



Rehabilitation of Overhead Transmission Line

Part 2 – Particular Technical Specifications

High Voltage



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1. Scope of the Works

1.1. Rehabilitation of overhead line

The transmission line to be rehabilitated under this project is a 220 kV double circuit line Deir Nbouh - Baalbeck, equipped with 570 mm² Almelec conductors and with 1 x OPGW (12 Optical Fibers).

In the last three years, the line was subjected to systematic robbery operations that led to the collapse of 11 towers and the theft of the iron members and the fallen and hanged conductors.

The required stringing works on the 220kV line are estimated to be around 50 km, and that on the 66kV line are around 10 km.

The supply and installation of the 570 mm² Almelec conductors will be between the towers numbered 19-20-21-22-23, section 13 km 41-42, section 9 km, 33-34, section 15 km and 35-36-37-38 section 12 km.

The supply and installation of the 66mm² Almelec conductors will be between the towers numbered 33-34 and 35.

The works will take place in the same locations of the collapsed towers and the stringing works will take place between these towers and the adjacent ones as well. The exact work locations shall be handled to the contractor by EDL team directly after the kick off meeting that will be held in EDL premises and the drawings of the towers will be provided in this meeting.

The works include design, manufacture, factory test, delivery to site, erection, field test, commissioning, clearance of defects during the liability period for the supply of steel towers (including the stubs of towers) conductors, OPGW, insulators, and all works related to transportation, foundations and erection.

The scope includes also the detailed design studies of civil works, specially the determination of tower foundation types (pile or footing), the earthing calculation note, the calculation of reinforcement bars, drawings, bending schedule and bill of quantities.

The types of foundations shall be approved by the Engineer or by EDL before starting the detailed studies.

All components and accessories necessary for safe and efficient operation at site in accordance with known engineering practice shall be included in the supply.

Empty cable drums shall be handled in EDL warehouse.



2. Technical characteristics

Main characteristics		
Length of the 220 kV line		50 km approximately
Tension		220 kV
Number of circuits		2
Number of conductor per phase		1
Number of OPGW (12 optical Fibers)		1
Length of the 66 kV line		10 km approximately
Conductor section		570 mm ² Almelec
OPGW section		158 mm ²
Tower # 34		Double circuit vertical formation AI, AN - D.SUS
Tower # 41, 42		Double circuit vertical formation AI, AN - D.SUS
Towers # 19, 20, 21, 22, 23		Double circuit vertical formation AI, AN - D.SUS
Towers # 36, 37, 38		Double circuit vertical formation AI, AN - D.SUS
Type of isolator		Composite (provided by EDL)

3. List of drawings

Drawings of these Tender Documents will be provided upon the start of work.

