



Fiji Electricity Authority

**Tender Specifications for
Geotechnical Investigation for 33/11kV Zone Substation at
Naikabula, Lautoka
MR 129-2018**

March 2018

1 Background

The Fiji Electricity Authority (FEA)

The FEA is a wholly Government of Fiji owned statutory body that was established under the Electricity Act of 1966. It is supervised by a Board of eight members comprising a Chairman, Deputy Chairman, the Chief Executive Officer of FEA, the Permanent Secretary of Infrastructure and Transport, the Permanent Secretary of Finance, and representatives of Business and Consumer Groups. All members are appointed by the Minister of Infrastructure and Transport, except for the Chief Executive Officer of FEA, who is appointed by the Board with the approval of the Minister. The Management team of the FEA consists of Chief Executive Officer, Chief Finance Officer, General Manager Human Resources, General Manager Generation, General Manager Network, General Manager Customer Services, Chief Information Officer, General Manager Major Projects & Strategy, General Manager Commercial and General Manager System Planning & Control.

FEA maintains power supply systems on the larger islands Viti Levu, Vanua Levu and Ovalau, which account for some 90% of the country's population.

2 FEA System Arrangement

2.1 Viti Levu Interconnected System

The Viti Levu Interconnected System (VLIS) is by far the largest system of the four power systems operated by FEA. The VLIS consists of four hydro power stations and eight thermal power stations, which are linked via 132 kV or 33 kV transmission systems, or 11kV interconnectors. The installed generation capacity on Viti Levu is approximately 292.64MW, comprising 135.1MW hydro-power, 147.82MW of thermal capacity and 9.72MW wind energy. The recorded peak demand on the VLIS is 170MW to date.

The Wailoa, Nadarivatu and Wainikasou hydro power stations are located in the centre of the island. 132 kV steel tower transmission lines connect Wailoa and Nadarivatu power stations to the 132 kV backbone transmission network, which spans from Cunningham to Vuda, with switching stations in Wailoa and Nadarivatu.

The Wainikasou hydro power station is connected to the Wailoa switching station via a 33 kV transmission line and a 132/33 kV step-up transformer at Wailoa. The Nagado Power station is connected to the 33 kV sub-transmission network in the Western region of VLIS.

132/33 kV substations are situated at Vuda in Western Region and at Cunningham in Central Region. These are connected to strategically located 33/11 kV zone substations via 33 kV sub-transmission lines or underground cables.

3 Objective of the Assignment

The Fiji Electricity Authority (FEA) intends to develop its high voltage transmission network by building a new 33/11kV zone substation in Naikabula, Lautoka.

The objective of this assignment will be to:

- Carry out geotechnical investigation of the Naikabula Sub Station site, to determine the soil bearing capacity and relevant design parameters for the civil and structural design of the sub station.

4 Scope of Work

To ascertain for the nature of the sub-soil conditions of the Naikabula site by means of boreholes and trial excavations etc. Samples shall be taken as necessary and tested to determine the physical and chemical characteristics of various strata and of the ground water.

The sub-soil/geotechnical investigation should include determination of the design bearing pressure recommendations for foundations type and material to be used for the foundations. The safe bearing capacity of the sub-strata may be modified at the final design stage when the full site survey and investigation have been completed and the final layout, structural details etc. agreed at the development stage.

Special attention shall be paid to the Ground water table and chemical composition of the ground water and soil in the substation area.

The following should be considered as a minimum requirement, assuming uniform conditions over the Site, but should be extended if many inconsistencies are encountered.

- (1) Depth of boreholes shall be continued up to bedrock if it does not meet the hard stratum of N-value more than 50.
- (2) Borehole records shall describe and indicate level of all soils encountered and indicate the natural water table level. Rock core records shall specify total core recovery, solid core recovery and quality of the rock cored.
- (3) Where applicable, samples of soil shall be obtained from all soil strata or at 2 meters intervals in a single stratum and tested to determine physical and chemical properties, particularly with respect to substances, which would react with concrete or other materials to be used for the foundation works.
- (4) Where applicable, in situ soil tests shall be applied to all soil strata or at 2 meter intervals in a single stratum. Standard Penetration test in non-cohesive soils, field vane tests in sensitive cohesive soils.
- (5) Ground water samples shall be obtained from each Borehole and tested in accordance with approved practice.

Appropriate laboratory tests shall be carried out on all soil and ground water samples to an extent considered appropriate by the geotechnical engineer. All tests shall be in accordance with an internationally recognized standards and methods, e.g. British Standard 1377.

Records of ground borings and trial excavations, results of in situ tests and laboratory tests to determine the physical and chemical properties of the soil and ground-water samples shall be incorporated into a comprehensive sub-soil investigation report. This shall include recommendations on the type of foundations and on the design bearing capacity of the sub-soil at formation levels for each site.

The Sub-soil investigations shall be undertaken by a reputed Institution approved by the Employer's Representative. A qualified geologist or materials engineer shall be in attendance at all times when borings are being driven or samples extracted. Laboratory tests shall be carried out at an establishment approved by the Employer's Representative.

5 Deliverables

Within one week of commencement, the Consultant shall submit to FEA a detailed work program outlining time inputs, field visits and the methodology, in MS Project format.

Fortnightly progress reports shall be submitted every Monday from the date of commencement.

The Consultant will provide a comprehensive Geotechnical Investigation Report, which includes findings and recommendations to the FEA Project Team the executive management group at the proposed date below.

6 Program

The anticipated program for the review is shown below.

| | |
|---|------------|
| RFT Close | 28/03/2018 |
| Evaluation Completed & Endorsed by EMG & Board | 6/04/2018 |
| Engagement of Consultant | 13/04/2018 |
| Commencement of Study | 16/04/2018 |
| Submission of Draft Report to FEA and presentation to FEA EMG | 30/04/2018 |
| Submission of Final Report | 04/05/2018 |

7 Supervision and Reporting

The successful Consultant will report to the General Manager System Planning & Control.

8 Expertise & Qualification

The Consultant shall:

- Possess at least a Bachelor's degree in civil engineering, specialising in geotechnical investigations, or a geologist or materials engineer or of a related field with at least five (5) years' experience.
- Demonstrates integrity and commitment to FEAs values
- Have strong interpersonal and communication skills

Past experience in carrying out a geotechnical investigation for a similar project would be an advantage.

9 Fee Proposal

A detailed financial proposal is required. FEA prefers a lump sum contract, including disbursements.

Unit rates for staff and consumables is to be submitted.

The Contract price proposal shall be comprehensive in that, in consideration of the Bidder meeting all obligations, conditions and liabilities under the Contract.

10 Payment Schedule & Terms

The payment schedule will be negotiated with the successful bidder.

11 Submission of Proposals/Tenders

11.1 Summary of Requirements

Tenderers shall provide the following information as their response to this RFT. Information shall be contained in a single bound document, Two hard copies of this document shall be provided to the location described stated below, together with one electronic copy on CD or USB memory stick. Electronic submissions will be accepted if a hard copy is received prior to the closing date. The electronic copy can be loaded on Tenderlink, FEA's electronic tender hosting website, before closing time. The hard copy is to be sent by courier and air way bill number provided. The Bidder is to provide one original hard copy, one copy and one electronic copy on CD or USB memory stick.

The Bidder shall seal the original copy of the technical proposal, the original copy of the price proposal and each copy of the technical proposal and each copy of the price proposal in separate envelopes clearly marking each one as: "ORIGINAL-TECHNICAL & PRICE PROPOSAL", "COPY NO. 1 - TECHNICAL & PRICE PROPOSAL" etc as appropriate.

The inner and outer envelopes shall

(a) be addressed to:

The Secretary Tender Committee
Fiji Electricity Authority

2 Marlow Street
Suva, Fiji

and

(b) bear the following identification:

Bid for Geotechnical Investigation for 33/11kV Zone Substation at Naikabula, Lautoka
Tender Number: **MR 129-2018**

The inner envelope shall indicate the name and address of the Bidder to enable the bid to be returned unopened in case it is declared "late". If the outer envelope is not sealed and marked as above, FEA will assume no responsibility for the misplacement or premature opening of the bid.

Facsimile submissions will not be accepted.

11.2 Submission Requirements

The proposal for Geotechnical Investigation shall include:

1. A covering letter including the complete name and address of the principal firm including the name and title of person principally responsible for the assignment
2. A detailed methodology including a programme for the works/services. Comments on the TOR can be included to add value to the submission.
3. Lump sum fee for the entire works/services with breakdown for each component
4. Unit rates for all staff proposed to be engaged on the project
5. Bidders are to familiarise themselves with Local Fijian Taxation requirements and clearly identify relevant local taxes that are included in their fees
6. Bidders are to state clearly the currency(s) that is being used in their submission bids
7. Company background and evidence of similar works undertaken by the firm over the last five years including project name, summary of work carried out, contact name and address of clients
8. Background of proposed sub-consultants if any, and their relevant scope of work
9. CV's of personnel that will be engaged in the work including sub-consultants
10. Copies of insurance certificates including any Professional Indemnity Insurance cover are to be submitted
11. Information requirements from FEA, which is to be provided at the commencement of study

Submissions shall be made in English language only.

11.3 Closing Date

Submissions close at **4.00pm (Fiji) Time on 28th March 2018** at FEA's Head Office in Suva. Late submissions will not be accepted.

11.4 Costs

All costs of preparing the submission shall be borne by the Bidder.

11.5 Pre-bid Visit

A pre-bid visit will be undertaken on Tuesday 20th March 2018. Bidders will be required to meet at the proposed 33/11kV substation site in Naikabula, Latuoka at 10.00am. This location can be obtained from maps provided in Appendix 1 of this specifications.

All costs associated with attending the site visits shall be borne by the Bidder.

12 Notification and Award

Following FEA board approval, Bidders will be advised, by letter, whether they have been successful or not. Bidders will be able to debrief with the evaluation team should they so request, however the scoring information will not be released to any of the Bidders at any time.

Notwithstanding any other provision of this document, FEA reserves the right to:

- Accept or reject any proposal
- Seek clarification of any aspect or information provided in this document and to seek further information from any party
- Amend the closing date for submission of Tender or any other date referred to or implied in this document
- In whole or in part, suspend or cancel this Invitation for Tender
- Re-advertise this invitation for Tender

13 Confidentiality of Information

The Consultant shall retain ownership of any Intellectual Property already owned by the Consultant or arising from the Services performed under this TOR, but the Consultant grants to the Client a perpetual royalty-free license to use any Intellectual Property which the Consultant owns which is incorporated in the Services or any reports or products provided to the Client as part of the Services. "Intellectual property" means all intellectual property rights including copyright, designs, specifications and know-how. The Client acknowledges that the Consultant has no liability for use of this Intellectual Property for purposes or projects other than the Project defined in this Agreement."

"All information given by the Client to the Consultant shall remain the property of the Client and be treated as confidential and not disclosed to any third party without the prior written consent of the Client."

14 Addenda to Tender

Where the Authority finds it necessary to make amendments to or clarify the requirements of the tender documents during the period of tendering, it shall publish these through its tender publishing website.

Each Bidder in the Appendix to Tender shall state the reference number and description of each of the aforesaid Addenda which has been considered during the preparation of the Tender. Time extension for tender submission, due to such changes, will be advised by FEA.

15 Contract Conditions

The contract will be based on FIDIC General Terms and Conditions of FIDIC Client/Consultant Contract Model Services Agreement (White Book) Fourth Edition 2006.

Modifications/additional clauses are given in Appendix 3.

16 Insurance

Certificates of insurance including any Professional Indemnity Insurance cover are to be submitted.

17 Inputs/Facilities Provided

All facilities and resources required for the Geotechnical Investigation shall be provided by the successful Bidder.

18 Enquiries

All enquiries shall be directed to:

Tuvitu Delairewa
General Manager Commercial
2 Marlow Street, Suva
Phone: + 679 331 1133
Facsimile: + 679 331 1882
Email: TDelairewa@fea.com.fj



Appendix 1: Locality Map of 33/11kV Substation site in Naikabula, Lautoka

Refer to attached pdf map.

Appendix 2: Condition of Payments

Payments Terms

All payments shall be due and payable by FEA in accordance with the payments terms detailed below.

The payments shall be made on completion of milestones as identified in the Terms of Reference by FEA.

Payments to be made will fall into two categories.

Payments for work carried out off-shore and hence not subject to GST or VAT, but will be subject to 15% non-resident Withholding tax and will be deducted by Employer.

Payments for work carried out within Fiji (i.e. on-shore), and hence shall be subject to Fiji Income tax legislation for resident company and for non-resident company will also be subject to 15% non-resident Withholding tax and will be deducted by Employer.

Off - Shore Work

All invoices issued for off-shore work shall be expressed in the foreign currency and will be issued using Bidder's Commercial Invoice. No GST or VAT shall be included in the invoice. Payment of the foreign currency shall be paid at the prevailing exchange rate as at the date of payment. The Employer shall pay the invoice amount in foreign currency to each overseas bank account nominated by Contractor within 30 days of receipt of the commercial invoice.

On - Shore Work

All invoices issued for on-shore work pursuant to this Contract shall be expressed in Fiji Dollar currency and will be subject to Fiji income tax. The invoice shall be issued using Bidder's Fijian registered entity letterhead. FEA shall pay the amount agreed to in Fiji dollars including the VAT amount to a local bank account nominated by the Bidder. FEA shall pay the invoiced amounts within 30 days of receipt of the invoice.

The Bidder shall advise FEA details of its Fijian registered entity including the Tax Identification Number given by the Fiji Revenue and Customs Authority (FRCA) as soon as possible after the execution of this Agreement.

FEA shall not be responsible to pay invoices issued by the Bidder or its Fijian registered entity if such invoices are not in conformance with the above stated requirements.

If FEA disputes any portion of the amount claimed in an invoice submitted by the Bidder or by its Fijian registered entity, FEA shall notify the Bidder in writing of the reasons for disputing the amount and FEA shall pay that portion of the amount in the invoice that is not in dispute.

The Bidder hereby agrees that payments made by FEA in accordance with this Agreement to the Bidder's Fijian registered entity shall be proper consideration deemed to be received by the Bidder.



All matters relating to taxation such as income tax, withholding tax, provisional tax, PAYE and other tax issues shall be the responsibility of the Bidder. Similarly any superannuation related issues such as FNPF liabilities (where applicable) shall be the responsibility of the Bidder.

Appendix 3: Additional Clauses to FIDIC Conditions of Contract (White Book, Fourth Edition, 2006)

Add to Clause 2.1.1 fourteen [14] days in place of “reasonable time”

Alteration of clause 2.3.1: Insert the word “reasonably” in between the words “all” and “in” in the second line.

Delete and replace “56”days to ”28 “days to Clause 4.6.1

Alternation to Clause 4.6.2

Delete and replace “21”days to “14“ days on third line and 35”days to “7” days on fifth line.

Alteration to Clause 5.2.1

Delete and replace “20” days to “30” days on the first line

Alteration to Clause 5.1.1; Add the following words as second paragraph:

“The Initial Mobilization Fee will be advanced within 7days from execution of the Contract by both the parties. The Contractor shall arrange to issue an Advance Payment Guarantee with a preferred bank of the Client, in the proportion of the amount of the Initial Mobilization Fee received by them at the same time before the advanced is made by the Client. The Advance Payment Guarantee shall expire 28days after the Time for Completion.”

New clause 5.4.2:

“Notwithstanding the provisions of clause 5.4.1, the prices bid by the Contractor shall include all customs duties, import duties, levies, business taxes, income and other taxes including any applicable withholding tax that may be levied in accordance to the laws and regulations in being as of the date 28 days prior to the closing date for submission of bids in the Country on the Consultant’s remuneration, imported goods, goods imported for the Services and documents. Nothing in the Agreement shall relieve the Consultant from his responsibility to pay any tax that may be levied in the Country on income, expenses and profits made by it in respect of the Agreement.”

Clause 6.5 – (Drafting error) Change the clause reference from “6.4.1” to “6.5.1”.

Add to Clause 7.1.1 and 7.2.1

As an insertion new 7.1.4 and 7.2.4 respectively:

“The Consultant shall buy a Professional Indemnity Insurance Cover, Workmens’ Insurance Cover and Consultant’s All Risk Cover to adequately and fully cover any losses, claims arising under this BIDDER Agreement.”

Submission of Tender

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 FEA 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 28th March, 2018**

Each tender shall be sealed in an envelope with:

The envelope bearing only the following marking:

MR 129/2018
Geotechnical Investigation for 33/11kV Zone Substation at FEA's Naikabula
Substation, Lautoka

The Secretary, Tender Committee
Fiji Electricity Authority
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**