower type "4DR"						
3.1.1	Tower type 4DT6+24 m	each	2				
3.2	Tower Type "4DAX"						
3.2.1	Tower type 4DAX Standard	each	2				

Design, Supply, Installation, Testing Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-1)

Item	Description	Unit	Quantity	Unit Price1		Total Price1	
				Local Currency [BDT]	Foreign Currency [.....]	Local Currency [BDT]	Foreign Currency [.....]
1	2	3	4	5	6	7=4x5	8= 4 x 6
Schedule No. 4A(ii) Installation and Other Services							
4	Testing of Piles						
4.1	Individual Test Pile (steel tube pile) including necessary soil testing, design, supply, installation, monitoring and testing to prove compliance with theoretical design, payment for successful test only: -including supply of steel tube materials						
(a)	Test pile for Uplift load	per test	1				
(b)	Test pile for Compression load	per test	1				
4.2	Individual Working Pile (cast in situ pile) test including design, supply, installation and testing to prove compliance with technical specification, payment for successful test only (applicable for all tower types selected by the Employer's Engineer):						
(a)	Compression test	per test	1				
(b)	Uplift test	per test	1				
(c)	Pile Integrity test	per test	8				
5	Stringing of double circuit line, four conductors per phase and two OPGW (length approx. Route km)-Land Part						
5.1	Conductor "ACCC 724/71 DHAKA" (Double circuit line, single circuit erected, FOUR conductor per phase) including: Installation of insulation strings, compressed dead-ends, compression junction sleeves, suspension clamps, Sagging and clipping, Installation of armour rods and Dampers, Pilot strings and jumpers and any other works required as per specification.	route km	2				
5.2	One 19 x 3.67 20SA earthwire, including joint box, including:Tension and semi-tension joints, suspension clamps, armour rods and dampers,Sagging and clipping,Earthing jumpers etc	route km	2				
5.3	One 19 x 3.67 20SA earthwire equivalent OPGW, 48 fibres OPGW, including joint box, including:Tension and semi-tension joints, suspension clamps, armour rods and dampers,Sagging and clipping, Installation of intermediate junction boxes and terminal junction boxes at substation gantries ,Earthing jumpers	route km	2				
6	Costs and Expenses related to test witness³						
6.1	Tower	Lot	1				
6.2	Conductor	Lot	1				
6.3	Insulator	Lot	1				
6.4	Conductor, Insulator & earthwire fittings	Lot	1				
6.5	OPGW & fittings	Lot	1				
7	Documentation						
7.1	Establishment of as-built drawings, manuals and all requested documents as per specifications	lump sum	1				

Design, Supply, Installation, Testing Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-1)

Item	Description	Unit	Quantity	Unit Price1		Total Price1	
				Local Currency [BDT]	Foreign Currency [.....]	Local Currency [BDT]	Foreign Currency [.....]
1	2	3	4	5	6	7=4x5	8= 4 x 6
Schedule No. 4A(ii) Installation and Other Services							
8	Miscellaneous						
8.1	Transport of the material and equipment supplied from Employer's Country	lump sum	1				
8.2	Insurance of material and equipment supplied from Employer's Country during transport	lump sum	1				
8.3	Painting of bottom part of towers in accordance with Section 21	lump sum	1				
8.4	Additional counterpoise earthing in accordance with requirement of the Technical specification	per meter	30				
8.5	Miscellaneous Rates for works certified by the Engineer in accordance with method of Payment						
(a)	Additional Excavation	cu.m	300				
(b)	Additional Concrete	cu.m	150				
(c)	Additional Reinforcement	kg	2500				
(d)	Additional Boring (500mm diameter)	rm	350				
(e)	Additional Boring (600mm diameter)	rm	350				
(f)	Additional Boring (750mm diameter)	rm	350				
(g)	Additional Boring (900mm diameter)	rm	350				
(h)	Additional Boring (1000mm diameter)	rm	350				
(i)	Additional Boring (1200mm diameter)	rm	350				
(j)	Back Filling of foundation	cu.m	350				
Total Columns 7 & 8 to be carried forward to Schedule No. 5 - Grand Summary							

Name of Bidder	_____
Signature of Bidder	_____

1 Specify currencies in accordance with ITB 19.1 of the BDS. Create additional columns for up to a maximum of three foreign currencies, if so required. 

2 As described in SCC 22.2.7

3 These costs are fixed ceiling and will be included in total price. But the payment shall be at actual upon submission of relevant documents.

4. Bidder shall quote the amount considering clause 14.1 of section 8 (Special Conditions of Contract), Volume 1 of 3 of the bidding document. The amount quoted by bidder is subject to arithmetic correction by Employer as required.

Design, Supply, Installation, Testing & Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-1)

Schedule No. 5A (i & ii). Grand Summary

Item	Description	Total Price ¹	
		Local Currency Portion [BDT]	Foreign Currency Portion [USD]
1	Schedule No. 1A(i) Plant and Mandatory Spare Parts Supplied from Abroad		
2	Schedule No. 1A(ii) Plant and Mandatory Spare Parts Supplied from Abroad		
3	Schedule No. 2A(i) Plant and Mandatory Spare Parts Supplied from Within the Employer's Country		
4	Schedule No. 2A(ii) Plant and Mandatory Spare Parts Supplied from Within the Employer's Country		
5	Schedule No. 3A(i & ii) (Design Services		
6	Schedule No. 4A(i) Installation and Other Services		
7	Schedule No. 4A(ii) Installation and Other Services		
Grand Total to be carried forward to Letter of Price Bid			

Name of Bidder	_____
Signature of Bidder	_____

1 Specify currencies in accordance with ITB 19.1 of the BDS.

**Design, Supply, Installation, Testing & Commissioning of 400kV and 230kV
River Crossing Transmission Lines on Turnkey Basis (Lot-1)**

Schedule No. 6A. Recommended Spare Parts					
Item	Description	Unit	Quantity	Unit Price ¹	Total Price ¹
				Foreign Currency Portion [USD]	Foreign Currency Portion [USD]
1	2	3	4	5	6= 4 x 5
Name of Bidder _____ Signature of Bidder _____					

¹ Specify currencies in accordance with ITB 19.1 of the BDS.

**Design, Supply, Installation, Testing &
Commissioning of 400kV and 230kV River Crossing
Transmission Lines on Turnkey Basis (Lot-2)**

Design, Supply, Installation, Testing Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-2)

Item	Description	Country of origin ²	Unit	Quantity	Unit Price ¹	Total Price ¹
					Foreign Currency [.....] CIP	Foreign Currency [.....] CIP
1	2	3*	4	5	6	7= 5 x 6
Schedule No. 1B Plant and Mandatory Spare Parts Supplied from Abroad						
1	Supply of 230 kV double circuit towers, complete with all stubs, nuts, bolts, locking nuts, washers, phase conductors and earthwire, swivels/shackles, step bolts, tower notice and identification plates, ACDs, protective coating, earthing, etc.					
1.1	Tower Type "2DR"					
1.1.1	Tower type 2DR Standard		each	5		
1.1.2	Tower type 2DRM10		each	2		
1.1.3	Tower type 2DRM20		each	2		
1.2	Tower Type "2DAX"					
1.2.1	Tower type 2DAX Standard		each	2		
1.3	Tower Foundation Material					
1.3.1	Steel Tube Material for Tower Foundation		Per Tower	11		
1.3.2	Permanent Steel Casing Material for Tower Foundation		Per Tower	4		
2	Phase conductor and OPGW cable, complete with repair sleeves and joints					
2.1	"ACSR Twin Mallard equal dia. Twin ACCC" Phase Conductor" (double circuit line, both circuits erected, two conductors per phase) (3)		Route km ³	7		
2.2	One 19 x 3.67 20SA earthwire		Route km ³	7		
2.3	One 19 x 3.67 20SA earthwire equivalent OPGW, 48 fibres OPGW, including joint box		Route km ³	7		
3	Insulator strings, with associated suspension and tension clamps for ACSR twin Mallard equal dia. Twin ACCC Conductor					
3.1	a) Double suspension string, having each string 210 kN, total 2X210kN (Suspension) - disc only		Set	54		
	b) 210kN Double suspension Insulators Fittings set for ACSR twin Mallard equal dia. Twin ACCC Conductor (Suspension) - hardware fittings only		Set	54		
3.2	a) Double tension string, 2x300kN -disc only		Set	24		
	b) Double tension string, 2x300kN - hardware fittings only		Set	24		
4	OPGW sets, complete with all accessories, incl. armour rods and earth bounds					
4.1	Suspension set (including all fittings and accessories for surplus and to guide the OPGW to the joint box)		set	9		
4.2	Tension set (including all fittings and accessories for surplus and to guide the OPGW to the joint box)		set	4		

Design, Supply, Installation, Testing Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-2)

Item	Description	Country of origin ²	Unit	Quantity	Unit Price ¹	Total Price ¹
					Foreign Currency [.....] CIP	Foreign Currency [.....] CIP
1	2	3*	4	5	6	7= 5 x 6
Schedule No. 1B Plant and Mandatory Spare Parts Supplied from Abroad						
5	Earthwire sets, complete with all accessories					
5.1	Suspension set		set	9		
5.2	Tension set		set	4		
6	Dampers					
6.1	Vibration damper for phase conductor		per span	10		
6.2	Spacer damper for phase conductor		per span	10		
6.3	Vibration damper for earthwire		per span	10		
6.4	Vibration damper for OPGW		per span	10		
7	Aerial Markers					
7.1	Air craft obstruction lights solar powered complete with lamps, solar, panels, batteries, control equipment cables, support framework, tower work platform etc.		Per tower	11		
7.2	Bird diverters		pcs.	20		
7.3	Bird guards, one bird guard per each crossarm applied on intermediate towers		pcs.	54		
7.4	Aircraft warning spheres		pcs.	250		
7.5	Painting of 60 meter and over tower in accordance with the requirements of the Technical Specification		per tower	11		
7.6	Reflecting Paint		Per tower	9		
8	Mandatory Spare Parts and Tools					
8.1	ACSR twin Mallard equal dia. Twin ACCC Conductor type with two core retainers per drum		km	2		
8.2	19 x 3.67 20SA earthwire		km	2		
8.3	19 x 3.67 20SA earthwire equivalent OPGW, 48 fibres,		km	2		
8.4	a) Double suspension string, having each string 210 kN, total 2x210kN (Suspension) - disc only		set	3		
	b) Double suspension string, having each string 210 kN, total 2x210kN (Suspension) - hardware fittings only		set	3		
8.5	a) Double tension string, 2x300kN -disc only		set	3		
	b) Double tension string, 2x300kN - hardware fittings only		set	3		
8.6	19 x 3.67 20SA Earthwire suspension set		set	3		
8.7	19 x 3.67 20SA Earthwire tension set		set	3		
8.8	OPGW 48 fibres suspension set		set	3		

Design, Supply, Installation, Testing Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-2)

Item	Description	Country of origin ²	Unit	Quantity	Unit Price ¹	Total Price ¹
					Foreign Currency [.....] CIP	Foreign Currency [.....] CIP
1	2	3*	4	5	6	7= 5 x 6
Schedule No. 1B Plant and Mandatory Spare Parts Supplied from Abroad						
8.9	OPGW 48 fibres tension set		set	3		
8.10	OPGW junction box		set	4		
8.11	Vibration damper for phase conductor ACSR twin Mallard equal dia. Twin ACCC Conductor type Conductor		each	6		
8.12	Vibration damper for OPGW		each	3		
8.13	Repair sleeve for conductor - ACSR twin Mallard equal dia. Twin ACCC Conductor type		pcs	3		
8.14	Midspan joints for conductor ACSR twin Mallard equal dia. Twin ACCC Conductor type		pcs	3		
8.15	Bird diverters		pcs	2		
8.16	Bird guard		pcs	2		
8.17	Aircraft warning markers		pcs	6		
Total Columns 7 to be carried forward to Schedule No. 5 - Grand Summary						

Name of Bidder	
Signature of Bidder	

- 1 Specify currencies in accordance with ITB 19.1 of the BDS. Create additional columns for up to a maximum of two foreign currencies, if so required.
- 2 Bidders shall enter a code representing the country of origin of all imported plant and equipment.
- 3 Definition of route km: Route km is the transmission line distance between two terminal points in plan view. Route km is exclusive sag and other electrical clearances, elevation differences etc. The Contractor shall incorporate all such extra costs in his unit rate.

Country of Origin Declaration Form

Item	Description	Code	Country

Design, Supply, Installation, Testing Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-2)

Item	Description	Country of origin ²	Unit	Quantity	Unit Price ¹		Total Price ¹	
					Local Currency [BDT]	Foreign Currency [.....]	Local Currency [BDT]	Foreign Currency [.....]
1	2	3*	4	5	6	7	8=5x6	9= 5 x 7
Schedule No. 2B Plant and Mandatory Spare Parts Supplied from Within the Employer's Country								
1	Supply of 400 kV double circuit towers, complete with all stubs, nuts, bolts, locking nuts, washers, phase conductors and earthwire OPGW, swivels/shackles, step bolts, tower notice and identification plates, ACDs, protective coating, earthing, etc.							
1.1	Tower type "2DR"							
1.1.1	Tower type 2DR Standard		each	5				
1.1.2	Tower type 2DRM10		each	2				
1.1.3	Tower type 2DRM20		each	2				
1.2	Tower Type "2DAX"							
1.2.1	Tower type 2DAX Standard		each	2				
1.3	Tower Foundation Material							
1.3.1	Steel Tube Material for Tower Foundation		Per Tower	11				
1.3.2	Permanent Steel Casing Material for Tower Foundation		Per Tower	4				
2	Phase conductor and OPGW cable, complete with repair sleeves and joints							
2.1	"ACSR Twin Mallard equal dia. Twin ACCC" Phase Conductor" (double circuit line, both circuits erected, two conductors per phase) [3]		Route km ³	7				
2.2	One 19 x 3.67 20SA earthwire		Route km ³	7				
2.3	One 19 x 3.67 20SA earthwire equivalent OPGW, 48 fibres OPGW, including joint box		Route km ³	7				
3	Insulator strings, with associated suspension and tension clamps for quadruple "ACCC 724/71 DHAKA" Conductor							
3.1	a) Dpuble suspension string, having each string 210 kN, total 2X210kN (Suspension) - disc only		Set	54				
	b) 210kN Double suspension Insulators Fittings set for ACSR twin Mallard equal dia. Twin ACCC Conductor (Suspension) - hardware fittings only		Set	54				
3.3	a) Double tension string, 2x300kN -disc only		Set	24				
	b) Double tension string, 2x300kN - hardware fittings only		Set	24				
4	OPGW sets, complete with all accessories, incl. armour rods and earth bounds							
4.1	Suspension set (including all fittings and accessories for surplus and to guide the OPGW to the joint box)		set	9				
4.2	Tension set (including all fittings and accessories for surplus and to guide the OPGW to the joint box)		set	4				
5	Earthwire sets, complete with all accessories							
5.1	Suspension set		set	9				

Design, Supply, Installation, Testing Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-2)

Item	Description	Country of origin ²	Unit	Quantity	Unit Price ¹		Total Price ¹	
					Local Currency [BDT]	Foreign Currency [.....]	Local Currency [BDT]	Foreign Currency [.....]
1	2	3*	4	5	6	7	8=5x6	9= 5 x 7
Schedule No. 2B Plant and Mandatory Spare Parts Supplied from Within the Employer's Country								
5.2	Tension set		set	4				
6	Dampers							
6.1	Vibration damper for phase conductor		per span	10				
6.2	Spacer damper for phase conductor		per span	10				
6.3	Vibration damper for earthwire		per span	10				
6.4	Vibration damper for OPGW		per span	10				
7	Aerial Markers							
7.1	Air craft obstruction lights solar powered complete with lamps, solar, panels, batteries, control equipment cables, support framework, tower work platform etc.		Per tower	11				
7.2	Bird diverters		pcs.	20				
7.3	Bird guards, one bird guard per each crossarm applied on intermediate towers		pcs.	54				
7.4	Aircraft warning spheres		pcs.	250				
7.5	Painting of 60 meter and over tower in accordance with the requirements of the Technical Specification		per tower	11				
7.6	Reflecting Paint		Per tower	9				
8	Mandatory Spare Parts and Tools							
8.1	ACSR twin Mallard equal dia. Twin ACCC Conductor type with two core retainers per drum		km	2				
8.2	19 x 3.67 20SA earthwire		km	2				
8.3	19 x 3.67 20SA earthwire equivalent OPGW, 48 fibres,		km	2				
8.4	a) Double suspension string, having each string 210 kN, total 2X210kN (Suspension) - disc only		set	3				
	b) Double suspension string, having each string 210 kN, total 2x210kN (Suspension) - hardware fittings only		set	3				
8.5	a) Double tension string, 2x300kN -disc only		set	3				
	b) Double tension string, 2x300kN - hardware fittings only		set	3				
8.6	19 x 3.67 20SA Earthwire suspension set		set	3				
8.7	19 x 3.67 20SA Earthwire tension set		set	3				
8.8	OPGW 48 fibres suspension set		set	3				
8.9	OPGW 48 fibres tension set		set	3				
8.10	OPGW junction box		set	4				

Design, Supply, Installation, Testing Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-2)

Item	Description	Country of origin ²	Unit	Quantity	Unit Price ¹		Total Price ¹	
					Local Currency [BDT]	Foreign Currency [.....]	Local Currency [BDT]	Foreign Currency [.....]
1	2	3*	4	5	6	7	8=5x6	9= 5 x 7
Schedule No. 2B Plant and Mandatory Spare Parts Supplied from Within the Employer's Country								
8.11	Vibration damper for phase conductor ACSR twin Mallard equal dia. Twin ACCC Conductor type Conductor		each	6				
8.12	Vibration damper for OPGW		each	3				
8.13	Repair sleeve for conductor - ACSR twin Mallard equal dia. Twin ACCC Conductor type		pcs	3				
8.14	Midspan joints for conductor ACSR twin Mallard equal dia. Twin ACCC Conductor type		pcs	3				
8.15	Bird diverters		pcs	2				
8.16	Bird guard		pcs	2				
8.17	Aircraft warning markers		pcs	6				
Total Columns 8 & 9 to be carried forward to Schedule No. 5 - Grand Summary								

Name of Bidder	_____
Signature of Bidder	_____

- Specify currencies in accordance with ITB 19.1 of the BDS.
- Bidders shall enter a code representing the country of origin of all imported plant and equipment.
- Definition of route km: Route km is the transmission line distance between two terminal points in plan view. Route km is exclusive sag and other electrical clearances, elevation differences etc. The Contractor shall incorporate all such extra costs in his unit rate.
- Price shall include all customs duties and sales and other taxes already paid or payable on the components and raw materials used in the manufacture or assembly of the item or the customs duties and sales and other taxes already paid on previously imported items."

Design, Supply, Installation, Testing & Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-2)							
Item	Description	Unit	Quantity	Unit Price ₁		Total Price ₁	
				Local Currency [BDT]	Foreign Currency [.....]	Local Currency [BDT]	Foreign Currency [....]
1	2	3	4	5	6	7=4x5	8 = 4 x 6
Schedule No. 3B Design Services							
1	Line Design						
1.1	Detailed line design including plan and profiles; conductor, earthwire and OPGW sag tension calculations; tower spotting, establishment of line schedule; Design of insulator strings, OPGW and earthwire attachments	Lump sum	1				
2	Tower Test						
2.1	Proto assembly of all type towers with all extensions to prove compliance with specification. Payment for successful test only.						
(a)	Tower type 2DR	each	1				
(b)	Tower type 2DAX	each	1				
3	Foundation Design						
3.1	Foundation design for all soil types including additional soil investigation and additional soil resistivity measurement	Lump sum	1				
Total Columns 7 & 8 to be carried forward to Schedule No. 5 - Grand Summary							

Name of Bidder	_____
Signature of Bidder	_____

1. Specify currencies in accordance with ITB 19.1 of the BDS. Create additional columns for up to a maximum of three foreign currencies, if so required.

2. Bidder shall quote the amount considering clause 14.1 of section 8(Special Conditions of Contract), Volume 1 of 3 of the bidding document. The amount quoted by bidder is subject to arithmetic correction by Employer as required.

Design, Supply, Installation, Testing Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-2)

Item	Description	Unit	Quantity	Unit Price1		Total Price1	
				Local Currency [BDT]	Foreign Currency [.....]	Local Currency [BDT]	Foreign Currency [.....]
1	2	3	4	5	6	7=4x5	8= 4 x 6
Schedule No. 4B Installation and Other Services							
1	Survey and soil investigation works-Land Part						
1.1	Survey Work						
1.1.1	Check survey in accordance with the requirements of the technical specification, incl. Full ground survey with change of route, if any, tower plotting and preparation and submission of route maps, profile drawings, SIMM documents, etc.	Km	7				
1.2	Geotechnical Investigations incl. taking samples, logging and lab testing						
1.2.1	Boreholes for geotechnical investigation, incl. laboratory test, borehole logs, sampling and interpretive report as per geotechnical specification						
(a)	Level 2	borehole	NIL				
(b)	Level 4	borehole	NIL				
1.2.2	Soil resistivity tests (one per tower)	unit	11				
2	River Crossing Foundations for towers						
2.1	River Crossing Foundations for towers on river bed (All works under article no. 7.1.4.6.1 & 7.1.4.6.2 including all setting out, Concrete, Reinforcement, Excavation, Pumping, Stub-Setting, Geotechnical Investigation (Level 4), Shuttering, Leveling, Pile Driving Monitoring, supply & Installation of foundation steelwork, Earthing Materials,Backfilling, approved Protective Coating, site clearing & any other required work etc.)-excluding supply of steel tube materials						
2.1.1	Pile Foundation for 2DR	per tower	7				
2.2	River Crossing Foundations for towers on river bank (All works under article no. 7.1.4.6.3 & 7.1.4.6.4 including all setting out, Concrete, Reinforcement, Excavation, Pumping, Stub-Setting, Geotechnical Investigation (Level 4), Shuttering, Leveling, Pile Driving Monitoring, supply & Installation of foundation steelwork, Earthing Materials,Backfilling, approved Protective Coating, site clearing& any other required work etc.)-excluding supply of steel tube materials						
2.2.1	Pile Foundation for 2DR	per tower	2				
2.2.2	Pile Foundation for 2DAX	per tower	2				
3	Erection of 230kV double circuit towers complete with all stubs, nuts, bolts, locking nuts, washers, phase conductor and earthwire swivels/shackles, step bolts, tower notice and identification plates, ACDs, ptotective coating, earthing etc.						
3.1	Tower type "2DR"						
3.1.1	Tower type 2DR Standard	each	5				
3.1.2	Tower type 2DRM10	each	2				
3.1.3	Tower type 2DRM20	each	2				

Design, Supply, Installation, Testing Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-2)

Item	Description	Unit	Quantity	Unit Price1		Total Price1	
				Local Currency [BDT]	Foreign Currency [.....]	Local Currency [BDT]	Foreign Currency [.....]
1	2	3	4	5	6	7=4x5	8= 4 x 6
Schedule No. 4B Installation and Other Services							
3.2	Tower Type "2DAX"						
3.2.1	Tower type 2DAX Standard	each	2				
4	Testing of Piles						
4.1	Individual Test Pile (steel tube pile) including necessary soil testing, design, supply, installation, monitoring and testing to prove compliance with theoretical design, payment for successful test only: -including supply of steel tube materials						
(a)	Test pile for Uplift load	per test	1				
(b)	Test pile for Compression load	per test	1				
4.2	Individual Working Pile (cast in situ pile) test including design, supply, installation and testing to prove compliance with technical specification, payment for successful test only (applicable for all tower types selected by the Employer's Engineer):						
(a)	Compression test	per test	1				
(b)	Uplift test	per test	1				
4.3	Pile Integrity test (PIT)	per test	16				
5	Stringing of double circuit line, two conductors per phase, One earthwire and one OPGW (length approx. Route km)-River Crossing Part						
5.1	Conductor "ACSR Twin Mallard equal dia. Twin ACCC" (Double circuit line, both circuits erected, TWO conductor per phase) including: Installation of insulation strings, compressed dead-ends, compression junction sleeves, suspension clamps, Sagging and clipping, Installation of armour rods and Dampers, Pilot strings and jumpers and any other works required as per specification.	route km	7				
5.2	One 19 x 3.67 20SA earthwire including Compressed dead-ends, compression junction sleeves suspension clamps, armour rods and dampers,Sagging and clipping, Earthing jumpers, warning sphere(if required)	route km	7				
5.3	One 19 x 3.67 20SA earthwire equivalent OPGW, 48 fibres OPGW, including joint box, including:Tension and semi-tension joints, suspension clamps, armour rods and dampers,Sagging and clipping, Installation of intermediate junction boxes and terminal junction boxes at substation gantries ,Earthing jumpers	route km	7				
6	Costs and Expenses related to test witness[3]						
6.1	Tower	Lot	1				
6.2	Conductor	Lot	1				
6.3	Insulator	Lot	1				
6.4	Conductor, Insulator & earthwire fittings	Lot	1				
6.5	OPGW & fittings	Lot	1				

Design, Supply, Installation, Testing Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-2)

Item	Description	Unit	Quantity	Unit Price1		Total Price1	
				Local Currency [BDT]	Foreign Currency [.....]	Local Currency [BDT]	Foreign Currency [.....]
1	2	3	4	5	6	7=4x5	8= 4 x 6
Schedule No. 4B Installation and Other Services							
7	Documentation						
7.1	Establishment of as-built drawings, manuals and all requested documents as per specifications	lump sum	1				
8	Miscellaneous						
8.1	Transport of the material and equipment supplied from Employer's Country	lump sum	1				
8.2	Insurance of material and equipment supplied from Employer's Country during transport	lump sum	1				
8.3	Painting of bottom part of towers in accordance with Section 21	lump sum	1				
8.4	Additional counterpoise earthing in accordance with requirement of the Technical specification	per meter	30				
8.5	Erection of OPGW connection from terminal tower to substation Gantry/Mast	per wire	4				
8.6	Miscellaneous Rates for works certified by the Engineer in accordance with method of Payment						
(a)	Additional Excavation	cu.m	300				
(b)	Additional Concrete	cu.m	150				
(c)	Additional Reinforcement	kg	2500				
(d)	Additional Boring (500mm diameter)	rm	350				
(e)	Additional Boring (600mm diameter)	rm	350				
(f)	Additional Boring (750mm diameter)	rm	350				
(g)	Additional Boring (900mm diameter)	rm	350				
(h)	Additional Boring (1000mm diameter)	rm	350				
(i)	Additional Boring (1200mm diameter)	rm	350				
(j)	Back Filling of foundation	cu.m	350				
Total Columns 7 & 8 to be carried forward to Schedule No. 5 - Grand Summary							

Name of Bidder _____

Signature of Bidder _____

1 Specify currencies in accordance with ITB 19.1 of the BDS. Create additional columns for up to a maximum of three foreign currencies, if so required.

2 As described in SCC 22.2.7

3 These costs are fixed ceiling and will be included in total price. But the payment shall be at actual upon submission of relevant documents.

4. Bidder shall quote the amount considering clause 14.1 of section 8 (Special Conditions of Contract), Volume 1 of 3 of the bidding document. The amount quoted by bidder is subject to arithmetic correction by Employer as required.

Design, Supply, Installation, Testing & Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-2)

Schedule No. 5B. Grand Summary			
Item	Description	Total Price ¹	
		Local Currency Portion [BDT]	Foreign Currency Portion [.....]
1	Schedule No. 1B Plant and Mandatory Spare Parts Supplied from Abroad		
2	Schedule No. 2B Plant and Mandatory Spare Parts Supplied from Within the Employer's Country		
3	Schedule No. 3B Design Services		
4	Schedule No. 4B Installation and Other Services		
Grand Total to be carried forward to Letter of Price Bid			

Name of Bidder	_____
Signature of Bidder	_____

1 Specify currencies in accordance with ITB 19.1 of the BDS.

Design, Supply, Installation, Testing & Commissioning of 400kV and 230kV River Crossing Transmission Lines on Turnkey Basis (Lot-2)

Schedule No. 6B. Recommended Spare Parts							
Item	Description	Unit	Quantity	Unit Price ¹		Total Price ¹	
				Local Currency Portion [BDT]	Foreign Currency Portion [xxx]	Local Currency Portion [BDT]	Foreign Currency Portion [xxx]
1	2	3	4	5	6	7 = 4 x 5	8 = 4 x 6
						Name of Bidder _____ Signature of Bidder _____	

¹ Specify currencies in accordance with ITB 19.1 of the BDS.