

Power Transmission Strengthening and Integration of Renewable Energy Project (PTSIREP), Package-1
Scope A: LILO of Existing Matarbari PP-Banskhali PP double circuit 400kV line at Matarbari 400/230/132kV SS (Pekua)

4-11 (Rev-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 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, swivels/shackles, step bolts, tower notice and identification plates, ACDs, protective coating(Galvanizing), etc as per specification.					
1.1	Tower type "4DL"					
1.1.1	Tower type 4DL Standard		each	1		
1.1.2	Tower type 4DL+1.5 m		each	0		
1.1.3	Tower type 4DL+3 m		each	1		
1.1.4	Tower type 4DL+4.5 m		each	2		
1.1.5	Tower type 4DL+6 m		each	6		
1.1.6	Tower type 4DL+9 m		each	13		
1.2	Tower type "4D1"					
1.2.1	Tower type 4D1 Standard		each	0		
1.2.2	Tower type 4D1+1.5 m		each	0		
1.2.3	Tower type 4D1+3 m		each	0		
1.2.4	Tower type 4D1+4.5 m		each	0		
1.2.5	Tower type 4D1+6 m		each	0		
1.2.6	Tower type 4D1+9 m		each	0		
1.2.7	Tower type 4D1+12 m		each	1		
1.2.8	Tower type 4D1+15 m		each	1		
1.2.9	Tower type 4D1+20m		each	1		
1.2.10	Tower type 4D1+25 m		each	1		
1.2.11	Tower type 4D1+30 m		each	0		
1.2.12	Tower type 4D1+40 m		each	0		
1.3	Tower type "4D25"					
1.3.1	Tower type 4D25 Standard		each	0		
1.3.2	Tower type 4D25+1.5 m		each	0		
1.3.3	Tower type 4D25+3 m		each	0		
1.3.4	Tower type 4D25+4.5 m		each	2		
1.3.5	Tower type 4D25+6 m		each	1		
1.3.6	Tower type 4D25+9 m		each	6		

Power Transmission Strengthening and Integration of Renewable Energy Project (PTSIREP), Package-1
Scope A: LILO of Existing Matarbari PP-Banskali PP double circuit 400kV line at Matarbari 400/230/132kV SS (Pekua)

4-12 (Rev-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 Plant and Mandatory Spare Parts Supplied from Abroad						
1.4	Tower type "4D45"					
1.4.1	Tower type 4D45 Standard		each	0		
1.4.2	Tower type 4D45+1.5 m		each	0		
1.4.3	Tower type 4D45+3 m		each	0		
1.4.4	Tower type 4D45+4.5 m		each	0		
1.4.5	Tower type 4D45+6 m		each	1		
1.4.6	Tower type 4D45+9 m		each	1		
1.5	Tower type "4DT6"					
1.5.1	Tower type 4DT6 Standard		each	1		
1.5.2	Tower type 4DT6+1.5 m		each	0		
1.5.3	Tower type 4DT6+3 m		each	1		
1.5.4	Tower type 4DT6+4.5 m		each	0		
1.5.5	Tower type 4DT6+6 m		each	1		
1.5.6	Tower type 4DT6+9 m		each	4		
1.6	Auxiliary Crossarm for tower					
1.6.1	Auxiliary crossarm for tower type 4DT6		per set of three	3		
1.7	Tower Earthing					
1.7.1	Type A		Per Tower	30		
1.7.2	Type B		Per Tower	7		
1.7.3	Type C		Per Tower	7		
1.7.4	Type D (if Required)		Per Tower	1		
1.8	Galvanized Tower Steel					
(a)	Fabricated		ton	10		
(b)	Non-fabricated		ton	10		
2	Phase conductor, earthwire and OPGW cable, complete with repair sleeves and joints					
2.1	"ACSR Finch" (double circuit line, both circuits erected, four conductors per phase) [3]		Route km2	13.5		

Power Transmission Strengthening and Integration of Renewable Energy Project (PTSIREP), Package-1
Scope A: LILO of Existing Matarbari PP-Banskali PP double circuit 400kV line at Matarbari 400/230/132kV SS (Pekua)

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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 Plant and Mandatory Spare Parts Supplied from Abroad						
2.2	a) ACSR "Dorking" earthwire with necessary midspan joints and repair sleeves. One earthwire on the line.		Route km2	13.5		
2.3	ACSR Dorking equivalent OPGW inclusive of joint boxes, fixing clamps, fusion splices and connections to the joint boxes. One OPGW earthwire on the line.		Route km2	13.5		
3.1	Insulator strings, with associated suspension and tension clamps for quadruple "ACSR Finch" Conductor					
3.1.1	a) 210kN twin suspension Insulators set (Suspension) - disc only		Set	138		
	b) 210kN twin suspension Insulators Fittings set for (Suspension) - hardware fittings only		Set	138		
3.1.2	a) 210kN twin suspension Insulators set for (Heavy Suspension) - disc only		Set	24		
	b) 210kN twin suspension Insulators Fittings Set for Conductor - hardware fittings only		Set	24		
3.1.3	a) 210kN jumper suspension Insulators Set- disc only		Set	60		
	b) 210kN jumper suspension Insulators Fittings Set hardware fittings only		Set	60		
3.1.4	a) 400kN twin tension Insulators Set - disc only		Set	192		
	b) 400kN twin tension Insulators Fittings Set - hardware fittings only		Set	192		
3.1.5	a) 210kN single upright low duty Insulators Set - disc only		Set	12		
	b) 210kN single upright low duty Insulators Fittings Set hardware fittings only		Set	12		
3.1.6	a) 210kN single inverted low duty Insulators Set disc only		Set	12		
	b) 210kN single inverted low duty Insulators Fittings Set - hardware fittings only		Set	12		

Power Transmission Strengthening and Integration of Renewable Energy Project (PTSIREP), Package-1
Scope A: LILO of Existing Matarbari PP-Banskhali PP double circuit 400kV line at Matarbari 400/230/132kV SS (Pekua)

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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 Plant and Mandatory Spare Parts Supplied from Abroad						
3.2	Insulator strings, with associated suspension and tension clamps for quadruple " LL ACSR Finch" Conductor					
3.2.1	a) 400kN twin tension Insulators Set - disc only		Set	12		
	b) 400kN twin tension Insulators Fittings Set - hardware fittings only		Set	12		
3.3	Counterweights for 210kN suspension insulator sets complete with yoke plate attachment bolts to be used for 4D1 towers:					
(a)	- 40kg set		each	6		
(b)	- 80kg set		each	6		
(c)	- 120kg set		each	6		
4.1	Earthwire sets, complete with all accessories.					
4.1.1	Suspension set for ACSR "Dorking"earthwire		set	27		
4.1.2	Tension set for ACSR "Dorking" earthwire		set	38		
4.2	OPGW sets, complete with all accessories, incl. armour rods and earth bounds					
4.2.1	Suspension set (including all fittings and accessories for surplus and to guide the OPGW to the joint box)		set	27		
4.2.2	Tension set (including all fittings and accessories for surplus and to guide the OPGW to the joint box)		set	38		
5	Dampers					
5.1	Vibration damper for phase conductor		per span	45		
5.2	Spacer damper for phase conductor		per span	45		
5.3	Vibration damper for OPGW		per span	45		
5.4	Vibration Damper for Earthwire		per span	45		
5.5	Spacer for jumper		nos.	126		
6	Aerial Markers and Tower Paint					
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	28		

Power Transmission Strengthening and Integration of Renewable Energy Project (PTSIREP), Package-1
Scope A: LILO of Existing Matarbari PP-Banskhal PP double circuit 400kV line at Matarbari 400/230/132kV SS (Pekua)

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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 Plant and Mandatory Spare Parts Supplied from Abroad						
6.2	Bird diverters		pcs.	228		
6.3	Bird guards, one bird guard per each crossarm applied on intermediate towers		pcs.	162		
6.4	Aircraft warning spheres		pcs.	310		
6.5	Painting of 60 meter and over tower in accordance with the requirements of the Technical Specification		per tower	28		
6.6	Painting of tower (Reflecting Paint) upto 3 meter in submerge area in accordance with the requirements of the Technical Specification		Per tower	5		
6.7	Coal tar epoxy coatings on all tower steelwork up to 3.0m/HFL whichever is greater from ground level in accordance with the requirements of the Technical Specification		Per tower	45		
6A	Bypass Equipment with mandatory spares in accordance with Chapter 22 of Volume 2		Set	1		
6A.1	Bypass Equipment (ERS structure) components, including gimbal joints, foundation plates, guy plates etc.					
6A.2	Insulators					
6A.3	Guywire components including guywire					
6A.4	Guy anchor assemblies					
6A.5	Hardware fittings & other required components including Storage container					
6A.6	Erection Tools & Equipment including Mandatory Spares		Lot	1		
6A.7	Demonstration and Training					
	Mandatory Spare Parts and Tools					
7.1	Conductor ACSR Finch		km	12		
7.2	Optical fibre ground wire, 48 fibres OPGW, mechanically compatible with ACSR Dorking		km	3		
7.3	ACSR Dorking Earthwire.		km	2		
8	Insulator strings, with associated suspension and tension clamps for quadruple "ACSR Finch" Conductor					
8.1	a) 210kN twin suspension Insulators set (Suspension) - disc only		Set	36		
	b) 210kN twin suspension Insulators Fittings set for (Suspension) - hardware fittings only		Set	36		
8.2	a) 210kN twin suspension Insulators set for (Heavy Suspension) - disc only		Set	18		

Power Transmission Strengthening and Integration of Renewable Energy Project (PTSIREP), Package-1
Scope A: LILO of Existing Matarbari PP-Banskhali PP double circuit 400kV line at Matarbari 400/230/132kV SS (Pekua)

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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 Plant and Mandatory Spare Parts Supplied from Abroad						
8.2	b) 210kN twin suspension Insulators Fittings Set for Conductor - hardware fittings only		Set	18		
8.3	a) 210kN jumper suspension Insulators Set- disc only		Set	12		
	b) 210kN jumper suspension Insulators Fittings Set hardware fittings only		Set	12		
8.4	a) 400kN twin tension Insulators Set - disc only		Set	72		
	b) 400kN twin tension Insulators Fittings Set - hardware fittings only		Set	72		
8.5	OPGW 48 fibres suspension set		set	6		
8.6	OPGW 48 fibres tension set		set	10		
8.7	OPGW junction box		set	5		
8.8	Earthwire suspension set		set	6		
8.9	Earthwire Tension set		set	10		
8.10	Vibration damper for ACSR Finch conductor		each	30		
8.11	Spacer damper for quadruple ACSR Finch conductor		each	15		
8.12	Vibration damper for OPGW		each	10		
8.13	Vibration damper for Earthwire		each	10		
8.14	Repair sleeve for conductor - ACSR Finch		pcs	10		
8.15	Midspan joints for conductor -ACSR Finch		pcs	10		
8.16	Bird diverters		pcs	5		
8.17	Bird guard		pcs	5		
8.18	Aircraft warning markers		pcs	10		
8.19	Terminal ground resistance tester (tools)		pcs	1		
8.20	Motorised jointing compressor for all conductor complete with dies suitable for conductors & earthwires to be used for this Contract		each	1		
Total Columns 7 to be carried forward to Schedule No. 5 -Grand Summary						

² 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.

1.Specify currency in accordance with specifications in Bid Data Sheet under ITB 19.1 in Single-stage Bid. Create and use as many columns for Unit Price and Total Price as there are c

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Scope A: LILO of Existing Matarbari PP-Banskhali PP double circuit 400kV line at Matarbari 400/230/132kV SS (Pekua)

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Item	Description	Unit	Quantity	Unit Price1		Total Price1	
				Local Currency EXW [BDT]	Foreign Currency EXW []	Local Currency EXW [BDT]	Foreign Currency EXW []
1	2	3	4	5	6	7=4*5	8=4*6
Schedule No. 2A 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, swivels/shackles, step bolts, tower notice and identification plates, ACDs, protective coating(Galvanizing), etc as per specification.						
1.1	Tower type "4DL"						
1.1.1	Tower type 4DL Standard	each	1				
1.1.2	Tower type 4DL+1.5 m	each	0				
1.1.3	Tower type 4DL+3 m	each	1				
1.1.4	Tower type 4DL+4.5 m	each	2				
1.1.5	Tower type 4DL+6 m	each	6				
1.1.6	Tower type 4DL+9 m	each	13				
1.2	Tower type "4D1"						
1.2.1	Tower type 4D1 Standard	each	0				
1.2.2	Tower type 4D1+1.5 m	each	0				
1.2.3	Tower type 4D1+3 m	each	0				
1.2.4	Tower type 4D1+4.5 m	each	0				
1.2.5	Tower type 4D1+6 m	each	0				
1.2.6	Tower type 4D1+9 m	each	0				
1.2.7	Tower type 4D1+12 m	each	1				
1.2.8	Tower type 4D1+15 m	each	1				
1.2.9	Tower type 4D1+20m	each	1				
1.2.10	Tower type 4D1+25 m	each	1				
1.2.11	Tower type 4D1+30 m	each	0				
1.2.12	Tower type 4D1+40 m	each	0				

Power Transmission Strengthening and Integration of Renewable Energy Project (PTSIREP), Package-1
Scope A: LILO of Existing Matarbari PP-Banskhal PP double circuit 400kV line at Matarbari 400/230/132kV SS (Pekua)

4-18 (Rev-1)

Item	Description	Unit	Quantity	Unit Price1		Total Price1	
				Local Currency EXW [BDT]	Foreign Currency EXW []	Local Currency EXW [BDT]	Foreign Currency EXW []
1	2	3	4	5	6	7=4*5	8=4*6
Schedule No. 2A Plant and Mandatory Spare Parts Supplied from Within the Employer's Country							
1.3	Tower type "4D25"						
1.3.1	Tower type 4D25 Standard	each	0				
1.3.2	Tower type 4D25+1.5 m	each	0				
1.3.3	Tower type 4D25+3 m	each	0				
1.3.4	Tower type 4D25+4.5 m	each	2				
1.3.5	Tower type 4D25+6 m	each	1				
1.3.6	Tower type 4D25+9 m	each	6				
1.4	Tower type "4D45"						
1.4.1	Tower type 4D45 Standard	each	0				
1.4.2	Tower type 4D45+1.5 m	each	0				
1.4.3	Tower type 4D45+3 m	each	0				
1.4.4	Tower type 4D45+4.5 m	each	0				
1.4.5	Tower type 4D45+6 m	each	1				
1.4.6	Tower type 4D45+9 m	each	1				
1.5	Tower type "4DT6"						
1.5.1	Tower type 4DT6 Standard	each	1				
1.5.2	Tower type 4DT6+1.5 m	each	0				
1.5.3	Tower type 4DT6+3 m	each	1				
1.5.4	Tower type 4DT6+4.5 m	each	0				
1.5.5	Tower type 4DT6+6 m	each	1				
1.5.6	Tower type 4DT6+9 m	each	4				
1.6	Auxiliary Crossarm for tower						
1.6.1	Auxiliary crossarm for tower type 4DT6	per set of three	3				

Power Transmission Strengthening and Integration of Renewable Energy Project (PTSIREP), Package-1
Scope A: LILO of Existing Matarbari PP-Banskhali PP double circuit 400kV line at Matarbari 400/230/132kV SS (Pekua)

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Item	Description	Unit	Quantity	Unit Price1		Total Price1	
				Local Currency EXW [BDT]	Foreign Currency EXW []	Local Currency EXW [BDT]	Foreign Currency EXW []
1	2	3	4	5	6	7=4*5	8=4*6
Schedule No. 2A Plant and Mandatory Spare Parts Supplied from Within the Employer's Country							
1.7	Tower Earthing						
1.7.1	Type A	Per Tower	41				
1.7.2	Type B	Per Tower	2				
1.7.3	Type C	Per Tower	2				
1.7.4	Type D (if Required)	Per Tower	0				
1.8	Galvanized Tower Steel						
(a)	Fabricated	ton	10				
(b)	Non-fabricated	ton	10				
2	Phase conductor, earthwire and OPGW cable, complete with repair sleeves and joints						
2.1	"ACSR Finch" (double circuit line, both circuits erected, four conductors per phase) [3]	Route km2	13.5				
2.2	ACSR "Dorking" earthwire with necessary midspan joints and repair sleeves. One earthwire on the line.	Route km2	13.5				
2.3	ACSR Dorking equivalent OPGW inclusive of joint boxes, fixing clamps, fusion splices and connections to the joint boxes. One OPGW earthwire on the line.	Route km2	13.5				
3.1	Insulator strings, with associated suspension and tension clamps for quadruple "ACSR Finch" Conductor						
3.1.1	a) 210kN twin suspension Insulators set (Suspension) - disc only	Set	138				
	b) 210kN twin suspension Insulators Fittings set for (Suspension) - hardware fittings only	Set	138				
3.1.2	a) 210kN twin suspension Insulators set for (Heavy Suspension) - disc only	Set	24				
	b) 210kN twin suspension Insulators Fittings Set for Conductor - hardware fittings only	Set	24				
3.1.3	a) 210kN jumper suspension Insulators Set- disc only	Set	60				
	b) 210kN jumper suspension Insulators Fittings Set hardware fittings only	Set	60				

Power Transmission Strengthening and Integration of Renewable Energy Project (PTSIREP), Package-1
Scope A: LILO of Existing Matarbari PP-Banskali PP double circuit 400kV line at Matarbari 400/230/132kV SS (Pekua)

4-20 (Rev-1)

Item	Description	Unit	Quantity	Unit Price1		Total Price1	
				Local Currency EXW [BDT]	Foreign Currency EXW []	Local Currency EXW [BDT]	Foreign Currency EXW []
1	2	3	4	5	6	7=4*5	8=4*6
Schedule No. 2A Plant and Mandatory Spare Parts Supplied from Within the Employer's Country							
3.1.4	a) 400kN twin tension Insulators Set - disc only	Set	192				
	b) 400kN twin tension Insulators Fittings Set - hardware fittings only	Set	192				
3.1.5	a) 210kN single upright low duty Insulators Set - disc only	Set	12				
	b) 210kN single upright low duty Insulators Fittings Set hardware fittings only	Set	12				
3.1.6	a) 210kN single inverted low duty Insulators Set - disc only	Set	12				
	b) 210kN single inverted low duty Insulators Fittings Set - hardware fittings only	Set	12				
3.2	Insulator strings, with associated suspension and tension clamps for quadruple " LL ACSR Finch" Conductor						
3.2.1	a) 400kN twin tension Insulators Set - disc only	Set	12				
	b) 400kN twin tension Insulators Fittings Set - hardware fittings only	Set	12				
3.3	Counterweights for 210kN suspension insulator sets complete with yoke plate attachment bolts to be used for 4D1 towers:						
(a)	- 40kg set	each	6				
(b)	- 80kg set	each	6				
(c)	- 120kg set	each	6				
4.1	Earthwire sets, complete with all accessories.						
4.1.1	Suspension set for ACSR "Dorking"earthwire	set	27				
4.1.2	Tension set for ACSR "Dorking" earthwire	set	38				
4.2	OPGW sets, complete with all accessories, incl. armour rods and earth bounds						
4.2.1	Suspension set (including all fittings and accessories for surplus and to guide the OPGW to the joint box)	set	27				
4.2.2	Tension set (including all fittings and accessories for surplus and to guide the OPGW to the joint box)	set	38				

Power Transmission Strengthening and Integration of Renewable Energy Project (PTSIREP), Package-1
Scope A: LILO of Existing Matarbari PP-Banskali PP double circuit 400kV line at Matarbari 400/230/132kV SS (Pekua)

4-21 (Rev-1)

Item	Description	Unit	Quantity	Unit Price1		Total Price1	
				Local Currency EXW [BDT]	Foreign Currency EXW []	Local Currency EXW [BDT]	Foreign Currency EXW []
1	2	3	4	5	6	7=4*5	8=4*6
Schedule No. 2A Plant and Mandatory Spare Parts Supplied from Within the Employer's Country							
5	Dampers						
5.1	Vibration damper for phase conductor	per span	45				
5.2	Spacer damper for phase conductor	per span	45				
5.3	Vibration damper for OPGW	per span	45				
5.4	Vibration Damper for Earthwire	per span	45				
5.5	Spacer for jumper	nos.	126				
6	Aerial Markers and Tower Paint						
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	28				
6.2	Bird diverters	pcs.	228				
6.3	Bird guards, one bird guard per each crossarm applied on intermediate towers	pcs.	162				
6.4	Aircraft warning spheres	pcs.	310				
6.5	Painting of 60 meter and over tower in accordance with the requirements of the Technical Specification	per tower	28				
6.6	Painting of tower (Reflecting Paint) upto 3 meter in submerge area in accordance with the requirements of the Technical Specification	Per tower	5				
6.7	Coal tar epoxy coatings on all tower steelwork up to 3.0m/HFL whichever is greater from ground level in accordance with the requirements of the Technical Specification	Per tower	45				
6A	Bypass Equipment with mandatory spares in accordance with Chapter 22 of Volume 2						
6A.1	Bypass Equipment (ERS structure) components, including gimbal joints, foundation plates, guy plates etc.	Set	1				
6A.2	Insulators						
6A.3	Guywire components including guywire						
6A.4	Guy anchor assemblies						
6A.5	Hardware fittings & other required components including Storage container						
6A.6	Erection Tools & Equipment including Mandatory Spares						

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Scope A: LILO of Existing Matarbari PP-Banskhali PP double circuit 400kV line at Matarbari 400/230/132kV SS (Pekua)

4-22 (Rev-1)

Item	Description	Unit	Quantity	Unit Price1		Total Price1	
				Local Currency EXW [BDT]	Foreign Currency EXW []	Local Currency EXW [BDT]	Foreign Currency EXW []
1	2	3	4	5	6	7=4*5	8=4*6
Schedule No. 2A Plant and Mandatory Spare Parts Supplied from Within the Employer's Country							
6A.7	Demonstration and Training	Lot	1				
	Mandatory Spare Parts and Tools						
7.1	Conductor ACSR Finch	km	12				
7.2	Optical fibre ground wire, 48 fibres OPGW, mechanically compatible with ACSR Dorking	km	3				
7.3	ACSR Dorking Earthwire.	km	2				
8	Insulator strings, with associated suspension and tension clamps for quadruple "ACSR Finch" Conductor						
8.1	a) 210kN twin suspension Insulators set (Suspension) - disc only	Set	36				
	b) 210kN twin suspension Insulators Fittings set for (Suspension) - hardware fittings only	Set	36				
8.2	a) 210kN twin suspension Insulators set for (Heavy Suspension) - disc only	Set	18				
	b) 210kN twin suspension Insulators Fittings Set for Conductor - hardware fittings only	Set	18				
8.3	a) 210kN jumper suspension Insulators Set- disc only	Set	12				
	b) 210kN jumper suspension Insulators Fittings Set hardware fittings only	Set	12				
8.4	a) 400kN twin tension Insulators Set - disc only	Set	72				
	b) 400kN twin tension Insulators Fittings Set - hardware fittings only	Set	72				
8.5	OPGW 48 fibres suspension set	set	6				
8.6	OPGW 48 fibres tension set	set	10				
8.7	OPGW junction box	set	5				
8.8	Earthwire suspension set	set	6				
8.9	Earthwire Tension set	set	10				

Power Transmission Strengthening and Integration of Renewable Energy Project (PTSIREP), Package-1
Scope A: LILO of Existing Matarbari PP-Banskali PP double circuit 400kV line at Matarbari 400/230/132kV SS (Pekua)

4-23 (Rev-1)

Item	Description	Unit	Quantity	Unit Price1		Total Price1	
				Local Currency EXW [BDT]	Foreign Currency EXW []	Local Currency EXW [BDT]	Foreign Currency EXW []
1	2	3	4	5	6	7=4*5	8=4*6
Schedule No. 2A Plant and Mandatory Spare Parts Supplied from Within the Employer's Country							
8.10	Vibration damper for ACSR Finch conductor	each	30				
8.11	Spacer damper for quadruple ACSR Finch conductor	each	15				
8.12	Vibration damper for OPGW	each	10				
8.13	Vibration damper for Earthwire	each	10				
8.14	Repair sleeve for conductor - ACSR Finch	pcs	10				
8.15	Midspan joints for conductor -ACSR Finch	pcs	10				
8.16	Bird diverters	pcs	5				
8.17	Bird guard	pcs	5				
8.18	Aircraft warning markers	pcs	10				
8.19	Terminal ground resistance tester (tools)	pcs	1				
8.20	Motorised jointing compressor for conductor complete with dies suitable for all conductors & earthwires to be used for this Contract	each	1				
Total Columns 7 and 8 to be carried forward to Schedule No. 5 -Grand Summary							

2 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.

1.Specify currency in accordance with specifications in Bid Data Sheet under ITB 19.1 in Single-stage Bid. Create and use as many columns for Unit Price and Total Price as there are currencies.

Power Transmission Strengthening and Integration of Renewable Energy Project (PTSIREP), Package-1
Scope A: LILO of Existing Matarbari PP-Banskhali PP double circuit 400kV line at Matarbari 400/230/132kV SS (Pekua)

4-24 (Rev-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 = 4 x 5	8 = 4 x 6
Schedule No. 3A 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 4DL	each	1				
(b)	Tower type 4D1	each	1				
(c)	Tower type 4D25	each	1				
(d)	Tower type 4D45	each	1				
(e)	Tower type 4DT6	each	1				
3	Foundation Design						
3.1	Foundation design for all soil types	Lump sum	1				
Total Columns 7 and 8 to be carried forward to Schedule No. 5 -Grand Summary							

1. Specify currency in accordance with specifications in Bid Data Sheet under ITB 19.1 in Single-stage Bid. Create and use as many columns for Unit Price and Total Price as there are currencies.

Power Transmission Strengthening and Integration of Renewable Energy Project (PTSIREP), Package-1
Scope A: LILO of Existing Matarbari PP-Bankhali PP double circuit 400kV line at Matarbari 400/230/132kV SS (Pekua)

4-25 (Rev-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 = 4 x 5	8 = 4x6
Schedule No. 4A Installation and Other Services							
1	Survey, soil investigation works & Route Clearance						
1.1	Survey Work & Route Clearance						
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, submission of tower footing area on mouza maps for each tower location, profile drawings, SIMM documents, etc.	Km	13.5				
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	2				
(b)	Level 4	borehole	2				
1.2.2	Soil resistivity tests (one per tower)	unit	45				
2	Foundations for towers including all setting out, Concrete, Reinforcement, Excavation, Pumping, Stub-Setting, Geotechnical Investigation (Level 2), Shuttering, Leveling, Timbering, supply & Installation of foundation steelwork, Earthing Materials, Backfilling, approved Protective Coating & site clearing etc.						
2.1	Tower type "4DL"						
2.1.1	Pile Foundation for Soil Category-2 with 2m Raised Chimney	per tower	8				
2.1.2	Pile Foundation for Soil Category-3 with 2m Raised Chimney	per tower	7				
2.1.3	Pile Foundation for Soil Category-4 with 2m Raised Chimney	per tower	6				
2.2	Tower type "4D1 (0m to 15m body extension)"						
2.2.1	Pile Foundation for any Soil Category with 2m Raised Chimney	per tower	1				
2.3	Tower type "4D1 (20m body extension)"						
2.3.1	Pile Foundation for any Soil Category with 2m Raised Chimney	per tower	1				
2.3	Tower type "4D1 (25m body extension)"						
2.3.1	Pile Foundation for any Soil Category with 2m Raised Chimney	per tower	1				
2.4	Tower type "4D25"						
2.4.1	Pile Foundation for Soil Category-2 with 2m Raised Chimney	per tower	3				
2.4.2	Pile Foundation for Soil Category-3 with 2m Raised Chimney	per tower	3				
2.4.3	Pile Foundation for Soil Category-4 with 2m Raised Chimney	per tower	2				
2.5	Tower type "4D45"						
2.5.1	Pile Foundation for any Soil Category with 2m Raised Chimney	per tower	2				

Power Transmission Strengthening and Integration of Renewable Energy Project (PTSIREP), Package-1
Scope A: LILo of Existing Matarbari PP-Banskhali PP double circuit 400kV line at Matarbari 400/230/132kV SS (Pekua)

4-26 (Rev-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 = 4 x 5	8 = 4x6
Schedule No. 4A Installation and Other Services							
2.6	Tower type "4DT6"						
2.6.1	Pile Foundation for Soil Category-2 with 2m Raised Chimney	per tower	2				
2.6.2	Pile Foundation for Soil Category-3 with 2m Raised Chimney	per tower	3				
2.6.3	Pile Foundation for Soil Category-4 with 2m Raised Chimney	per tower	2				
2.7	River Crossing Foundation for any soil category with 2m Raised Chimney						
2.7.1	Pile Foundation for Tower Type 4DL (Any Extension)	per tower	2				
2.7.2	Pile Foundation for Tower Type 4D1 (Any Extension)	per tower	1				
2.7.3	Pile Foundation for Tower Type 4D25 (Any Extension)	per tower	1				
3	Erection of 400kV double circuit towers complete with all stubs, nuts, bolts, locking nuts, washers, phase conductor and earthwire , step bolts, tower notice and identification plates, ACDs, protective coating (Galvanizing), earthing etc.						
3.1	Tower type "4DL"						
3.1.1	Tower type 4DL Standard	each	1				
3.1.2	Tower type 4DL+1.5 m	each	0				
3.1.3	Tower type 4DL+3 m	each	1				
3.1.4	Tower type 4DL+4.5 m	each	2				
3.1.5	Tower type 4DL+6 m	each	6				
3.1.6	Tower type 4DL+9 m	each	13				
3.2	Tower type "4D1"						
3.2.1	Tower type 4D1 Standard	each	0				
3.2.2	Tower type 4D1+1.5 m	each	0				
3.2.3	Tower type 4D1+3 m	each	0				
3.2.4	Tower type 4D1+4.5 m	each	0				
3.2.5	Tower type 4D1+6 m	each	0				
3.2.6	Tower type 4D1+9 m	each	0				
3.2.7	Tower type 4D1+12 m	each	1				
3.2.8	Tower type 4D1+15 m	each	1				
3.2.9	Tower type 4D1+20 m	each	1				
3.2.10	Tower type 4D1+25 m	each	1				
3.2.11	Tower type 4D1+30 m	each	0				
3.2.12	Tower type 4D1+40 m	each	0				
3.3	Tower type "4D25"						
3.3.1	Tower type 4D25 Standard	each	0				
3.3.2	Tower type 4D25+1.5 m	each	0				
3.3.3	Tower type 4D25+3 m	each	0				
3.3.4	Tower type 4D25+4.5 m	each	2				
3.3.5	Tower type 4D25+6 m	each	1				
3.3.6	Tower type 4D25+9 m	each	6				
3.4	Tower type "4D45"						
3.4.1	Tower type 4D45 Standard	each	0				
3.4.2	Tower type 4D45+1.5 m	each	0				

Power Transmission Strengthening and Integration of Renewable Energy Project (PTSIREP), Package-1
Scope A: LILO of Existing Matarbari PP-Banskhali PP double circuit 400kV line at Matarbari 400/230/132kV SS (Pekua)

4-27 (Rev-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 = 4 x 5	8 = 4 x 6
Schedule No. 4A Installation and Other Services							
3.4.3	Tower type 4D45+3 m	each	0				
3.4.4	Tower type 4D45+4.5 m	each	0				
3.4.5	Tower type 4D45+6 m	each	1				
3.4.6	Tower type 4D45+9 m	each	1				
3.5	Tower type "4DT6"						
3.5.1	Tower type 4DT6 Standard	each	1				
3.5.2	Tower type 4DT6+1.5 m	each	0				
3.5.3	Tower type 4DT6+3 m	each	1				
3.5.4	Tower type 4DT6+4.5 m	each	0				
3.5.5	Tower type 4DT6+6 m	each	1				
3.5.6	Tower type 4DT6+9 m	each	4				
3.6	Galvanized Tower Steel						
3.6.1	Fabricated Tower Steel	per ton	10				
3.7	Auxiliary Crossarm for tower						
3.7.1	Auxiliary crossarm for tower type 4DT6	per set of three	3				
4	Testing of Foundations						
4.1	Individual Pile test including supply,install and test 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	2				
(b)	Uplift test	per test	2				
(c)	Pile Integrity test	per test	180				
4A	Tower Paint						
(a)	Coal tar epoxy coatings on all tower steelwork up to 3.0m/HFL whichever is greater from ground level in accordance with the requirements of the Technical Specification	per tower	45				
(b)	Painting of tower having total height above GL exceeds 60m for aircraft navigation in accordance with the requirements of the Technical Specification	per tower	28				
(c)	Painting of tower (Reflecting Paint) upto 3 meter above epoxy coat in submerge area in accordance with the requirements of the Technical Specification	per tower	5				
5	Stringing of double circuit line, four conductors per phase, one OPGW and one conventional earthwire (length approx. Route km)						
5.1	Conductor "ACSR Finch" (Double circuit line, both circuits erected, FOUR conductors per phase) including: Installation of insulator 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	13.5				

Power Transmission Strengthening and Integration of Renewable Energy Project (PTSIREP), Package-1
Scope A: LILO of Existing Matarbari PP-Banskhali PP double circuit 400kV line at Matarbari 400/230/132kV SS (Pekua)

4-28 (Rev-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 = 4 x 5	8 = 4x6
Schedule No. 4A Installation and Other Services							
5.2	One optical fibre ground wire, 48 fibres OPGW, mechanically compatible with ACSR Dorking shield wire, 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	13.5				
5.3	ACSR "Dorking" earthwire with necessary midspan joints and repair sleeves. One earthwire on the line.	route km	13.5				
6	Dismantling & Bypass						
6.1	Dismantling of existing line section (including tower, conductor, insulator and other accessories) whichever is required for line in/out, storing the dismantled materials at PGCB store	per span	3.00				
6.2	By passing the required line section with ERS which will be supplied under this Contract and other all necessary materials for by passing shall be collected from PGCB store.	per span	3.00				
6.3	Dismantling of by pass line after completing line in line out and storing the all the materials including ERS of by pass line at PGCB store	per span	3.00				
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	Additional counterpoise earthing in accordance with requirement of the Technical specification	per meter	20				
8.4	Miscellaneous Rates for works certified by the Engineer in accordance with method of Payment						
(a)	Additional Excavation	cu.m	100				
(b)	Additional Concrete (Piling)	cu.m	250				
(c)	Additional Concrete (other than Piling)	cu.m	150				
(d)	Additional Reinforcement	kg	500				
(e)	Additional Boring (for any diameter)	rm	100				
(f)	Additional Permanent steel casing (minimum 8mm thick , any dia)	Ton	100				
(g)	Back Filling of foundation	cu.m	75				
8.5	Environmental Management and Monitoring Plan including Ecological study	lump sum	1				
8.6	STI, STD and HIV/AIDS alleviation program	lump sum	1				
8.7	Costs and Expenses related to FAT witness (Provisional Sum) ²	lump sum	1		USD 50000		USD 50000
8.8	Payment for Compensation (For resettlement of affected people, dwelling/commercial structures, trees, crops etc. on the Right of Way)	lump sum	1				
Total Columns 7 and 8 to be carried forward to Schedule No. 5 -Grand Summary							

1. Specify currency in accordance with specifications in Bid Data Sheet under ITB 19.1 in Single-stage Bid. Create and use as many columns for Unit Price and Total Price as there are currencies.
2. These costs are fixed ceiling and will be included in total price. But the payment shall be at actual upon submission of relevant documents.