

SECTION VI

SCOPE OF WORK

Overhead Lines and Underground cables

TABLE OF CONTENTS

5.2	SCOPE OF WORKS	1
5.2.1	<i>General</i>	1
5.2.2	<i>Factory Acceptance Test</i>	2
5.2.3	<i>66KV Lines and Cables</i>	3

5.2 SCOPE OF WORKS

5.2.1 General

The Bidder shall examine the scope of works in this section in close connection with the other documents and particulars forming these Bidding Documents.

Special attention shall be paid to Technical Specifications, in which the general technical requirements are specified. The drawings enclosed in are for bidding purposes only.

If the Specifications and/or Drawings do not contain particulars of materials or goods that are necessary for the proper and safe completion, operation and maintenance of the equipment in question, all such materials shall be deemed to be included in the supply.

In the event of any conflict between the Drawings and the Specifications, the latter shall prevail.

In the event of any conflict between scaled dimensions and figures on the Drawings, the figures shall prevail.

Should the Bidder find discrepancies in or omissions from these Specifications or from the other Documents, or should he be in doubt as to their meaning, he should immediately contact the Project Manager for interpretation, clarification or correction thereof before submitting his Bid. Such action shall, however, in no case be considered as a cause for altering the closing date of the Bid.

The scope of work covers supply of equipment, engineering and design, manufacture, testing before shipment and packing sea worthy or otherwise as required, delivery of all equipment CIP site, construction and installation and commissioning.

Where the new line share the route with existing lines, the scope of work shall include all the necessary works/modifications that will be required to accommodate the lines along the same route. The conductors of the existing lines shall be re-used while new hardware/fittings of correct type and size shall be used.

The term "transfer" in this scope of works shall mean supply of new hardware/fittings, new concrete poles, stays, insulators as well as installation of these in the existing line routes. It also includes moving all equipment, such as distribution transformers, autoreclosers, switches and links, capacitor banks etc, mounted on the present poles over to the new poles. Also, all existing poles, conductors and hardware/fittings shall be recovered and handed over to the KPLC stores at locations most near to the installation sites.

Cross arms:

Steel cross-arms shall be used in all cases including re-conductoring. All steel cross arms shall be grounded.

Conductor Joints and Termination's

All joints and terminations shall be of **compression type** for conductors of 150mm² and above.

Poles:

Concrete poles shall be used in all cases.

Shield Wires:

OPGW (Optical Ground Wire) shall be used in all the 33Kv and 66 kV Lines. The standard size used by KPLC is 48 core fibres, where the 66KV line is done in underground cable, a Fibre Optic cable will be laid together in the trace of the cable.

5.2.2 Factory Acceptance Test

The contractor shall meet the cost of travel for FAT for two (2) participants and the project manager. Accommodation and per diem cost shall be met by the employer. The following major equipment shall be offered for inspection

- 150MM² ACSR and/or 300mm sq AAAC conductor
- OPGW
- 33KV and 66Kv cables

FAT shall be carried out as prescribed in the particular technical specification.

5.2.3 66KV ,33KV Lines and Cables

The scope of works includes:

For Lot 1

66KV Circuits from Athi-River and Komarock 220/66KV substations

Construction of a total 133km of 66kV overhead Single Circuit Lines in 300 mm² AAA Conductor. Construction of an extra 1(one) km of 66kV overhead double Circuit Lines in 300 mm² AAA Conductor. Installation of 3km of 66kV underground cable single circuit Lines in 400 mm² single core copper cables. All the above will have OPGW. For undergrounded sections of the line, underground FOC shall be installed.

For Lot 2

66KV Circuits from Ngong 220/66KV substations

Construction of a total 94km of 66kV overhead Single Circuit Lines in 300 mm² AAA Conductor. Construction of an extra 1(one) km of 66kV overhead double Circuit Lines in 300 mm² AAA Conductor. Installation of 1(one) km of 66kV underground cable single circuit Lines in 400 mm² single core copper cables. All the above will have OPGW. For undergrounded sections of the line, underground FOC shall be installed.

For Lot 3

33KV Circuits from Kitale, Awendo, Mwingi and Garissa 132/33KV substations

Construction of a total 70km of 33kV overhead Single Circuit Lines in 150mm² ACSR Conductor. Construction of an extra 1(one) km of 33kV overhead double Circuit Lines in 150mm² ACSR Conductor. Installation of 1(one) km of 33kV underground cable single circuit Lines in 300 mm² single core Aluminium cables. All the above will have OPGW. For undergrounded sections of the line, underground FOC shall be installed.

All the above described works will also include mounting of Wall Mounted Optical Distribution Frames, design, and all other works described in the document.