Design, Supply and Installation
Reconductoring 132kV Transmission Lines in Eastern Region on Turnkey Basis
[Contract No.:PGCB/WB/ESPNERP/132KV/TL/REC/P3]

Addendum No. 01

Following revisions/changes are made in the Bidding Document which will form part of the Bidding Document:

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1. **Section II. Bid Data Sheet (BDS)**

   BDS of ITB 17.7: Replace existing text with:
   "Price shall not be adjusted".

2. **PCC 19. Subcontracting**

   A new PCC Clause No. 19.3 has been added.

   PCC 19.3 – Replacing the sub-clause
   For items or parts of the Facilities not specified in the Appendix to the Contract Agreement titled "List of Major Items of Supply and Services and List of Approved Subcontractors, the Contractor may employ such Subcontractors subject to written approval of Employer's Representative.

3. **PCC Contract Price**

   PCC 11.2: Replace "The Contract Price shall be adjusted in accordance with the provisions of Appendix-2 (Price Adjustment) to the Contract Agreement and on the actual quantity of Plant and Installation Services completed by the Contractor during the Contract Execution Stage." With "price shall not be adjusted".

4. **Price Schedule (Schedule B)**

   Scope: A. Schedule No. 4- Installation and Other Services
   Following sub-item shall be added under item no. A9

Item	Description	Unit	Qty	Unit Price[1]		Total Price[1]	
				Foreign Currency (in .....)	Local Currency (BDT)	Foreign Currency (in .....)	Local Currency (BDT)
A9.3	Drumming/rewinding/packing of dismantled conductors and carrying/transprting those drums as well as fittings and accessories to the nearby PGCB store	Lump sum	1				

Scope: B. Schedule No. 4- Installation and Other Services
Following sub-item shall be added under item no. B9

Item	Description	Unit	Qty	Unit Price[1]		Total Price[1]	
				Foreign Currency (in .....)	Local Currency (BDT)	Foreign Currency (in .....)	Local Currency (BDT)
B9.4	Drumming/rewinding/packing of dismantled conductors and carrying/transprting those drums as well as fittings and accessories to the nearby PGCB store	Lump sum	1				

5. Section III – Evaluation and Qualification Criteria

4.2(a) Specific Experience: Following criteria shall be added after the text 'For the above three contracts executed during the period mentioned above:'

- at least one contract shall be outside of the bidder's own country or in Bangladesh

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1. Section 11. Conductors

i. Page no. 11-18 is replaced with the revised page no. 11-18 (Rev. 1). [**Attachment-1**]

ii. Page no. 11-19

The texts "Ambient temperature: 40^0C" are replaced with the following texts:

"Ambient temperature: **25^0**C"

iii. Clause 1.7 Sheave Test, Page 11-24

The texts "After this test, the UTS of aluminium, steel or invar core materials shall be evaluated." are replaced with the following texts:

"After this test, the UTS of the conductor shall be evaluated. The evaluated UTS shall not be less than 95% of the conductor UTS as mentioned in the specification."

iv. Clause 1.9 Radial Crush Test, Page 11-24

The texts "All the strands/core shall be subsequently disassembled and tensile tested. All the strands/core shall exhibit full strength retention" are replaced with the following texts:

"All the **core** strands/core shall be subsequently disassembled and tensile tested. All the **core** strands/core shall exhibit full strength retention"

v. Clause 1.16 Coefficient of linear expansion for composite core/ core wires, Page 11-26

The texts "The temperature and elongation on a sample shall be continuously measured and recorded at interval of approximately 15 degree C from 15 degree C to maximum continuous operating temperature by changing the temperature by suitable means." are replaced with the following texts:

"The temperature and elongation on a sample shall be continuously measured and recorded at interval of approximately 15 degree C from **laboratory ambient temperature** to maximum continuous operating temperature by changing the temperature by suitable means."

vi. Clause 1.25 Breaking load test on Aluminium/ Aluminium Alloy & Composite core/ INVAR Core wires and D.C Resistance test on Aluminium/ Aluminium Alloy wire, Page 11-27
The texts "The above tests shall be carried out as per IEC: 888/889 or relevant international standards and the results shall meet the requirements of the specification." are replaced with the following texts:

"The above tests except for composite core shall be carried out as per IEC: 888/889 or relevant international standards and the results shall meet the requirements of the specification.

For composite core, breaking load test shall be carried out as per ASTM B987 or relevant international standards and the results shall meet the requirements of the specification"

Where specified after the final route inspection the Contractor shall demonstrate by means of a low voltage test, to the complete satisfaction of the Employer, that there is complete continuity over each phase. **This is a Hold Point.**

11.7.17. Records

During the course of the work, the SIMM document (reference Clause 4.7) shall be updated with details of the actual phase conductor and earthwire erection sags, location of phase conductor and earthwire tension joints including repair sleeves and the electrical resistance of all joints and clamps including the name of the linesman responsible and the date of assembly.

Annex 11-1: Conductor - Types and Uses

ANNEX 11-1 (1) : ACCC Conductor

(A) Technical Particulars of ACSR Grosbeak as existing in the 132kV transmission line(s) and the Requirements for ACCC conductor with equal diameter of ACSR Grosbeak :

Description /Particulars		Existing ACSR Conductor	Required ACCC Conductor
Designation (Code Name)		ACSR Grosbeak (636 MCM)	ACCC-Grosbeak (ACCC with equal diameter of ACSR Grosbeak)
Type		ACSR	ACCC
Standard		ASTM B-232	ASTM/IEC/BSEN
Structure (Nos./mm)	Aluminium	26/3.973	Refer to Note (i)
	Steel	7/3.089	-
	Composite core	-	1/8.13
Nominal Cross-sectional Area	Al. (mm^2)	322.09	416.2
	St (mm^2)	52.42	-
	Composite core (mm^2)	-	51.9
	Total (mm^2)	374.51	**468.1**
Nominal Diameter of Composite Core		-	8.13
Overall diameter (mm)		25.16	**25.15**
Shape of Al. wires		Round	All trapezoidal
Weight (kg/km)		1303±2%	Maximum 1280
Ultimate tensile strength of Conductor (kN)		112	**133.9**
Rated Strength of Core (kN)		-	**110.8**
Direction of external lay		Right hand	Right hand
DC resistance at 20°C (Ω/km)		0.08959	Maximum 0.068
Conductor max. continuous operating Temperature at surface		80°C	180°C
Max. allowable emergency operating temp.		100°C	200°C
Final Modulus of Elasticity (GPa)		77	Above Thermal Kneepoint : 112.3
			Below Thermal Kneepoint : 60.6
Coefficient of linear expansion (/°C)		19.2 x 10^{-6}	Above Thermal Kneepoint : 1.61 x 10^{-6}
			Below Thermal Kneepoint : 18.7 x 10^{-6}
AC Current Rating (Amp)		629 Amp @ 75°C	**1537 @ 180 °C & 60Hz**
			1620 @ 200 °C & 60Hz
Creep period of conductor to be considered (years)		20	To be filled by bidder /manufacturer
Max. working tension (kN)		≤50.4	≤50.4