

### TENDER DOCUMENT AND SPECIFICATION MR 269/2017 Preferred Supplier for Geotextile Fabric

The Fiji Electricity Authority (FEA) invites bids from reputable contractors for being the Preferred Supplier of Geotextile Fabric. The Geotextile Fabric will be used in the upgrade of existing Access Roads to its 132kV Transmission Line Towers. This document serves to define the specifications of the Geotextile fabric that FEA wishes to purchase.

#### 1. Scope

This Specification covers the general requirements to manufacture, test, and supply and deliver anticipated quantity of **20 Rolls** of non-woven, needle punched, continuous filament, and polyester Geotextile fabric of **Strength Class D**.

#### 2. Specifications

##### 2.1 Required Mechanical properties of the Non-woven Geotextile

Strength Class	Wide Strip Tensile Strength	Wide Strip Toughness	Grab Tensile Strength	Trapezoidal Tear Strength	G Rating	CBR Burst Strength
	kN/m	kJ/m <sup>2</sup>	N	N	-	N
	AS 3706.2	AS 3706.2	AS 3706.2	AS 3706.3	Austroroads 90	AS 3706.7
	Q Value	Q Value	Q Value	Q Value	Q Value	Q Value
D	26	7	> 1,200	> 450	> 3,000	>4400

##### 2.2 Required Hydraulic properties of the Non-woven Geotextile

Strength Class	Pore Size (O <sub>95</sub> )	Permittivity	Coefficient of Permeability	Flow Rate @100mm Head
	µm	s <sup>-1</sup>	m/s x 10 <sup>-4</sup>	l/m <sup>2</sup> /s
	AS 3706.7	AS 3706.9	AS 3706.9	AS 3706.9
D	75	1.35	43	135

##### 2.3 Typical Physical Properties

Appearance	Odourless Grey Fibres
Roll Size	<b>5m x 100m</b>
Weight	180kg-250kg

### 2.4 Materials

The fibers of the geotextile and thread used in jointing lengths shall consist of polymers composed of at least 95% by mass of synthetic fibers.

The geotextile filaments shall be rot proof, chemically stable and shall have low water absorbency. Filaments shall resist delamination and maintain their relative dimensional stability in the geotextile.

Non-woven geotextiles shall have filaments bonded by needle punching, heat or chemical bonding processes.

Geotextiles shall be stabilized against ultraviolet radiation such that when tested in accordance with AS 3706.11 shall have retained strength of at least 50% after 672 hours of test exposure.

### 3. Standards applicable for this Tender

<b>ISO 9001</b>	Quality Management System	
<b>Austrroads</b>	Guide to road design. <a href="http://www.austrroads.com.au/road-construction/road-design/guide-to-road-design">http://www.austrroads.com.au/road-construction/road-design/guide-to-road-design</a>	
<b>AS 3706</b>	Geotextiles - Methods of test General requirements, sampling, conditioning, basic physical properties and statistical analysis	
	<b>AS 3706.1</b>	<i>General Requirements, Sampling, Conditioning, Basic Physical properties and Statistical Analysis</i>
	<b>AS 3706.3</b>	<i>Determination of Tearing Strength – Trapezoidal method</i>
	<b>AS 3706.4</b>	<i>Determination of Burst Strength – California Bearing Ration (CBR) – Plunger method</i>
	<b>AS 3706.5</b>	<i>Determination of Puncture Resistance – Drop Cone method</i>
	<b>AS 3706.7</b>	<i>Determination of Pore Size Distribution – Dry Sieving method</i>
	<b>AS 3706.9</b>	<i>Determination of Permittivity</i>
	<b>AS 3706.11</b>	<i>Determination of Durability – Resistance to Degradation by Light and Heat</i>

<b>AS 2001</b>	Methods of test for textiles Physical tests - Determination of bursting force of textile fabrics - Ball burst method	
	<b>AS 2001.2.3</b>	<i>Physical tests – Determination of breaking force and extension of Textile Fabrics</i>
	<b>AS 2001.2.4</b>	<i>Physical tests – Determination of bursting pressure of Textile Fabrics – Hydraulic Diaphragm Method</i>

**Note: Bidders shall demonstrate/submit proof of ownership and possession of aforementioned standards. Bidders shall also demonstrate the product’s compliance with the standards stipulated above.**

#### 4. Manufacturer’s Qualification

Manufacturer shall have sufficient designing, supplying and manufacturing experience of the Geotextile Fabric for at least three (3) years. As proof, the manufacturer shall submit a supply-list indicating type of Fabric, quantity supplied, name of client and the year of delivery. Certificates from customers with satisfactory usage shall be provided with the supply record.

#### 5. Suppliers Qualification

The supplier shall furnish with the bid:

1. A supply history of the Geotextile Fabric and/or other products.
2. Prove capital capability to supply the said quantity.

#### 6. Warranty

The supplier and/or manufacturer shall provide warranty of a minimum of **3 Years** from the date Fiji Electricity Authority receives the Geotextiles.

On the contrary, if the bidder cannot warranty for 3 years than a preferred warranty period shall be given by the bidder.

#### 7. Quality and Environment Assurance

The quality assurance system of design, manufacture, and inspection shall conform to ISO 9001.

Quality assurance certificate according to ISO 9001 issued by an authorized inspection agency shall be submitted with the bid.

The environment management system of manufacture shall confirm to ISO 14001.

Environment assurance certificate according to ISO 14001 issued by an authorized inspection agency shall be submitted with the bid

Bids will not be considered if the manufacturer’s experience or quality assurance system does not meet the above requirements.

### 8. Type Test Results

The bidder shall submit results for the following parameters:

1. Wide Strip Tensile Strength (AS 3706.2)
2. Wide Strip Toughness Test (AS 3706.2)
3. Grab Tensile Strength (AS 3706.2)
4. Trapezoidal Tear Strength (AS 3706.3)
5. G Rating (Austroads)
6. CBR Burst Strength (AS 3706.7)
7. Pore Size (AS 3706.7)
8. Permittivity Test (AS 3706.9)
9. Coefficient of Permeability Test (AS 3706.9)
10. Flow Rate @100mm Head Test (AS 3706.9)

### 9. Storage, Packaging and Identification

Geotextiles shall be stored under protective cover or wrapped with a waterproof opaque UV protective sheeting to avoid any UV damage prior to installation.

Geotextiles shall not be stored directly on the ground or in any manner in which they may be affected by heat. The method of storage shall be in accordance with any other recommendations set by the manufacturer.

The protected geotextile rolls shall be clearly labelled showing manufacturer, type of geotextile and batch identification number.

The vendor shall be responsible for nominating standard pack quantities and standard packs shall be clearly marked with the following:

- a) Manufacture's name
- b) Manufacture's part reference number
- c) Batch number
- d) Item description
- e) Package weight
- f) Quantity x length

### 10. Information to be supplied

The following information shall be supplied with the offer:

- a) Catalogue describing the items and indicating the model number
- b) Constructional features and material used for components
- c) Complete dimensional drawing
- d) Quality assurance certificates
- e) Duly completed schedule of guaranteed technical particulars
- f) Manufacturing experience and list of purchasers
- g) Test certificates as per clause 5.2.1 and 5.2.2

### 11. Pricing Schedule

#### 11.1 Incoterms

All pricing shall be done on Cost, Insurance and Freight (CIF) basis, delivered to Suva wharf, Fiji.

#### 11.2 Currency

All pricing shall be in either: US\$, AU\$, NZ\$, FJ\$.

#### 11.3 Taxation

The pricing shall be EXCLUSIVE of any type of taxation that needs to be paid in Fiji.

#### 11.4 Pricing breakdown

The prices quoted will be fixed and NOT variable.

#### 11.5 Validity

The pricing shall be valid for 90 days.

#### 11.6 Prices

Prices for Geotextile Fabric <u>delivered to FEA Kinoya Depot</u>				
Product	Quantity	Dimensions	Price per Roll (500m <sup>2</sup> ) FJ\$ & VIP	Total Price (10 Rolls x 500 m <sup>2</sup> )
Non-woven, needle punched, continuous filament, polyester Geotextile fabric of <b>Strength Class D</b>	10 rolls	Length – 100m Width – 5m  Area – 500m <sup>2</sup>		

Prices shall be quoted inclusive all applicable duties and taxes and delivery costs.

Prices for Geotextile Fabric <u>delivered to FEA Navutu Depot</u>				
Product	Quantity	Dimensions	Price per Roll (500m <sup>2</sup> ) FJ\$ & VIP	Total Price (10 Rolls x 500 m <sup>2</sup> )
Non-woven, needle punched, continuous filament, polyester Geotextile fabric of <b>Strength Class D</b>	10 rolls	Length – 100m Width – 5m  Area – 500m <sup>2</sup>		

Prices shall be quoted inclusive all applicable duties and taxes and delivery costs.

## **TENDER DOCUMENT SUBMISSION – INSTRUCTION TO BIDDERS**

### **Hard Copy Submission**

**Bidders are required to submit Two (2) hard copies** of the tender bids in sealed envelope which shall be deposited in the tender box located at the Supply Chain Office at the FEA Head Office, 2 Marlow Street, Suva, Fiji.

The bidder shall seal the original hardcopy of the bid comprising of both the technical proposal and the price proposal, in one envelope, and clearly mark the envelope as: "ORIGINAL - PROPOSAL". Bidders shall also provide 1 additional copy of the original bid and mark them as "COPY - PROPOSAL". Each proposal shall be individually sealed within an envelope. The 2 envelopes comprising the Original and Copy shall be sealed within an outer envelope. All inner and outer envelopes shall bear the following marking / identification, and be addressed as follows:

### **Bid for FEA Tender MR 269/2017 – Preferred Supplier for Geotextile Fabric**

**The Secretary - Tender Committee,  
c/o Supply Chain Office,  
Fiji Electricity Authority,  
Private Mail Bag, 2 Marlow Street,  
Suva, Fiji Islands**

**DO NOT OPEN BEFORE TENDER CLOSING DATE AND TIME.**

**All envelopes shall also indicate the name and address of the Bidder on the reverse of the envelope.**

The inner and outer envelopes shall be addressed to the Employer as follows:

All postage or courier charges for delivery of Tender documents must be paid by the bidders. 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.

**This tender closes at 4:00pm, on Wednesday 25<sup>th</sup> of October, 2017.**

All late tenders, and inadequately marked envelopes shall be returned to the Tenderers unopened. (Bids via e-mail or fax will not be considered).

For further information or clarification on the submission of bids, please contact our Supply Chain Office on phone (+679) 3224360 or (+679) 9991587, or The Secretary Tender Committee, by e-mail: [TDelairewa@fea.com.fj](mailto:TDelairewa@fea.com.fj)

**Tenders received after the closing date shall not be considered.**

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

### **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 25<sup>th</sup> October, 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](mailto: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 2<sup>nd</sup> August, 2017**- Addressed as

#### **Tender – MR 269/2017 Preferred Supplier for Geotextile Fabric**

**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 25<sup>th</sup> October, 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.**