MR 133/2025

TECHNICAL SPECIFICATION FOR DESIGN, MANUFACTURE, TESTING AND SUPPLY OF UNDERGROUND POWER CABLES

ENERGY FIJI LIMITED

Revision History & Document Control

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1	Prepared by	Basant Kumar		01/02/16
2	Tendered			16/03/16
3	Reviewed	Rajiv Singh		01/07/20
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Next Scheduled Revision

This technical specification is due for review in September 2027.

TABLE OF CONTENT

1. INTRODUCTION AND SCOPE OF WORK

Energy Fiji Limited [EFL] is responsible for generation, transmission and distribution of electricity in Viti Levu, Vanua Levu, Ovalau and Taveuni in Fiji. By the end of 2024, EFL had 223,539 customers. This includes residential, commercial and institutional customers.

EFL is requesting proposal for the Preferred Supplier to supply item listed below for EFL's operations to carry out repair, construction and maintenance of Power line Network in Fiji.

The preferred Supplier arrangement will be for a period of three (3) years from the date of signing of the contract. The award of this Tender may be split and awarded to more than one successful bidder.

This document outlines the technical requirements for underground cables for use in EFL's distribution and sub-transmission networks.

The items covered by this specification are listed below:

No.	Stock Code	Item Description
Hard Drawn Bare Copper Wires		
1	I03950	Hard Drawn Bare Copper Wire 35mm^2
2	I03951	Hard Drawn Bare Copper Wire 70mm^2
PVC Insulated Copper 0.6/1kV Underground Cables		
3	I04032	0.6/1kV 1 Core Copper PVC Green Cable – 16mm^2
4	I04013	0.6/1kV 1 Core Copper PVC Black Cable – 35mm^2
5	I04014	0.6/1kV 1 Core Copper PVC Red Cable – 35mm^2
6	I04034	0.6/1kV 1 Core Copper PVC Green Cable – 35mm^2
7	I04015	0.6/1kV 1 Core Copper PVC Red Cable – 70mm^2
8	I04016	0.6/1kV 1 Core Copper PVC Black Cable – 70mm^2
9	I04099	0.6/1kV 1 Core Copper PVC Yellow Cable – 70mm^2
10	I04100	0.6/1kV 1 Core Copper PVC Blue Cable – 70mm^2
11	I04015A	0.6/1kV 1 Core Copper PVC Red Cable – 95mm^2
PVC PVC Insulated Copper 0.6/1kV Underground Cables		
12	I04137	0.6/1kV 4 Core Copper PVC PVC Cable – 35mm^2
13	I04162	0.6/1kV 3 Core Copper N/SC RN PVC PVC Cable – 70mm^2
14	I04187	0.6/1kV 4 Core Copper PVC PVC Cable – 95mm^2
15	I04182	0.6/1kV 4 Core Copper PVC PVC Cable – 120mm^2
16	I04140	0.6/1kV 4 Core Copper PVC PVC Cable – 185mm^2
17	I04023	0.6/1kV 1 Core Copper PVC PVC Cable – 240mm^2
18	I04021	0.6/1kV 1 Core Copper PVC PVC Cable – 300mm^2
XLPE PVC Insulated Copper 0.6/1kV Underground Cables		
19	New Item	0.6/1kV 4 Core Copper XLPE PVC Cable – 35mm^2
20	I04184	0.6/1kV 4 Core Copper XLPE PVC Cable – 70mm^2
21	New Item	0.6/1kV 4 Core Copper XLPE PVC Cable – 95mm^2
22	New Item	0.6/1kV 4 Core Copper XLPE PVC Cable – 185mm^2
23	I04201	0.6/1kV 4 Core Copper XLPE PVC Cable – 240mm^2
XLPE Insulated Aluminum 0.6/1kV Underground Cables		
24	New Item	0.6/1kV 1 Core Aluminum XLPE Cable – 95mm^2
25	I04266	0.6/1kV 1 Core Aluminum XLPE Cable – 185mm^2
26	I04267	0.6/1kV 1 Core Aluminum XLPE Cable – 240mm^2
27	I04268	0.6/1kV 1 Core Aluminum XLPE Cable – 300mm^2
Polythene PVC Insulated Copper 11kV Cables		
29	New Item	6.35/11kV 1 Core Copper Polythene PVC Cable – 35mm^2

Table 1.1: Items Covered Under this Specification

This specification covers the general requirements of design, manufacture, testing, supply and delivery of underground cables to be used in EFLs distribution and sub-transmission network.

1 INSTRUCTIONS TO BIDDERS

1.1 Eligible Bidders

This invitation is open to all Bidders who have sound Financial Background, and have previous experience in design, manufacture, testing and supply of such underground cables and line hardware.

Bidders shall provide such evidence of their continued eligibility satisfactory to EFL as EFL shall reasonably request. Bidders who are not manufacturers of such underground cables shall provide evidence of agency.

Bidders shall not be under a declaration of ineligibility for corrupt or fraudulent practice.

1.2 Eligible Materials, Equipment and Services

The materials, equipment, and services to be supplied under the Contract shall have their origin from reputable companies (as specified by EFL where relevant) and from various countries and all expenditures made under the Contract will be limited to such materials, equipment, and services. Upon request, bidders may be required to provide evidence of the origin of materials, equipment, and services.

For purposes of this Contract, “services” means the works and all related services including design services.

For purposes of this Contract, “origin” means the place where the materials and equipment are mined, grown, produced or manufactured, and from which the services are provided. Materials and equipment are produced when, through manufacturing, processing or substantial or major assembling of components, a commercial recognized product results that is substantially different in basic characteristics or in purpose or utility from its components.

The materials, equipment and services to be supplied under the Contract shall not infringe or violate any industrial property or intellectual property rights or claim of any third party.

1.3 One Bid per Bidder

Each bidder shall submit only one bid. A bidder who submits or participates in more than one bid will cause all those bids to be rejected.

1.4 Cost of Bidding

The bidder shall bear all costs associated with the preparation and submission of its bid and EFL will in no case be responsible or liable for those costs.

1.5 Site Visits

Bidders can visit existing EFL networks by making arrangements to visit existing EFL installations. Bidders are required to familiarize themselves with the existing EFL installations so the solutions they offer does not require modification to existing poles and support infrastructure.

1.6 Contents of Bidding Documents

The bidder is expected to examine carefully the contents of this Bidding document. Failure to comply with the requirements of bid submission will be at the bidder's own risk. Bids which are not substantially responsive to the requirements of the bidding documents will be rejected.

1.7 Clarification of Bidding Documents

A prospective bidder requiring any clarification of the bidding documents may notify EFL in writing by email, addressed to:

Jitendra Reddy
Manager Procurement, Inventory & Supply Chain

2 Marlow Street,
Suva, Fiji
Phone: +679 331 3333 Ext 2320 or
Mobile: +679 999 2400
Email: Jreddy@efl.com.fj

EFL will respond to any request for clarification which it receives earlier than 10 days prior to the deadline for submission of bids.

2.1 Amendment of Bidding Document

At any time prior to the deadline for submission of bids, EFL may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the bidding documents by issuing addenda.

2.2 Language of Bid

The bid, and all correspondence and documents related to the bid, exchanged between the bidder and the EFL shall be written in the English language.

2.3 Bid Prices

Unless specified otherwise, Bidders shall quote for the entire facilities on a "single responsibility" basis such that the total bid price covers all the Supplier's obligations mentioned in or to be reasonably inferred from the bidding documents in respect of the design, manufacture, including procurement and subcontracting (if any), testing and delivery.

Bidders shall give a breakdown of the prices in the manner and detail called for in this bidding document, or any issued addenda.

Bids shall be given on CIF basis. The point of delivery shall be EFL's Navutu Depot in Lautoka. The term CIF shall be governed by the rules prescribed in the current edition of Incoterms, published by the International Chamber of Commerce, Paris.

EFL has a marine insurance cover for items it is required for purchase for its project and operational works. Bidders are required to comment if the marine insurance component is covered in their bids.

2.4 Bid Currencies

Prices shall be quoted in a single currency only.

2.5 Bid Validity

Bids shall remain valid for a period of **180 days** from the date of Deadline for Submission of Bids specified in Sub-Clause 21.1.

2.6 Format and Signing of Bids

The bidder shall provide one electronic copy of the Technical and Financial proposals on EFL's electronic tender hosting website; https://www.tenderlink.com/efl

The bid shall contain no alterations, omissions or additions, except those to comply with instructions issued by EFL, or as necessary to correct errors made by the bidder, in which case such corrections shall be initialed by the person or persons signing the bid.

2.7 Deadline for Submission of Bids

Bids must be received by EFL at the address specified above no later than **1600 hours (Fiji Time) 30th April 2025**.

EFL may, at its discretion, extend the deadline for submission of bids by issuing an addendum, in which case all rights and obligations of EFL and the bidders previously subject to the original deadline will thereafter be subject to the deadlines extended.

2.8 Late Bids

Any bid received by EFL after the deadline for submission of bids prescribed above will be rejected.

2.9 Modification and Withdrawal of Bids

The bidder may modify or withdraw its bid after bid submission, provided that written notice of the modification or withdrawal is received by EFL prior to the deadline for submission of bids. No bid may be modified by the bidder after the deadline for submission of bids.

2.10 Rejection of One or All Bids

EFL reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids, at any time prior to award of Contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for the rejection.

2.11 Process to be Confidential

2.11.1 Information relating to the examination, clarification, evaluation and comparison of bids and recommendations for the award of a contract shall not be disclosed to bidders or any other persons not officially concerned with such process.

2.11.2 Any effort by a bidder to influence EFL's processing of bids or award decisions may result in the rejection of the bidder's bid.

2.11.3 Lowest bid will not necessarily be accepted as successful bid.

2.12 Clarification of Bids

To assist in the examination, evaluation and comparison of bids, EFL may, at its discretion, ask any bidder for clarification of its bid. The request for clarification and the response shall be in writing, but no change in the price or substance of the bid shall be sought, offered or permitted except as required to confirm the correction of arithmetic errors discovered by EFL in the evaluation of the bids.

2.13 Compliance with Specifications

The tender shall be based on the equipment and work specified and shall be in accordance with the Technical Specification. It should be noted that unless departures from specifications are detailed in Schedules of the Technical Specification, the tender would be taken as conforming to the Specification in its entirety. The Bidder shall tender for the whole of the Works included in the Specification.

2. REFERENCES

2.1. Applicable Standard

The item shall be designed, manufactured and tested in accordance with the latest edition of the Standards specified below and all amendments issued prior to the date of closing of tenders except where varied by this specification.

AS 1746	Conductors – Bare overhead – Hard-drawn copper
AS/NZS 1125	Conductors in insulated electric cables and flexible cords
AS/NZS 3808	Insulating and sheathing materials for electric cables
AS/NZS 4961	Electric cables – Polymeric insulated – For distribution and service applications
AS/NZS 5000.1	Electric Cables – Polymeric Insulated for Working Voltages up to and Including 0.6/1kV
AS 3198	Approval and test specification-Electric cables – XLPE insulated – For working voltages up to 0.6/1kV
AS/NZS 3863	Galvanized mild steel wire for armoring cables
AS 1574	Copper and copper alloys – Wires for electrical purpose
AS/NZS 1660	Test methods for electric cables, cords and conductors
AS 1429.1	Electric cables – Polymeric insulated Part 1: For working voltages 1.9/3.3(3.6) kV up to and including 19/33(36) kV
AS/NZS 3983	Metal drums for insulated electric cables and bare conductors
AS C365.2	Drums for bare stranded conductors – Metal drums
AS/NZS 2857	Timber drums for insulated electric cables and bare conductors
AS C365.1	Drums for bare stranded conductors – Wooden drums
AS ISO/IEC 17025	General requirements for the competence of testing and calibration laboratories
AS/NZS ISO:9001	Quality Management Systems – model for quality assurance in design, development, production, installation and servicing

Should inconsistencies be identified between standards and/or this specification, the tenderer shall immediately refer such inconsistencies to the EFL for resolution.

The successful bidder shall provide EFL with soft copies of the relevant standards used in the design, manufacturing and testing of the power cables after award of the tender and prior to signing of the contract as a mandatory requirement. Associated cost for providing soft copies of the relevant standards must be included with the offer.

3. SERVICE CONDITIONS

3.1. Environmental Conditions

The items shall be suitable for using outdoors and shall be designed to withstand the following service conditions.

Description		**Conditions**
Atmosphere Pollution Level	:	Very heavy (IEC 60815)
Ambient Temperature	:	Peak: 40^{o}C 24 Hour Average: 30^{o}CAnnual Average: 22^{o}C Minimum: 10^{o}C
Relative Humidity (Average)	:	85%
Rainfall	:	Annual Average: 2663mm
Isokeraunic (Thunder day) level	:	60 thunder days per year
Seismic	:	To a maximum of 7 on the open-ended Richter Scale

Note: Fiji is situated in a region where cyclones are experienced frequently. All plant and equipment shall be designed and constructed to withstand these extreme conditions. Equipment may be installed in coastal environments and in conditions, where special protection measures against corrosion will be required. Bidders are required to provide details of such protective measures for protection against corrosion.

3.2. System Conditions

Nominal Voltage	240V/ 415V	11kV	33kV
System Highest Voltage	660V	12kV	36kV
System Frequency	50Hz	50Hz	50Hz
Number of Phases	1 or 3	3	3
System Earthing	Effectively Earthed	Effectively Earthed	Effectively Earthed
Impulse Withstand Voltage (peak)	AC 10kV rms	28kV	70kV
Power Frequency Withstand Voltage (rms)		95kV	200kV

4. DESIGN AND CONSTRUCTION

4.1. General

The underground cables shall be manufactured as per relevant standards mentioned in sub-clause 2.1 and this specification.

Bidders are required to submit technical details as required by this specification with the tender submission. These are listed in sub-clause 12.1.

4.2. Polythene PVC & XLPE Insulated Aluminum/ Copper 11kV and 33kV Cables

4.2.1 General

The cables shall be designed and manufactured in accordance with AS/NZS 1429.1 with the following specific properties:

No.	Stock Code	Item Description
Hard Drawn Bare Copper Wires		
1	I03950	Hard Drawn Bare Copper Wire 35mm^2
2	I03951	Hard Drawn Bare Copper Wire 70mm^2
PVC Insulated Copper 0.6/1kV Underground Cables		
3	I04032	0.6/1kV 1 Core Copper PVC Green Cable – 16mm^2
4	I04013	0.6/1kV 1 Core Copper PVC Black Cable – 35mm^2
5	I04014	0.6/1kV 1 Core Copper PVC Red Cable – 35mm^2
6	I04034	0.6/1kV 1 Core Copper PVC Green Cable – 35mm^2
7	I04015	0.6/1kV 1 Core Copper PVC Red Cable – 70mm^2
8	I04016	0.6/1kV 1 Core Copper PVC Black Cable – 70mm^2
9	I04099	0.6/1kV 1 Core Copper PVC Yellow Cable – 70mm^2
10	I04100	0.6/1kV 1 Core Copper PVC Blue Cable – 70mm^2
11	I04015A	0.6/1kV 1 Core Copper PVC Red Cable – 95mm^2
PVC PVC Insulated Copper 0.6/1kV Underground Cables		
12	I04137	0.6/1kV 4 Core Copper PVC PVC Cable – 35mm^2
13	I04162	0.6/1kV 3 Core Copper N/SC RN PVC PVC Cable – 70mm^2
14	I04187	0.6/1kV 4 Core Copper PVC PVC Cable – 95mm^2
15	I04182	0.6/1kV 4 Core Copper PVC PVC Cable – 120mm^2
16	I04140	0.6/1kV 4 Core Copper PVC PVC Cable – 185mm^2
17	I04023	0.6/1kV 1 Core Copper PVC PVC Cable – 240mm^2
18	I04021	0.6/1kV 1 Core Copper PVC PVC Cable – 300mm^2
XLPE PVC Insulated Copper 0.6/1kV Underground Cables		
19	New Item	0.6/1kV 4 Core Copper XLPE PVC Cable – 35mm^2
20	I04184	0.6/1kV 4 Core Copper XLPE PVC Cable – 70mm^2
21	New Item	0.6/1kV 4 Core Copper XLPE PVC Cable – 95mm^2
22	New Item	0.6/1kV 4 Core Copper XLPE PVC Cable – 185mm^2
23	I04201	0.6/1kV 4 Core Copper XLPE PVC Cable – 240mm^2
XLPE Insulated Aluminum 0.6/1kV Underground Cables		
24	New Item	0.6/1kV 1 Core Aluminum XLPE Cable – 95mm^2
25	I04266	0.6/1kV 1 Core Aluminum XLPE Cable – 185mm^2
26	I04267	0.6/1kV 1 Core Aluminum XLPE Cable – 240mm^2
27	I04268	0.6/1kV 1 Core Aluminum XLPE Cable – 300mm^2
Polythene PVC Insulated Copper 11kV Cables		
29	New Item	6.35/11kV 1 Core Copper Polythene PVC Cable – 35mm^2

4.2.2 Conductors

Conductors shall have a compacted circular profile and consist of either aluminum or plain or tinned copper, complying with the requirements of AS/NZS 1125.

4.2.3 Conductor Screen

4.2.3.1 Material and Application

All cables shall have an extruded, cross-linked, semi-conductive screen applied on the conductor. A semi-conductive tape may be applied as part of the conductor screen and, where used, shall be applied directly on the conductor, preceding the extruded layer.

4.2.3.2 Thickness

The thickness of the extruded layer shall not be less than that specified in Table 3.1 of AS/NZS 1429.1.

4.2.3.3 Removal from Conductor

The conductor screen shall be easily removable from the conductor.

4.2.3.4 Outer Surface

The outer surface of the conductor screen shall be free of irregularities larger than those permitted in Table 3.1 of AS/NZS 1429.1.

4.2.3.5 Tests

Tests on the conductor screen and the category of each test shall be as specified in Table 3.1 of AS/NZS 1429.1.

4.2.3.6 Pass Criteria

The conductor screen shall comply with the requirements specified in Table 3.1 of AS/NZS 1429.1.

4.2.4 Insulation

4.2.4.1 Material

Insulation shall be XLPE (including materials known as tree-retardant XLPE) or EPR and shall comply with the requirements of AS/NZS 3808.

4.2.4.2 Application

The insulation shall bond to the conductor screen so that it is not possible to separate the two without damage at their interface. The insulation shall be homogeneous.

4.2.4.3 Thickness

The nominal thickness of insulation (t_i) and the insulation minimum thickness at any point shall be in accordance with Tables 2.1 and 2.2. The values for minimum at any point are derived from the equation:
$0.90\ t_i - 0.10$ mm.

4.2.4.4 Concentricity

The thickness of insulation shall be measured at the thickest point (t_{max}) and the thinnest point (t_{min}) andthe concentricity requirement shall be met as specified in Clause 2.3.4 of AS/NZS 1429.1.

4.2.4.5 Tests

Tests on the insulation and the category of each test shall be as specified in Table 3.1 of AS/NZS 1429.1.

4.2.4.6 Pass Criteria

The insulation shall comply with the requirements specified in Table 3.1 of AS/NZS 1429.1.

4.2.5 Insulation Screen

4.2.5.1 Material and Application

The screen shall consist of a layer of extruded, cross-linked, semi-conductive compound applied directlyover the insulation. A semi-conductive tape may be applied as part of the insulation screen and, where used, shall be applied over the extruded insulation screen.

4.2.5.2 Thickness

The thickness of the extruded layer shall be not less than that specified in Table 3.1 of AS/NZS 1429.1.

4.2.5.3 Requirements for Stripping Insulation Screen

Hand-stripping requirements shall be as specified in Clause 2.4.3 of AS/NZS 1429.1.

4.2.5.4 Tests

Tests on the insulation screen and the category of each test shall be as specified in Table 3.1 of AS/NZS 1429.1.

4.2.5.5 Pass Criteria

The insulation screen shall comply with the requirements specified in Table 3.1 of AS/NZS 1429.1.

4.2.6 Metallic Screen

4.2.6.1 General

Wire screens shall comply with the specific requirements of Clauses 2.5.2 to 2.5.5 inclusive of AS/NZS 1429.1. Metal sheaths (see Clause 2.9 of AS/NZS 1429.1) may be used as screens and may be supplemented with wire screens, in continuous electrical contact, to achieve the required electrical fault rating. The screens shall be of a gross cross-sectional area not less than that calculated by the adiabatic method set out in IEC 60986, based on an initial temperature of 80°C.

The non-adiabatic method for this calculation may be used when agreed between the purchaser and the supplier and, if used, it shall comply with IEC 60949.

For three-core cables, the screens shall be in continuous electrical contact throughout the length of thecable. In which case the gross cross-sectional area of the screen shall be equally shared amongst the three cores.

4.2.6.2 Material

The screen wires shall comprise plain or tinned annealed copper wires, generally complying with AS/NZS 1125. Where tinned screens are provided, wires taken from the completed cable need not comply with the tinning test specified in AS/NZS 1125. All wires shall be of the same nominal diameter and in no caseless than 0.60 mm. Wires shall not vary from the nominal diameter by more than 5%.

4.2.6.3 Application

The wires shall be helically applied with a length of lay not exceeding 10 times the pitch circle diameter of the screen wires over the core, and shall be in electrical contact with the core throughout the length of the cable.

The design gap, i.e. the gap between adjacent wires when equally spaced, calculated by taking into account the number and nominal diameter of wires and the calculated pitch circle diameter of the metallic screen, shall not exceed 4 mm.

For three-core cables, each core shall be screened with the same number of wires.

For single-core cables with a metal sheath, the screen shall be applied over semi-conductive tapes over the metal sheath. Where the tape is not of the water-blocking type the tape shall be non-hygroscopic.

4.2.6.4 Tests

Tests on the wire screen and the category of each test shall be as specified in Table 3.1 of AS/NZS 1429.1 and clause 5.2 of this specification.

4.2.6.5 Pass Criteria

The wire screen shall comply with the appropriate requirements specified in Table 3.1 of AS/NZS 1429.1.

4.2.7 Water Blocking

4.2.7.1 General

The water-blocking is required for the submarine cables used by EFL.

The inclusion of water-blocking shall comply with the requirements of Clause 2.14.2 of AS/NZS 1429.1.

Water-blocking measures may be taken to restrict water penetration along the cable in the region of the metallic screens (as per Appendix C of AS/NZS 1429.1) and within the conductor.

Hygroscopicity is an essential characteristic of a swellable water-blocking material. Where water- blocking materials are used, these materials are exempt from the requirements for non-hygroscopic materials.

Note: Some barrier or binder tapes used in conjunction with water-blocking tapes may reduce the effectiveness of water-blocking measures.

4.2.7.2 Material and Application

Water-blocking of the conductor(s) shall be achieved by non-biodegradable, water-swelling yarns and/or tapes applied within the wires of the conductor. A semi-conductive water-blocking tape may need to be applied directly over the conductor.

In the case of single-core cable or phase in a triple cable, the water-swellable tape may be applied underor over the screen wires, or both.

Where applied under the screen wires, the tape shall be semi-conductive. The tape shall be compatiblewith other cable components with which it is in contact.

The tapes shall be readily removable from the core and screen wires.

Note: Other effective water-blocking materials may be acceptable with the exception of loose powders, which might constitute a health rick (as per Appendix B of AS/NZS 1429.1).

4.2.8 Identification of Cores

The cores of three-core and triplex cables shall be identified in one of the ways outlined in AS/NZS 1429.1 Clause 2.6.

Where identified by printing, the characters shall be in a color contrasting with the core surface. They shall be applied so that they shall remain legible during the service life of the cable. The height of the individual characters shall be not less than the values specified in Clause 2.6 of AS/NZS 1429.1.

The gap between the end of one set of characters and the beginning of the next set shall be not greaterthan 150 mm.

Where colored strips are used for identification, their width shall be not less than 3 mm nor more than 5 mm.

4.2.9 Cable Identification

The outermost surface of cables shall be embossed or printed with the manufacturer's name, trade nameor mark and the year of manufacture, together with the information as per Clause 2.16 of AS/NZS 1429.1.

The letters and figures shall comprise upright block characters arranged along two approximately diametrically opposed lines, except that in the case of cables with a diameter less than or equal to 30 mm one line of characters is acceptable. The height of the characters shall be not less than 15% of the nominal diameter of the cable, but in no case shall it be less than 3 mm nor greater than 13 mm. The gap between the end of one set of characters and the beginning of the next shall be not greater than 500 mm.

4.2.10 Meter Marking on Cable

The outermost surface of the cable may be sequentially marked with numbers, in a contrasting color, atone meter intervals. Where applied, the meter marking shall be limited to six digits and any drum lengthmay start at any integral number.

4.2.11 Marking of Drums

Every drum of cable shall be durably branded, stenciled or labelled on the outside of the flange with the following information:

a) A manufacturer's traceability number.
b) The name or registered trade name or mark of the manufacturer or other distinguishing mark.
c) The cable designated voltage expressed in the form U_0/U.
d) The number of cores, phase conductor size and material.
e) Appropriate wording to identify the insulation and sheaths, and other protective coverings, if any.
f) The gross mass of the drum and cable.
g) An arrow to indicate the recommended direction of rotation of the drum.
h) Where the cable is meter marked (see Clause 2.17 of AS/NZS 1429.1), the start and finish numbers of meter marking.

5. PERFORMANCE AND TESTING

5.1. Type Test Obligations

All cables of the same design shall be identical in all respects relating to materials, design and manufacture.

A copy of the type test certificates shall be provided upon request, free of charge, to EFL for any item purchased against this specification. If a specific item was not tested in the past, EFL shall allow the tests to be performed on the cables purchased at the Supplier's expenses.

Should EFL require any test(s) to be repeated despite the earlier certificate being available for an identical (or similar, as allowed below) unit, the cost of such test will be borne by EFL.

Where cables are offered of a similar design to those previously tested, EFL may consider (in accordance with AS/NZS 1125 Table 2.1 (all tests) and AS/NZS 1429.1 clause 3.2 Table 3.1 to 3.4 and Table 3.7 to 3.10 for 11kV and 33kV cables) to accepting previous type test reports. The Bidder shall state if such tests that would qualify for consideration exist.

The Bidder may be requested during the tender evaluation period to substantiate that claim with written engineering evaluation. Such evaluation shall provide all relevant details permitting EFL to establish validity of existing type tests.

Any modification, resulting from a type test failure or change of design instigated by the Supplier or change of design to comply with the specification, which could affect the result of earlier type tests, shall require a repeat of such earlier type test. Any repeat type tests to provide compliance with the Standard's requirements shall be at the Supplier's cost.

5.2. Testing

The following are minimum requirements provided for testing of specific cables and all test reports shallbe provided with the bids for verification by EFL:

No.	Stock Code	Item Description	Testing Reference
Hard Drawn Bare Copper Wires			
1	I03950	Hard Drawn Bare Copper Wire 35mm^2	AS/NZS 1429.1 Clause 3.2 Table 3.1 Tests on Cables, tests 1 to 9 (All parts) AS/NZS 1429.1 Clause 3.2 Table 3.2, Partial discharge voltage levels AS/NZS 1429.1 Clause 3.3 Table 3.3, High voltage tests AS/NZS 1429.1 Clause 3.4, Bendingtest followed by partial discharge test
2	I03951	Hard Drawn Bare Copper Wire 70mm^2	
PVC Insulated Copper 0.6/1kV Underground Cables			
3	I04032	0.6/1kV 1 Core Copper PVC Green Cable – 16mm^2	
4	I04013	0.6/1kV 1 Core Copper PVC Black Cable – 35mm^2	
5	I04014	0.6/1kV 1 Core Copper PVC Red Cable – 35mm^2	
6	I04034	0.6/1kV 1 Core Copper PVC Green Cable – 35mm^2	
7	I04015	0.6/1kV 1 Core Copper PVC Red Cable – 70mm^2	
8	I04016	0.6/1kV 1 Core Copper PVC Black Cable – 70mm^2	
9	I04099	0.6/1kV 1 Core Copper PVC Yellow Cable – 70mm^2	
10	I04100	0.6/1kV 1 Core Copper PVC Blue Cable – 70mm^2	

11	I04015A	0.6/1kV 1 Core Copper PVC Red Cable – 95mm^2	
PVC PVC Insulated Copper 0.6/1kV Underground Cables			
12	I04137	0.6/1kV 4 Core Copper PVC PVC Cable – 35mm^2	AS/NZS 1429.1 Clause 3.7, Heat cycling followed by partial dischargetest AS/NZS 1429.1 Clause 3.8, Impulse withstand test followed by a high voltage test AS/NZS 1429.1 Clause 3.9, Table 3.5 High voltage tests—four hour test AS/NZS 1429.1 Clause 3.10 Table3.6, Schedule for re-qualificationtests for material changes
13	I04162	0.6/1kV 3 Core Copper N/SC RN PVC PVC Cable – 70mm^2	
14	I04187	0.6/1kV 4 Core Copper PVC PVC Cable – 95mm^2	
15	I04182	0.6/1kV 4 Core Copper PVC PVC Cable – 120mm^2	
16	I04140	0.6/1kV 4 Core Copper PVC PVC Cable – 185mm^2	
17	I04023	0.6/1kV 1 Core Copper PVC PVC Cable – 240mm^2	
18	I04021	0.6/1kV 1 Core Copper PVC PVC Cable – 300mm^2	
XLPE PVC Insulated Copper 0.6/1kV Underground Cables			
19	New Item	0.6/1kV 4 Core Copper XLPE PVC Cable – 35mm^2	
20	I04184	0.6/1kV 4 Core Copper XLPE PVC Cable – 70mm^2	
21	New Item	0.6/1kV 4 Core Copper XLPE PVC Cable – 95mm^2	
22	New Item	0.6/1kV 4 Core Copper XLPE PVC Cable – 185mm^2	
23	I04201	0.6/1kV 4 Core Copper XLPE PVC Cable – 240mm^2	
XLPE Insulated Aluminum 0.6/1kV Underground Cables			
24	New Item	0.6/1kV 1 Core Aluminum XLPE Cable – 95mm^2	
25	I04266	0.6/1kV 1 Core Aluminum XLPE Cable – 185mm^2	
26	I04267	0.6/1kV 1 Core Aluminum XLPE Cable – 240mm^2	
27	I04268	0.6/1kV 1 Core Aluminum XLPE Cable – 300mm^2	
Polythene PVC Insulated Copper 11kV Cables			
29	New Item	6.35/11kV 1 Core Copper Polythene PVC Cable – 35mm^2	

5.3. Routine Tests

Routine tests are intended to eliminate defective units and shall be carried out during the manufactureof cables.

Routine testing in accordance with relevant standards shall be conducted and copies of sample routine test reports shall be submitted with the offer.

5.4. Acceptance Tests

The EFL may carry out acceptance test on product to prove it conforms to the requirements of this Specification. Any product showing evidence of failure to comply with the requirements of thisspecification will be liable to rejection.

5.5. Witnessing of Tests

The Bidder shall make allowance for two EFL's Engineers to witness the type tests. All costs for the witnessing of such type tests shall be borne by the Bidder.

The Bidder shall also make allowance for witnessing of routine tests by two EFL Engineers.

Where applicable, the Supplier shall give EFL not less than four (4) weeks' notice of when each and every type test will be carried out.

Local bidder's factory inspection test, witnessing of type and routine tests shall also be conducted as per the above requirements.

5.6. Compliance

The Supplier shall state in writing that their offer complies with the relevant Standards and this specification. If the Supplier is offering product manufactured to an equivalent standard, full details ofthat standard must be given including a copy written in English. Any item showing evidence of failure to comply with the requirements of this specification and/or does not preform as required for its intended purpose will be liable to rejection and may result in cancellation of contract.

6. RELIABILITY

6.1. Service Life

Bidders are required to comment on the reliability of the product and the performance of the materials offered for a service life of 35 years under the specified system and environmental conditions in clause 3.

6.2. Evidence in Support of Reliability

Where the specified guaranteed service life is less than 35 years Suppliers are required to provide comment and submit evidence in support of the reliability and performance claimed including detailed information on Failure Mode and Effect Analysis.

7. ENVIRONMENTAL/ HSE CONSIDERATIONS

Suppliers are required to comment on the environmental soundness of the design and the materials used in the manufacture of the items offered. In particular, comments should address such issues as recyclability and disposal at end of service life and also disposal of packaging material.

Bidders are required to provide the Material Safety Datasheet (MSDS) of the product.

8. PACKAGING AND MARKING

8.1 Packaging

The packaging of items by the bidder must ensure that they are capable of being delivered undamaged giving due consideration to the quantity, distance of transportation and the preferred method of handlingat each location.

The following information shall be legibly and indelibly marked on the flange of the drums or on a waterproof plate or label securely attached to the drum:

- Manufactures Name
- Purchase Order Number
- Contact No.
- EFL Stock Code
- Item Description
- Applicable standards
- Gross mass of drum and conductor.
- Handling or lifting instructions where such handling or lifting is by means other than a spindle through the spindle holes with spreader to prevent damage to flanges.
- An arrow with the words ‘ROLL THIS WAY’ to indicate the direction in which the drum should be rolled to the flange.

Where metal drums are used, requirements shall comply with AS/NZS 3983 or AS C365.2.

Where timber drums are used, requirements shall comply with AS/NZS 2857 or AS C365.1. Timber used should be treated so it does not get infected by termites. All drums shall have a storage life of 24 months and more.

The items supplied shall be in lengths and drum types as indicated below:

No.	Stock Code	Item Description	Drum Type	Length of Conductor/Cableper Drum
Hard Drawn Bare Copper Wires				
1	I03950	Hard Drawn Bare Copper Wire 35mm^2		
2	I03951	Hard Drawn Bare Copper Wire 70mm^2		
PVC Insulated Copper 0.6/1kV Underground Cables				
3	I04032	0.6/1kV 1 Core Copper PVC Green Cable – 16mm^2		
4	I04013	0.6/1kV 1 Core Copper PVC Black Cable – 35mm^2		
5	I04014	0.6/1kV 1 Core Copper PVC Red Cable – 35mm^2		
6	I04034	0.6/1kV 1 Core Copper PVC Green Cable – 35mm^2		
7	I04015	0.6/1kV 1 Core Copper PVC Red Cable – 70mm^2		
8	I04016	0.6/1kV 1 Core Copper PVC Black Cable – 70mm^2		
9	I04099	0.6/1kV 1 Core Copper PVC Yellow Cable – 70mm^2		
10	I04100	0.6/1kV 1 Core Copper PVC Blue Cable – 70mm^2		
11	I04015A	0.6/1kV 1 Core Copper PVC Red Cable – 95mm^2		
PVC PVC Insulated Copper 0.6/1kV Underground Cables				
12	I04137	0.6/1kV 4 Core Copper PVC PVC Cable – 35mm^2		
13	I04162	0.6/1kV 3 Core Copper N/SC RN PVC PVC Cable – 70mm^2		
14	I04187	0.6/1kV 4 Core Copper PVC PVC Cable – 95mm^2		
15	I04182	0.6/1kV 4 Core Copper PVC PVC Cable – 120mm^2		
16	I04140	0.6/1kV 4 Core Copper PVC PVC Cable – 185mm^2		
17	I04023	0.6/1kV 1 Core Copper PVC PVC Cable – 240mm^2		
18	I04021	0.6/1kV 1 Core Copper PVC PVC Cable – 300mm^2		
XLPE PVC Insulated Copper 0.6/1kV Underground Cables				
19	New Item	0.6/1kV 4 Core Copper XLPE PVC Cable – 35mm^2		
20	I04184	0.6/1kV 4 Core Copper XLPE PVC Cable – 70mm^2		
21	New Item	0.6/1kV 4 Core Copper XLPE PVC Cable – 95mm^2		
22	New Item	0.6/1kV 4 Core Copper XLPE PVC Cable – 185mm^2		
23	I04201	0.6/1kV 4 Core Copper XLPE PVC Cable – 240mm^2		
XLPE Insulated Aluminum 0.6/1kV Underground Cables				
24	New Item	0.6/1kV 1 Core Aluminum XLPE Cable – 95mm^2		
25	I04266	0.6/1kV 1 Core Aluminum XLPE Cable – 185mm^2		
26	I04267	0.6/1kV 1 Core Aluminum XLPE Cable – 240mm^2		
27	I04268	0.6/1kV 1 Core Aluminum XLPE Cable – 300mm^2		
Polythene PVC Insulated Copper 11kV Cables				
29	New Item	6.35/11kV 1 Core Copper Polythene PVC Cable – 35mm^2		

Note: For supply of submarine cables, the length will be indicated during the ordering process.

9. QUALITY SYSTEM REQUIREMENTS

Bidders are required to submit evidence that the design, manufacture and testing of the cables are in accordance with ISO 9001.

Documentary evidence shall be provided concerning the level of Quality System Certification associated with the supplier and or manufacturer. This documentation shall include the Capability Statement associated with the Quality System Certification.

EFL may require, after the evaluation and award of the Tender, to visit the Supplier's factory for compliance checks on various quality management practices in the design, manufacturing, testing and supply of cables.

10. OCCUPATIONAL HEALTH AND SAFETY SYSTEMS

Bidders are required to submit copies of certification to occupational health and safety managementsystem, such as AS 4801 or to equivalent international standard. Such information is deemed mandatorybid submission and lack of it will result in disqualification of bid.

In addition to this, Bidders also need to submit health and safety plans implemented in factories for design, manufacture and testing of cables, which will be used in this project.

11. STOCK AVAILABILITY

The bidder is required to show the size of his/her stock holding and the ability to meet the required estimate quantity per annum. The movement of the cables will depend on the EFL's project works and for operation and maintenance purposes. An estimate movement of the item are outlined in the table below but it will not be purchase as a lump sum quantity at once. Hence, the successful bidder will be required to carry a consignment / safety stock at times to meet EFL's demand within the three-year contract period.

Bidders must not base their price on EFL to buy the entire quantity mentioned below within the contract period.

No.	Stock Code	Item Description	3 Years Stock Movement
Hard Drawn Bare Copper Wires			
1	I03950	Hard Drawn Bare Copper Wire 35mm^2	14,559.1
2	I03951	Hard Drawn Bare Copper Wire 70mm^2	887
PVC Insulated Copper 0.6/1kV Underground Cables			
3	I04032	0.6/1kV 1 Core Copper PVC Green Cable – 16mm^2	2051.5
4	I04013	0.6/1kV 1 Core Copper PVC Black Cable – 35mm^2	2828
5	I04014	0.6/1kV 1 Core Copper PVC Red Cable – 35mm^2	4740
6	I04034	0.6/1kV 1 Core Copper PVC Green Cable – 35mm^2	12015
7	I04015	0.6/1kV 1 Core Copper PVC Red Cable – 70mm^2	624
8	I04016	0.6/1kV 1 Core Copper PVC Black Cable – 70mm^2	580
9	I04099	0.6/1kV 1 Core Copper PVC Yellow Cable – 70mm^2	322
10	I04100	0.6/1kV 1 Core Copper PVC Blue Cable – 70mm^2	114
11	I04015A	0.6/1kV 1 Core Copper PVC Red Cable – 95mm^2	473
PVC PVC Insulated Copper 0.6/1kV Underground Cables			
12	I04137	0.6/1kV 4 Core Copper PVC PVC Cable – 35mm^2	2551
13	I04162	0.6/1kV 3 Core Copper N/SC RN PVC PVC Cable – 70mm^2	50
14	I04187	0.6/1kV 4 Core Copper PVC PVC Cable – 95mm^2	2020
15	I04182	0.6/1kV 4 Core Copper PVC PVC Cable – 120mm^2	2563
16	I04140	0.6/1kV 4 Core Copper PVC PVC Cable – 185mm^2	4121
17	I04023	0.6/1kV 1 Core Copper PVC PVC Cable – 240mm^2	246
18	I04021	0.6/1kV 1 Core Copper PVC PVC Cable – 300mm^2	1031
XLPE PVC Insulated Copper 0.6/1kV Underground Cables			
19	New Item	0.6/1kV 4 Core Copper XLPE PVC Cable – 35mm^2	50
20	I04184	0.6/1kV 4 Core Copper XLPE PVC Cable – 70mm^2	752
21	New Item	0.6/1kV 4 Core Copper XLPE PVC Cable – 95mm^2	50
22	New Item	0.6/1kV 4 Core Copper XLPE PVC Cable – 185mm^2	50
23	I04201	0.6/1kV 4 Core Copper XLPE PVC Cable – 240mm^2	962
XLPE Insulated Aluminum 0.6/1kV Underground Cables			
24	New Item	0.6/1kV 1 Core Aluminum XLPE Cable – 95mm^2	50

25	I04266	0.6/1kV 1 Core Aluminum XLPE Cable – 185mm^2	4477
26	I04267	0.6/1kV 1 Core Aluminum XLPE Cable – 240mm^2	18,395
27	I04268	0.6/1kV 1 Core Aluminum XLPE Cable – 300mm^2	1490
Polythene PVC Insulated Copper 11kV Cables			
29	New Item	6.35/11kV 1 Core Copper Polythene PVC Cable – 35mm^2	100

Note: The movement for the new items will be provided to the supplier during ordering.

12. PRODUCT WARRANTY PERIOD

The bidders are required to provide the warranty period as part of the proposal. A minimum warranty period of twenty-four (24) months from time of dispatch from factory shall be provided.

13. INFORMATION TO BE SUPPLIED BY THE BIDDER

13.1. Documentation to be supplied with the tender

To enable the EFL to fully evaluate the underground power cables offered, (in addition to the completed Specification Requirement and Guaranteed Performance schedule) the bidder shall submit the following information with their tender: **(Note these are mandatory requirements)**

- List showing similar product supplied to or on order for other utilities in Australia or New Zealand or the Oceania region for the past 5 years
- Test certificates as per Clause 5
- End of service life disposal methods
- Cross-section drawing of cables provided both in AutoCAD and PDF format
- Evidence of Quality Management Systems used in the manufacturing process
- Evidence of Health, Safety and Environmental plans
- Evidence of financial ability to provide the level of service and support
- Origin of materials used in manufacture of the cables
- Names and resumes of key team members who will be assigned to work with EFL upon successful award of the three-year supply contract (if bidder is successful)
- Material safety datasheets for all products offered
- Sample inspection and test plans

Bidders may be asked to provide additional information during tender assessment period or following award of contract.

13.2. Documentation to be supplied during the Course of the Contract

Within two (2) weeks of the placing of the order, the successful Bidder shall supply copies of the following:

a) A certified datasheet outlining the following information of the cables:
   i. Components:
      - Conductor (Main) (mm2)
      - Conductor Screen (Minimum Point) (mm)
      - Insulation (Minimum Point) (mm)
      - Insulation Screen (Minimum Point) (mm)
      - Metallic Screen (mm) (where required)
      - Separation Sheath (mm) (where required)
      - Armor (mm) (where required)
      - Sheath (mm) (where required)

ii. Diameter Over:
    - Conductor (Minimum) (mm)
    - Insulation (mm)
    - Insulation Screen (mm)
    - Separation Sheath (mm)
    - Overall (mm)

iii. Mass of Cable (kg/km)

iv. Minimum Bending Radii:
    - Fixed (mm)
    - During Installation (mm)

v. Maximum Pulling Tension:
    - On Conductors Together (kN)
    - On Armor (kN) (where required)
    - With Pulling Stocking (kN)

vi. DC Resistance @ 20oC:
    - Main Conductor (Ohm/km)
    - Metallic Screen (Three Cores Together) (Ohm/km)

vii. Reactance to Neutral @ 50Hz (Ohm/km)

viii. Capacitance to Neutral (µF/km)

ix. Fault Rating (1s Duration):
    - Main Conductor (kA/sec)
    - Screen Conductor (kA/sec)

x. Maximum Continuous Current Rating:

xi. In Air (Amps)

xii. In Ground (Amps)

xiii. Duct in Ground (Amps)

b) General cable construction details

c) Cable cross-sectional and cable profile

d) Installation conditions

The Bidder must exercise reasonable diligence in the design of items in order to satisfy EFL's specific integration requirements between the Bidder's offered item and EFL's requirement for the item to be utilized in its electricity distribution network.

EFL will comment on the datasheets supplied under the contract in relation to how the equipment interfaces with EFL's design, construction, operation, maintenance and other requirements. Comments about datasheets by EFL shall not in any way absolve the Supplier of responsibility for the safety and reliability aspects of the cables supplied. The Supplier shall amend the datasheets as directed and resubmit them to EFL within one week.

The following shall be shown prominently on all datasheets:

e) EFL stock code

f) Cable description

g) Cable manufacturing and testing standards

h) Date datasheet produced

13.3. Samples

When request, 1000mm production samples of each item shall be submitted with the offer.

Each sample shall be delivered freight free (Delivery Duty Paid (DDP)), suitably packaged and labelled with the following information:

- Name of supplier and this contact number

- Tender number
- Any supporting data on features or characteristics

13.4. Training

Training material in the form of drawings, instructions and/or audio visuals (in CD format) are required to be provided for the items accepted under the tender. The Tenderers shall allow the cost of productionand delivery of training material in the tendered prices.

The training materials should include but not be limited to the following topics:

- Handling
- Storage
- Application
- Installation
- Maintenance
- Environmental performance
- Electrical performance
- Mechanical performance
- Disposal

Offers of vendors who fail to furnish above particulars shall be rejected.

14. APPENDIX

14.1. Price Schedule

Bidders are required to complete the following price schedule and submit with the offer. EFL requiresthe biding prices to be in CIF incoterms.

No.	Stock Code	Item Description	Unit Price (per metre) & Currency of Bid
Hard Drawn Bare Copper Wires			
1	I03950	Hard Drawn Bare Copper Wire 35mm^2	
2	I03951	Hard Drawn Bare Copper Wire 70mm^2	
PVC Insulated Copper 0.6/1kV Underground Cables			
3	I04032	0.6/1kV 1 Core Copper PVC Green Cable – 16mm^2	
4	I04013	0.6/1kV 1 Core Copper PVC Black Cable – 35mm^2	
5	I04014	0.6/1kV 1 Core Copper PVC Red Cable – 35mm^2	
6	I04034	0.6/1kV 1 Core Copper PVC Green Cable – 35mm^2	
7	I04015	0.6/1kV 1 Core Copper PVC Red Cable – 70mm^2	
8	I04016	0.6/1kV 1 Core Copper PVC Black Cable – 70mm^2	
9	I04099	0.6/1kV 1 Core Copper PVC Yellow Cable – 70mm^2	
10	I04100	0.6/1kV 1 Core Copper PVC Blue Cable – 70mm^2	
11	I04015A	0.6/1kV 1 Core Copper PVC Red Cable – 95mm^2	
PVC PVC Insulated Copper 0.6/1kV Underground Cables			
12	I04137	0.6/1kV 4 Core Copper PVC PVC Cable – 35mm^2	
13	I04162	0.6/1kV 3 Core Copper N/SC RN PVC PVC Cable – 70mm^2	
14	I04187	0.6/1kV 4 Core Copper PVC PVC Cable – 95mm^2	
15	I04182	0.6/1kV 4 Core Copper PVC PVC Cable – 120mm^2	
16	I04140	0.6/1kV 4 Core Copper PVC PVC Cable – 185mm^2	
17	I04023	0.6/1kV 1 Core Copper PVC PVC Cable – 240mm^2	
18	I04021	0.6/1kV 1 Core Copper PVC PVC Cable – 300mm^2	
XLPE PVC Insulated Copper 0.6/1kV Underground Cables			
19	New Item	0.6/1kV 4 Core Copper XLPE PVC Cable – 35mm^2	
20	I04184	0.6/1kV 4 Core Copper XLPE PVC Cable – 70mm^2	
21	New Item	0.6/1kV 4 Core Copper XLPE PVC Cable – 95mm^2	
22	New Item	0.6/1kV 4 Core Copper XLPE PVC Cable – 185mm^2	
23	I04201	0.6/1kV 4 Core Copper XLPE PVC Cable – 240mm^2	
XLPE Insulated Aluminum 0.6/1kV Underground Cables			
24	New Item	0.6/1kV 1 Core Aluminum XLPE Cable – 95mm^2	
25	I04266	0.6/1kV 1 Core Aluminum XLPE Cable – 185mm^2	
26	I04267	0.6/1kV 1 Core Aluminum XLPE Cable – 240mm^2	
27	I04268	0.6/1kV 1 Core Aluminum XLPE Cable – 300mm^2	
Polythene PVC Insulated Copper 11kV Cables			
29	New Item	6.35/11kV 1 Core Copper Polythene PVC Cable – 35mm^2	

Bidders are to clearly indicate the currency of bid.

14.2. Technical Schedule and Guaranteed Performance

The schedule shall be completed and submitted with the offer. Note the following instructions while completing the schedules:

a) The schedule is provided as a separate attachment;
b) The bidders are required to complete the schedule in MS excel format and submit with the bid (PDF will not be accepted);
c) Manufacturer datasheets shall be provided for each item separately and clearly indicated with EFL stock codes.
d) The bidders who fail to submit original datasheets (***scanned/picture formats will not be accepted***) with all required technical details will not be considered for evaluation. This is because the data provided are critical to EFL during planning and implementation stages;
e) All data provided in the schedule shall be reflected in the original datasheets provided;
f) The units specified in the schedule shall be strictly followed;
g) The price schedule as per clause 13.1 is also attached in the excel sheet for completion.

(Note these are mandatory requirements)

14.3. Tender Submission – Mandatory Requirement

All tenderers are required to complete and submit a copy of the submission requirements with their bid submissions. **(Note these are mandatory requirements)**

Requirements	Response from Bidders
Validity of bid (180 days required) (Yes/No)	
List of test reports/certificates provided. (As per Clause 5)	
Minimum warranty period offered for this product	
Completed price and technical schedules (Clause 13.1 and 13.2)	
The biding pricing to be in CIF incoterm.	
Currency of bid.	
Price review period	
Lead time of delivery after tender award.	
Sample inspection and test plans	
Material safety datasheets for all products offered	
Detailed cross-sectional drawings	
If same items supplied to EFL previously	
Disposal method after service life.	
Quality management system used in the production of cables, attached certificate.	
Training	
Witnessing of tests (FAT)	
Bidder agrees with the requirements of AS 4912-2002; General conditions of contract for periodic supply of goods (Parts 1 and 2)	
Material safety datasheet to be provided for all items	
The bidder to include the following as part of the bid:	
Company profile	
Company registration details	
Company financial capability statement	
Reference list of customers the same product is supplied to and contact details for reference check	
If the bidder is the manufacturer, the ISO certification shall be provided	
If the bidder is only the supplier of the product, then both the manufacturer and supplier ISO certifications shall be provided	

Name of Tenderer: _____

Signature of Tenderer: _____

Date: _____

14.4. Overall Evaluation Criteria

Tender Evaluation Criteria	
Category	**Criteria**
Bid Responsiveness	General responsiveness of bid, compliance to submission requirements and documentation.
Health, Safety & Environment	Assessment of Tenderer's compliance to health, safety and environmental requirements detailed within the technical specification. Past performance of Tenderers.
Quality Assurance	Tenderer has Quality Management systems in place that are acceptable to EnergyFiji Limited.
Technical Compliance	Does the Tender meet Energy Fiji Limited's minimum technical requirements as outlined in the Technical Specification? • Design of equipment and all components • Performance of equipment and all components • Type test certification • Comprehensiveness of proposal, composition of tenderer's team • Ability to deliver on time / delivery timeframe • Sample approval
Commercial Compliance	Assessment of the Tenderers operational risks including conflicts of interest. Tenderer must comply with statutory requirements, such as that enforced by FRCS, FNPF, FNU, etc. and provide evidence of compliance as required in thespecifications.
Energy Fiji Limited Procedures	Tenderer must comply with all relevant Energy Fiji Limited safety and environmental procedures. This is indicated by the Tenderer signing the Form of Tender Schedule, acknowledging all applicable procedures. Tenderer must also comply with the requirements of Electricity Act (2017), Electricity Regulations (2019).
Financial Stability	Assessment of Tenderer's current financial stability and ability to remain financially stable.
Price Evaluation	• Base tendered prices; • Total ownership cost; • Other value adding options.

14.5. Departure from Specifications

The Bidder shall nominate the Clause or relevant section of the tender specification and describe thedeparture:

Tender Specification Reference[i]	**Departure**

_____

I Where possible, the Bidder shall refer to the specific clause of the tender specification.

TENDER CHECKLIST

The Bidders must ensure that the details and documentation mention below must be submitted as part of their tender Bid

Tender Number _____

Tender Name _____

1. Full Company / Business Name: _____

   (Attach copy of Registration Certificate)

2. Director/Owner(s): _____

3. Postal Address:_____

4. Phone Contact: _____

5. Fax Number: _____

6. Email address: _____

7. Office Location:_____

8. TIN Number: _____

   (Attach copy of the VAT/TIN Registration Certificate - Local Bidders Only (Mandatory)

9. FNPF Employer Registration Number: _____ **(For Local Bidders only) (Mandatory)**
10. **Provide a copy of Valid FNPF Compliance Certificate (Mandatory- Local Bidders only)**
11. **Provide a copy of Valid FRCS (Tax) Compliance Certificate (Mandatory Local Bidders only)**
12. **Provide a copy of Valid FNU Compliance Certificate (Mandatory Local Bidders only)**
13. Contact Person:_____

I declare that all the above information is correct.

Name: _____

Position: _____

Sign: _____

Date: _____

Tender submission

Bidders are requested to upload electronic copies via Tender Link by registering their interest at: https://www.tenderlink.com/efl

EFL will not accept any hard copy submission to be dropped in the tender box at EFL Head Office in Suva.

This tender closes at 4.00pm (1600hrs) on Wednesday 30th April, 2025.

For further information or clarification please contact our Supply Chain Office on phone **(+679) 3224360 or (+679) 9992400** or email us on tenders@efl.com.fj

The bidders must ensure that their bid is inclusive of all Taxes payable under Fiji Income Tax Act. Bidders are to clearly state the percentage of VAT that is applicable to the bid prices.

The lowest bid will not necessarily be accepted as the successful bid.

The Tender Bids particularly the "Price" must be typed and not hand written.

Any request for the extension of the closing date must be addressed to EFL in writing three (3) working days prior to the tender closing date.

Tender Submission via email or fax will not be accepted.