



ENERGY FIJI LIMITED

MR 281/2018

Preferred Supplier for the Supply of AP65
Base Course for 33kV Underground Cabling
Works

TENDER NO: MR 281/2018: Preferred Supplier for the Supply of AP65 Base Course for 33kV Underground Cabling Works

Energy Fiji Limited (EFL) is requesting proposal from Interested Suppliers to supply approximately **2000 cubic meters (m³)** of Base Course for 33kV underground Cable Installation Works from Cunningham Zone Substation, along Cunningham Road, Princess Road, and Reservoir Road, to Hibiscus Park Zone Substation.

Eligibility/Selection Criteria of the Bidding Contractor

The Supplier shall have a sound knowledge of the subject area. The Supplier shall take all necessary precautions to prevent any damages to the EFL assets and private properties in the area. The Supplier shall visit offloading areas and accordingly offer to execute and complete the provision and carting of Base Course to areas identified by the EFL Representative.

A **Mandatory** site visit will be conducted on **Wednesday 25th July, 2018** commencing at **10am at Kinoya Depot**.

The Bidder shall submit the names/contacts of utilities or projects where they have previously undertaken such work required by this Tender.

1.0 TECHNICAL SPECIFICATIONS FOR THE CRUSHED BASE- COURSE

Energy Fiji Limited invites sealed tenders from reputable companies with relevant experience, for the Supply of AP65 Base Course from a source and comply the following requirements:

- a) The Clay Index of the material must be based on AS/NZS 4402, of not greater than 5% Plasticity Index.
- b) The Clay friction must
 - a. Be free of all organic, vegetable or other deleterious material.
 - b. Pass the 4.65mm sieve
 - c. Be blended so the blended aggregate has a uniform texture with no segregation of fine and coarse material.
- c) Laboratory 4 day soaked California Bearing Ratio (CBR) of greater than 50, un-surcharged or a crushing resistance of greater than 100kN in accordance with AS/NZS 3111:1980.
- d) The testing frequency shall be 1 test per 5,000m² of maintenance aggregate constructed.
- e) The material must be approved by *FRA (Certification to be provided)*.
- f) If FRA opt to change their specification in the production of base course, the Bidder is required to comply with the standards and specification given by FRA.

1.1 Extraction

The quarry or pit shall be worked in such a way as to ensure that unsuitable material is not included in the material supplied.

For production of base course crushed rock, both the primary and secondary crushers shall be provided with scalping screens to ensure that any remaining overburden is removed from material supplied.

1.2 Source Rock

Sedimentary source shall not be used for production of crushed rock base course material. Igneous or metamorphic rock shall have a Los Angeles Abrasion Loss complying with the relevant requirements of the table 1.

If a source rock is to be used other than the type in the table 1, the relevant testing authorities shall determine whether the rock type is acceptable and shall set appropriate limits.

Source rocks which does not comply with the specified requirements but from which crushed rock of satisfactory performance has been produced, may be accepted for use subject to the written approval from relevant testing authorities.

Rock Type	Loss Angeles Abrasion- Subbase
<i>Granite</i>	45
<i>Granodiorite</i>	45
<i>Basaltic Rocks</i>	35
<i>Hornfels</i>	25
<i>Quartzite</i>	35

Table 1 - Requirements of LA Abrasion loss for igneous or metamorphic rocks

Natural Gravels, sands, soft or ripped rock shall comply with the requirements of Table 2.

Property	Subbase
<i>Liquid Limit % (max)</i>	35
<i>Plasticity Index (min)</i>	2
<i>(max)</i>	12
<i>California Bearing Ratio % (min)</i>	30
<i>Texas Ball Mill (sedimentary rocks)</i>	45

- **4 days Soaked at 98% Modified Compaction**

Table 2 - Requirements for Natural Gravel, Soft or Ripped Rocks

For crushed rock, the product shall comply with the properties shown in table 3.

Property	Subbase
<i>Sand Equivalent % (min)</i>	-
<i>Liquid Limit % (max)</i>	40
<i>Plasticity Index (max)</i>	2 - 12
<i>California Bearing Ration % (min)</i>	30
<i>Flakiness Index Max</i>	35

- **4 days soaked CBR @ 98% Modified Compaction**

Table 3 - Properties of crushed rock

1.3 Grading

For natural gravels, sands and soft or ripped rock, the product grading prior to completion shall comply with the broad requirement shown in table 4. Material supplied shall conform to these grading limits.

Sieve Size (mm)	% passing by mass
	Subbase
75	100
37.5	60-85
2.36	14-36
0.075	2-10

Table 4 - Product Grading for Natural gravels, sands and soft or ripped rock before compaction

For crushed rock, the product grading prior to compaction shall comply with the requirements shown in table 5. The crushed rock shall not be graded from near the coarse limit on one sieve to near the fine limit on the following sieve or vice versa. At least 75% by mass of the aggregates in the product that are retained on the 6.50mm sieve shall have two or more faces produced by crushing.

Sieve Size (mm)	% passing by mass
	Subbase
75	90-100

37.5	64-90
26.5	50-84
19.0	42-78
9.5	30-66
4.75	20-52
2.36	12-42
0.425	4-24
0.075	2-10

Table 5 - Requirements for crushed rock

2.0 Standards Applicable for this Tender

STANDARD	TITLE
AS/NZS 4402	Methods of testing soils for civil engineering purposes
AS/NZS 3111	Methods of test for water and aggregate for concrete
Fiji Roads Authority - Road Works Standards and Specification	

Note: Bidders shall demonstrate/submit proof of the product's compliance of the aforementioned standards.

3.0 Manufacturer's Qualification

The manufacturer shall be ISO 9001-2016 certified and shall have sufficient supply and manufacturing experience of AP65 Base coarse for at least ONE (3) years for the required work specifications.

As proof, the manufacturer shall submit a supply-list indicating the grade of base course, quantity supplied, name of client and the year of delivery. Certificates from customers with satisfactory usage may be provided with the supply record.

Only those Suppliers shall be considered, for which a minimum of 3-years manufacturing and successful service experience is available, without change of basic design of the plant and the material. Bidder to also state the source of the Base Course Aggregates.

4.0 Experience Evaluation

For evaluation of manufacturer's qualifications, the manufacturer must submit a reference list showing supply experience for supply of Base course. In addition, if any in-service failure due to the quality of the material has been experienced, the manufacturer should submit the information on the failures including the cause of the failures and the counter consequences taken.

5.0 Testing

The testing shall be performed by relevant testing laboratories. The bidder shall comply with the following tests for Base Course.

- a) Particle Size Distribution
- b) Atterberg Limit
- c) Flakiness Index
- d) Crushing Resistance
- e) Los Angles Abrasion
- f) Maximum Dry Density
- g) California Bearing Ratio
- h) Wet and Dry Variation

It is mandatory for the bidder to submit the relevant test certificates with the bidding documents.

5.0 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 2000 m³ of AP65 to Project Site, Including Cartage, Delivery, etc. in the following manner.

Item	Description	Quantity Required	Unit Price of Base Course (FJD VIP) (Price/m ³)	Unit Price of Cartage of Base Course (Price/m ³ /km)	Approximate Distance from Bidders source of Base Course to delivery site	Total Price (FJD VIP)
1	Supply and Cartage of AP65 Base Coarse	2000m ³				
Total Price						

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 EFL representatives and the supplier.

Unit Prices

Bidders are to submit unit prices for the supply of Base Course. This is applicable to delivery of base course on other location and to be used as a preferred supplier of base course.

Item	Description	Prices (FJD VIP)
1	AP65 per Cubic Meter	
2	Cartage of AP65 (S/m ³ /km)	

6.0 Trucking Information

Item	Description	Quantity
1	Number of Trucks that will be used in the	

	supply		
2	Maximum base coarse Loading Capacity per Truck. Bidders shall give a list of trucks and their capacity if the truck capacity varies.	Truck Number	Capacity (m³)
		1.	
		2.	
		3.	
		4.	
		5.	
		6.	
3	Maximum quantity that the supplier can deliver in one day		

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

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.

7.0 Duration of Production and Delivery

EFL requires the delivery of the Base Coarse as and where required. Bidders shall clearly indicate the duration of production and transportation. The bidder if awarded the contract shall ensure that the Base Course is delivered within 48hours to the said EFL site whenever required as the preferred supplier.

8.0 Payment Terms

EFL’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.

Tender Submission - Instruction to bidders

Two (2) hard copies of the tender bids in sealed envelope shall be deposited in the tender box located at the Supply Chain Office at the EFL Head Office, 2 Marlow Street, Suva, Fiji.

Courier charges for delivery of Tender Document must be paid by the bidders.

This tender closes at 4:00 p.m. (16.00hrs Fiji time) on Wednesday 1st August, 2018.

Each tender shall be sealed in an envelope with the envelope bearing only the following marking:

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The Secretary, Tender Committee
Energy Fiji Limited
Supply Chain Office
Private Mail Bag,
Suva

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.**

Bidders are requested to submit a:

- **Valid Tax Compliance Certificate**
- **FNPF Compliance Certificate**