



# **FIJI ELECTRICITY AUTHORITY**

## **TENDER DOCUMENT**

**TENDER NUMBER: MR 317/2017**

**TENDER NAME: Preferred Supplier of Fine Sand for 33kV Underground  
Cabling Works**

## FIJI ELECTRICITY AUTHORITY

### TENDER No. MR 317/2017

#### **Preferred Supplier of Fine Sand for 33kV Underground Cabling Works**

The Fiji Electricity Authority (FEA) is requesting proposal from Interested Suppliers to supply 4000 cubic meters (m3) of Fine Sand required for the purpose of sand bedding during 33kV underground Cable Installation Works from Cunningham Zone Substation, along Cunningham Road, Princess Road, and Reservoir Road, to Hibiscus Park Zone Substation.

Interested Bidders are to meet at the FEA's Kinoya Depot at **10.00am on Wednesday the 22<sup>nd</sup> of November, 2017** for the project briefing and site visit. **SITE VISIT IS COMPULSORY ATTENDANCE WILL BE TAKEN.**

**For information or clarification please contact our Supply Chain Office on phone (+679) 3224360 or (+679) 9991587.**

**This tender closes at 4.00pm (16.00hrs Fiji Time) on Wednesday, 29<sup>th</sup> of November, 2017.**

#### **1.0 Scope**

1. The Supplier shall be fully responsible for the extracting, sieving and carting and unloading of Fine Sand and providing machinery for the same.
2. Loading and unloading of the Fine Sand will be the responsibility of the Supplier.
3. The Quantity of Fine Sand required will be requested by the FEA Representative and the Contractor shall be responsible for delivering the required amount on time.
4. FEA representative will be showing interested Bidders offload locations at the site.
5. The Supplier shall be responsible to repair any damages to access road during the execution of the above work.
6. No royalty is payable by the FEA to any party for the extraction of Aggregate.
7. Any damage to the roads, vehicles and machines during the extraction and transportation process is entirely the Supplier's risk and responsibility.
8. FEA shall establish the successful bidder(s) as a preferred supplier and multiple small quantity purchase orders shall be furnished as deemed necessary and required by FEA.

## 2.0 Technical Specifications

The requirement for bedding sand to conform to FEA standards ensures that no Health and Safety risk exists for workers and no damage will occur to cables being installed.

Contractors & Suppliers shall ensure that any bedding sands used on FEA works shall comply with these specifications. FEA reserves the right to request that suppliers and contractors provide evidence of compliance to the standards mentioned below.

### Specification for Bedding and Backfill Sand

Cable Bedding Sand [Sigatoka Fine Sand] shall be clean sand free of rocks, clay lumps, tree roots, building rubble, metal, glass, sharp objects, organic solvents or other deleterious material that is likely to damage cables or pose a health and safety risk to workers and shall comply with the following grading requirements in Table 1.

#### Tolerance on size:

Percentage by weight passing AS1152 sieves in accordance with test method AS 1289.3.6.1.

Sieve Size (mm)	% passing by Weight
4.75	100
2.36	80/100
1.18	43/100
0.600	19/100
0.425	13/70
0.300	8/45
0.150	0/18
0.075	0/5

Table 1: Grading Requirements

The material would be described as “Fine Grained” Sieve Size 2.36 mm as per AS 1289.0 Sect 5(a) and have the following particle characteristics described in AS 1726.

“Well graded” or “Uniform” size having “rounded” or “sub-rounded” of equidimensional shape. Sands shall be a natural occurring type.

## **Note**

### **Not Permitted**

Manufactured sands such as quarry or crusher dust or by-product sands are not acceptable. Recycled 'Glass Sand' and other recycled crushed glass products are not approved as cable bedding materials.

## **3.0 Standards Applicable to this tender**

### **AS1152: Specifications for Test Sieves**

This Standard specifies the requirements for test sieves made from woven wire cloth or from plates with square or round perforations for use in determining the size distribution of granular products in the particle size range 32 mm to 125 mm.

The aperture sizes and tolerances of this Standard apply to new test sieves.

For wire cloth test sieves, successive sizes of which are in a ratio of about 1:2, the R40/3 series of aperture sizes is proposed. For perforated plate test sieves, both the R40/3 and the R20 series are proposed, particularly to meet the requirements of the aggregate, coal and iron industries.

### **AS 1289.3.6.1-2009 Methods of testing soils for engineering purposes**

Soil classification tests - Determination of the particle size distribution of a soil - Standard method of analysis by sieving.

This Standard sets out the method for the quantitative determination by sieve analysis of the particle size distribution in a soil, down to the 75 µm sieve. By using this Method the combined silt and clay fraction can be obtained by difference. For particle sizes smaller than 75 µm the sedimentation method described in AS 1289.3.6.3, using a hydrometer to secure the necessary data, applies

### **AS1289.0 Section 5 SOIL GROUPS**

For the purposes of the methods in the AS 1289 series, soils are grouped as follows:

- (a) Fine-grained soils-soils containing not less than 80% passing a 2.36 mm AS 1152 sieve.
- (b) Medium-grained soils-soils containing not less than 80% passing a 19 mm AS 1152 sieve.
- (c) Coarse-grained soils-soils containing not less than 80% passing a 37.5 mm AS 1152 sieve.

Any soil shall be regarded as belonging to the finest-grained group appropriate under the definitions given above. This grouping is not a soil classification framework and soils should be described as detailed in AS 1726.

With the exception of a soil classifications test and some soil compaction and density tests, soils with a greater proportion of material than 20% retained on a 37.5 mm AS 1152 sieve, cannot be usefully examined by the methods in AS 1289.

### **AS1726 Geotechnical Site Investigation**

Australian Standards AS1726-1993 groups soils into clays (<0.002 mm), silts (0.002-0.075 mm), sands (0.075-2.36 mm), gravels (2.36-63 mm), cobbles (63-200mm) and boulders (>200 mm). While the gravels, sands and silts are equi-dimensional (same order of magnitude in all three directions), clay particles are like plates or needles. Their surfaces are electrically charged due to a charge imbalance between the cations and anions within the atomic structure. The microstructure or micro fabric of the clay depends on the mineralogy of the clay and the valence, concentration and the type of the cations present in the pore water.

## **4.0 Bidders Eligibility Details**

### **Registration & Other Information**

The following information is required with the offer letter:

- i. Registration details of the company.
- ii. Occupational Health & Safety Policy of the company.
- iii. Certificates and work experience of employees.
- iv. List of tools, equipment, machines and safety gears

**The tender bid may not be considered if the above information is not attached with the offer letter.**

The Supplier is to confirm in writing in their offer letter that they will submit the following information within five (5) days prior to the award of the contract:

- i. Insurance cover for workers' health and safety.
- ii. Public liability cover.
- iii. Safety Management Plan.

**The award will be cancelled if the contractor is unable to provide the above information on time.**

### **Contractor Personnel**

The Supplier shall only employ Licensed Machinery Operators and they shall be available on site as and when required by the FEA in 24 hours of the request.

### **Other value added services.**

The bidder is open to include any other information that may add value to services.

## 5.0 Tender Evaluation Criteria

No.	Criteria	Weighting
1	Supplier background and history in the supply of fine sand	10%
2	Material source, quantity availability	10%
3	Production site, stockpile	10%
4	Delivery trucks	10%
5	Technical compliance	20%
6	Price	40%

## 6.0 Pricing Schedule

The Supplier shall submit the lump sum VIP price in Fijian currency to carry out the following works. The Supplier shall submit his price for the Supply of 4000 m<sup>3</sup> of Fine Sand to Project Site, Including Cartage, Delivery, etc. in the following manner.

Item	Description	Quantity Required	Unit Price of Fine Sand (FJD VIP) (Price/m <sup>3</sup> )	Unit Price Cartage (Price/m <sup>3</sup> /km)	Approximate Distance from Bidders source of Fine Sand to delivery site	Total Price (FJD VIP)
1	Supply and Cartage of Fine Sand	4000m <sup>3</sup>				

Please note that this will be a rate to measure contract, thus, the actual distances travelled by the suppliers truck will be considered. Therefore, an initial joint verification of distances will be done by FEA representatives and the supplier.

### Unit Prices

Bidders are to submit unit prices for the supply of Fine Sand. This is applicable to delivery of fine sand on other location and to be used as a preferred supplier of Fine Sand.

Item	Description	Prices (FJD VIP)
1	Fine Sand per Cubic Meter	
2	Cartage of Fine Sand (\$/m <sup>3</sup> /km)	

## 6.0 Trucking Information

Item	Description	Quantity
1	Number of Trucks that will be used in the supply	
2	Maximum Sand Loading Capacity per Truck. Bidders shall give a list of trucks and their capacity if the truck capacity varies.	
3	Maximum quantity that the supplier can deliver in one day	

The offloading areas are along Multiple Road Side location along the cable route (Cunningham Road, Princess Road & Reservoir Road) will be shown to the Contractors by FEA Site Visit Representative. Also, the Supplier will be required to stockpile Fine Sand at a specified location in Kinoya Depot after instructions by FEA representative.



## **7.0 Submission of tenders**

Two 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.

Addressed as:

**Tender - MR 317/2017 - Preferred Supplier of Fine Sand for 33kV Underground Cabling Works**

**The Secretary Tender Committee Fiji Electricity Authority  
Head Office  
Suva  
Fiji**

**Hard copies of the Tender bid will only be accepted if it is received before the closing date and time.**

**A Mandatory Site Visit will be held on Wednesday 22<sup>nd</sup> of November, 2017, commencing at 10am at Kinoya Depot.**

**Tenders received after 4:00pm on the closing date of Wednesday 29<sup>th</sup> November, 2017 will not be considered.**

**It must also indicate the name and address of the tenderer on the reverse of the envelope.**

**All late tenders, unmarked Envelopes and envelopes without bidder's name and address on the reverse on the envelope will be returned to the Tenderers unopened. (Bids via e-mail or fax will not be considered).**

**The bidders must ensure that their bid is inclusive of all Taxes payable under Fiji Income Tax Act and must have the most current Tax Compliance Certificate.**

**For further information or clarification please contact our Supply Chain Office on phone (+679) 3224360 or (+679) 9991587.**