Fiji Electricity Authority
Transmission Unit
2 Marlow Street, Suva

TENDER NO: MR 90/2017

SUPPLY OF STEEL POWER POLES

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TENDER DOCUMENT AND SPECIFICATIONS

The Fiji Electricity Authority invites sealed tenders from reputable companies with the relevant experience, for the design, manufacture and supply of tapered steel poles manufactured as per the required standards, to be used in overhead Transmission Lines by FEA.

TECHNICAL SPECIFICATIONS FOR STEEL UTILITY POWER POLES

1. Standards Applicable for this Tender

The primary standard got design, manufacture, testing, handling and transportation shall comply with **AS4677:2010 – Steel Utility Service Poles.**

Other relevant standards, but not limited to:

AS1170.2-2002	Structural Design Actions (Wind Actions)
AS/NZS4676-2000	Structural design requirements for utility service poles
ASCE 48 – 11	Design of Steel Transmission Pole Structures
AS 1214	Hot – dip galvanising coatings on threaded fasteners
AS 4360	Risk Management
AS/NZS ISO 9001	Quality Management Systems - Requirements

Note: Bidders shall demonstrate/submit proof of ownership and possession of aforementioned standards.

2. Design and Construction Features

All design and construction, methodology shall strictly comply with the above specified referenced documents, or any other relevant international standard.

The following information is provided as guideline:

	Length (m)	**Tip Strength (kN)**	**Design Mass(kg)**	**Tip Diameter (mm)**	**Base Diameter (mm)**
Steel Tapered Poles	**15.5**	**16-40**	**2270-3810**	**240-360**	**473-593**

- For a Factor of Safety range2 -2.5 ranges; and the pole top point loading of a 12kN; the anticipated UTS (Ultimate Tensile Strength) shall be 24kN – 30kN.
- As additional information, the poles will be carrying electrical conductors with the following properties:

Conductor Codename	Corn	Lime
Stranding & Wire Diameter no./mm	Al 30/2.50 Fe 7/2.50	Al 30/3.50 Fe 7/3.50
Nominal Overall Diameter mm	17.5y	24.5
Cross – sectional Area mm^2	182	356
Approximate Mass kg/km	677	1320
Breaking Load kN	63.5	122
Modulus of Elasticity GPa	88	88
Coefficient of Linear Expansion 10^{-6}/ °C	18.4	18.4

a. In Ground Corrosion Protection

All the steel poles shall be hot dip galvanized smoothly as per IEC (as amended up to date). The coating on the metal parts shall withstand minimum four one minute dips in copper sulphate solution as per IEC-168.

b. Type of Mounting

The bidder shall provide designs or both In – Ground mounted as well, as Base Plate mounted Steel Poles

c. Cross Arms

The bidder shall specify the type of cross arms (timber, steel, composite) that can be mounted to the steel poles and the methodology as well as any other additional equipment or modifications required for these mountings.

d. Pole Caps

- All the Steel poles shall have a welded Pole Cap that shall have a minimum tensile trength of 450 MPa.
- The Pole Cap shall be made from Grade 250 equivalent steel.

e. Mounting Holes

- The mounting Holes shall be as per the specifications and designs of the Steel Poles provided by FEA.
- All steel poles shall be supplied with mounting holes.
- Methods and procedures must, however be submitted for drilling the mounting holes

f. OPGW Extensions

The steel poles must come with a provision for OPGW extensions on the top.

3. Quality Control

A production drawing shall be provided for each type of pole designed and manufactured, and a quality control technician shall approve each stage of manufacture before proceeding to the next. Steel Loading tests shall be performed for each pole in the required manner. A final quality control check shall be carried out on each pole after the manufacturing is completed. All quality control procedures shall be mandated in a written manual and be available for inspection.

In addition, the manufacturer shall be ISO 9001-2000 and ISO 14001-2004 certified and shall maintain a development and engineering department to provide a technical after sales service and information related to the steel poles.

4. Service Conditions

The steel poles will be exposed to the following environmental conditions:

Daily average ambient temperature	32°C
Max. Ambient Temperatures	45°C
Annual average ambient temperature	30°C
Altitude	20m
Humidity	95%
Seismic Level – open ended Richter scale	7 on the open ended Richter Scale
Average Rainfall per year	2663mm
Isokeraunic Level	50

5. Tools and Equipment

The tenderer shall forward a list of tools and equipment required for safe operation and maintenance of the installation and includes the cost of supplying such tools and equipment as part of the tender submission.

6. Warranty

The Contractor shall provide warranty for the steel poles for a Period of twelve [12] months after delivery of the Poles. For all Steel Poles supplied by third-parties, the contractor is to ensure that the warranties of these Poles are transferred to FEA as the beneficiary. The Contractor warrants to the Employer that all Works performed and completed in respect of the Warranted Works are in accordance with the standards and quality specified in the Contract or if not otherwise specified, the work is according to good trade practice expected in the energy industry.

7. Factory test at manufacturer's work site for approvals

All required testing shall be carried out in accordance to the procedures outlined in the referenced documents. Certified copies of all test results shall be submitted by an independent accredited testing authority at an accredited testing facility.

It is also mandatory requirement for an FEA Engineer to be present at the manufacturer's site to witness the factory tests being carried out in accordance to the required standards:

Manufacturer to advise FEA when conducting a Factory Test

8. Manufacturer's Qualification

Manufacturer shall have sufficient designing, supplying and manufacturing experience of steel utility poles for at least ten (10) years for the required work specifications. As proof, the manufacturer shall submit a supply-list indicating type of steel pole, quantity supplied, name of client and the year of delivery. Certificates from customers with satisfactory usage shall be provided with the supply record. Steel Poles shall be considered, for which a minimum 5 years manufacturing and successful service experience is available, without change of basic design and material. The qualified manufacturer shall have designed, manufactured, tested and supplied at least 3,000 units of similar Steel Utility Poles for the same work specification

9. Prices and Quantity Required

Prices shall be quoted in Fijian Dollar Currency, inclusive of all taxes, customs, clearance charges, and duties payable in Fiji and for delivery to **FEA's Kinoya/Navutu Depot.**

SCHEDULE OF QUANTITIES AND BIDDER's PRICES	
ANTICIPATED QUANTITY REQUIRED	
BIDDER's UNIT PRICE (VIP) {Including Delivery to FEA Kinoya/Navutu Depot}	
BIDDER's LUMP SUM PRICE (VIP)	

{Including Delivery to FEA Kinoya/Navutu Depot}	

Bidders to utilize the above table to submit prices.

Prices shall be valid for at least 90 calendar days, from the closing date of this tender.

10. Payment Terms

FEA's standard 30 days payment policy upon delivery of goods and services applies. Bidder's to explicitly note all exceptions and/or reservations to the same if any.

11. Submission of bid documents

Tender Submission - Instruction to bidders

It is mandatory for Bidders to upload a copy of their bid in the **TENDER LINK** Electronic Tender Box no later than **4:00pm, on Wednesday 24th May, 2017.**

To register your interest and tender a response, view 'Current Tenders' at:
https://www.tenderlink.com/fea

For further information contact The Secretary Tender Committee, by e-mail
TDelairewa@fea.com.fj

In additional, hard copies of the tender, one original and one copy must be deposited in the tender box located at the FEA Head Office, 2 Marlow Street, Suva, Fiji no later than **4:00pm, on Wednesday 24th May, 2017-** Addressed as

Tender – MR 90/2017 – Design, Manufacture and Supply of Steel Utility Poles for Transmission Lines

The Secretary Tender Committee
Fiji Electricity Authority
Head Office
Suva
Fiji

- **Hard copies of the Tender bid will also be accepted after the closing date and time provided a soft copy is uploaded in the e-Tender Box and it is dispatched before the closing date and time.**

Tenders received after **4:00pm** on the closing date of **Wednesday 24th May, 2017**
May, 2017.

- will not be considered.
- Lowest bid will not necessarily be accepted as successful bid.
- **It is the responsibility of the bidder to pay courier chargers and all other cost associated with the delivery of the hard copy of the Tender submission including any Duties/Taxes. Hard copies of the Tender submission via Post Box will not be considered.**