ENERGY FIJI LIMITED

MR 186/2025

Tender for Supply and Installation of Electricity

Meter Test Bench

PUBLICITY

NO PUBLICITY OR DETAILS ABOUT THIS PROJECT ARE TO BE DISCLOSED BY ANY BIDDER OR ANY OTHER ASSOCIATED PARTY WITHOUT THE WRITTEN PERMISSION OF EFL PRIOR TO, DURING OR AFTER THE PROJECT IS AWARDED. IN GENERAL ANY PUBLICITY OR MEDIA ENQUERIES WILL BE DEALT WITH BY EFL.

ALL THOSE WHO REQUEST TO UPLIFT A COPY OF THIS TENDER HAVE AGREED NOT TO DISCLOSURE ANY INFORMATION REGARDING THIS TENDER.

Glossary

i. EFL – Energy Fiji Limited

ii. CBM – stands for "cubic meter" in shipping. This measurement is calculated by multiplying the width, height and length together of one's carton.

iii. DIFOTIS - Delivery in Full on Time in Spec

iv. VAT – Value Added Tax

v. VIP – VAT Inclusive Price

vi. SBA – Strategic Business Area

Table of Contents

1. Introduction

1.1. The Company - EFL

Energy Fiji Limited is a public company limited by shares established under Companies Act 2015 and having its place of business at 2 Marlow Street, Suva, Fiji. EFL is solely responsible for supplying power throughout the Fiji Islands. Power is supplied through Hydro, Diesel and wind mill generators located in different parts of Fiji.

The operations of the company are organized into three geographically defined divisions, which correspond to the national administrative divisions. These divisions are:

- Central Eastern Division based in the capital Suva
  - Suva, Lami, Navua, Tailevu, Levuka and part of the Coral Coast
- Western/Northern Division based in Lautoka
  - Lautoka, Tavua, Ba, Sigatoka, Vatukoula, Northern Division (Labasa, Savusavu, Taveuni)

EFL provides electricity services to most parts of the country especially in the Viti Levu and Vanua Levu area and its electricity grid is shown in the map below.

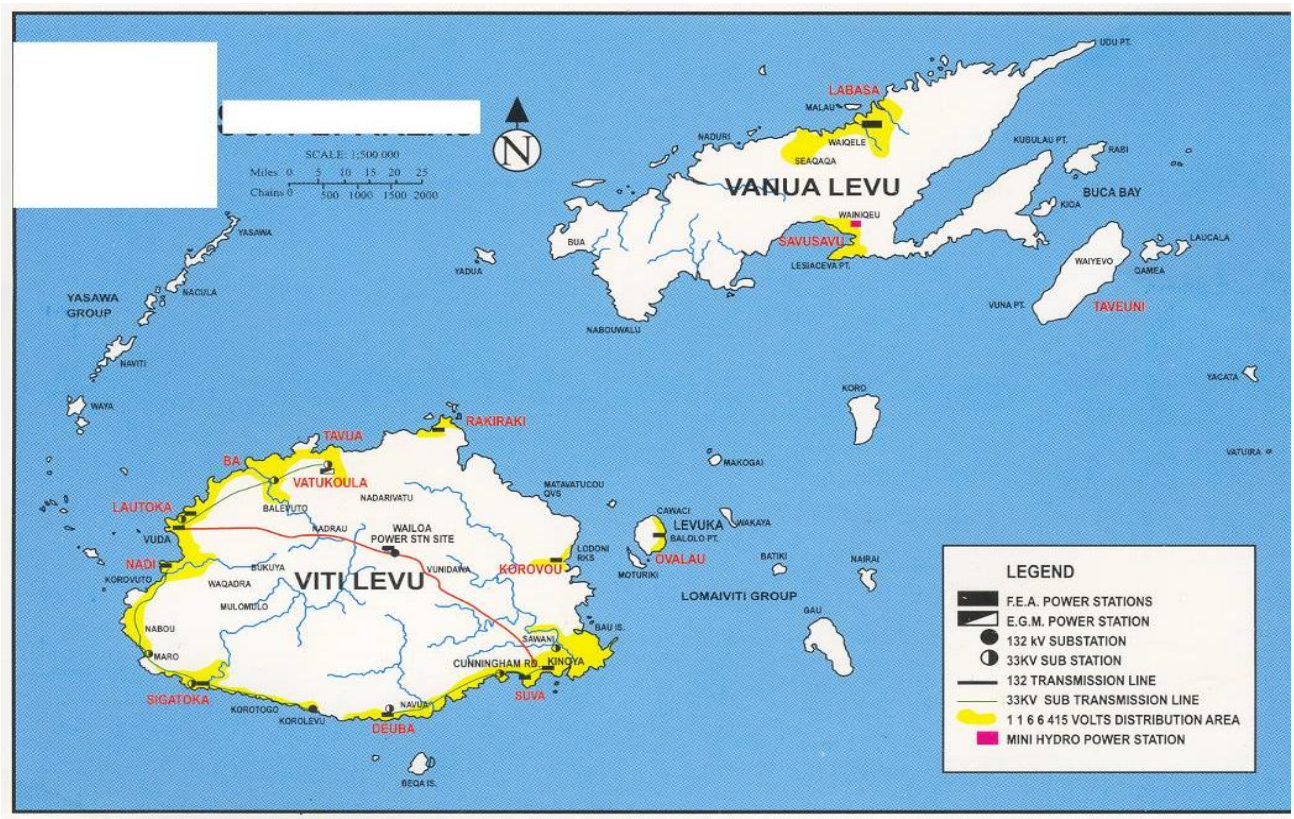


Figure 1 – Energy Fiji Limited coverage Area

EFL's official website is www.efl.com.fj .

2. Purpose and description of Tender

EFL currently operates two Meter Testing Stations located in Suva and Lautoka and are currently tasked with testing all electricity meters which are used throughout the nation.
The demand for using new generation of energy metering continues to increase and these meters are require to be tested on a more advanced and efficent test bench. The test bench at EFL Kinoya is aged and is comming to the end of its usable life. EFL would therefore like to procure a replacement meter test bench for the Meter Testing Station at EFL's Kinoya Depot.

3. Scope

Energy Fiji Limited hereby invites tenders from reputable Electricity Meter Test Bench suppliers or manufacturers for the supply, installation, and training of a Meter Test Bench/Work Station at EFL Kinoya Depot at a timeframe agreed between EFL and the successful bidder. The project referred to in this invitation as "Meter Test Bench".

4. Eligibility / Selection Criteria of the Bidder

The supplier should be a manufacturer, authorized distributor or reseller of the products. Preference will be given to the bidders who are manufactures of the product.

The vendors shall submit the names/contacts of utilities or projects where they have previously supplied the product.
All relevant test reports, product standard certificates, and product specification as a table form / drawings are required to be supplied in the tender as part of their bid.

Other information to be provided by the Bidder as part of the proposal is:

1. Manufacturer's / Vendor's warranty on the product.
2. Method of replacement or reimbursement of faulty / defective or damaged goods
3. Lead time including manufacturing time and shipping duration.
4. The bidder must provide the weight or CBM of the products
5. Supply of DIFOTIS (Delivery in Full on Time in Spec)
6. It is mandatory for the Bidders to provide full specification of the equipment and submitted as part of the bid.

5. Delivery

The Electricity Meter Test Bench & accessories shall be addressed/delivered to **EFL Kinoya Depot, Kinoya, Fiji**. The delivery shall be done within 12 months of issue of Purchase Order by EFL.
Delivery timeframe shall be clearly stated in the bid.

6. Confidentiality

The Instructions made available to each bidder only on the condition that the bidder will not disclose to any third party:

a) Any information whatsoever concerning the works, EFL, or the tendering process, or set out in the Tender Documents.

b) Any part of the tender documents.

c) Any existence of the tender process.

Nevertheless, a bidder may disclose confidential information

I. to its officers, employees, advisers and contractors for the purpose of completing its Tender (if successful) the works ,

II. if required to do so by Law, and

III. if it is already publicly available otherwise than through any breach by the bidder of its obligations of confidentiality

EFL retains any and all proprietary rights in the Confidential Information. A bidder will provide and maintain a copy on request to EFL of, a list of every person or entity receiving the Confidential Information in terms of this clause. Before the bidder discloses Confidential Information under this clause to any third party, the Bidder will ensure by deed that the third party agrees to be bound by the confidentiality obligations set out in this clause.

7. Other Value Added Services

The bidder is open to include any other information that may add value to their product such as device management software applications, Remote Monitoring and Diagnostics, Maintenance and Support Packages, 24/7 Customer Support and not limited to it.

8. Bidders Details

The Bidder shall provide all the necessary information specified in the table below:

General
The registered name of the Bidder:
Business address for correspondence: ***(****Location, Street , Locality City, Pin Code, Country, Telephone, Facsimile, Email Other)*
Contact name of the Authorised Person:
Contact's position: ***Contact addresses if different from above*** *Locality City, Pin Code* *Location, Street, Country, Telephone, Facsimile, Email, Web address*
Business structure:
Include the organisations years of experience in this field and reputation in the market place.

9. Technical Support

i. Bidder should provide details of what technical support is available to EFL to make better use of product.
ii. Include relevant manuals and instructions for proper care and handling of the equipment and accessories, and operations.

10. Product Information

Bidders must include the following document together with their Bid:

- Full Product Specification
- Relevant Test Certificates
- Standard Compliance Certificate.

11. Documentation

a). Bid prices shall be typed; bids with handwritten prices shall be disqualified.

b). The submitted tender documentation together with submitted technical documentation shall be neatly sorted in adequate sections and compiled.

c). All costs related to preparation and submission of the tender (including site visit) shall be borne by the bidder/tenderer and shall be at no cost to EFL.

d). The response to the specification is required to be comprehensive with a completed compliance table.

e). Tenderers are encouraged to offer the existing baseline products that are compliant with or equivalent to all mandatory requirements.

f). The offered product shall have at least the same or better technical characteristics as requested in this tender.

12. Reference Documents

Wherever reference is made in this technical specification to specific regulations, standards and codes, the provisions of the latest current edition or revision of the relevant regulations, standards or codes in effect shall apply unless otherwise expressly stated in the technical specifications. Where such standards and codes are national or related to a particular country or region, other authoritative standards that ensure substantial equivalence to the standards and codes specified will be acceptable.

13. Meter Test Room Site Visit

Bidders may request to visit the Kinoya Meter Testing Station located at Kinoya Depot during normal working hours (8am to 4pm) and normal weekdays (Monday to Friday). However, prior approval must be sought from EFL in accordance with Clause 25.

EFL will try to accommodate each request, but access to the Meter Testing Station will be at the sole discretion of EFL subject to EFL's HSE procedures and rules.

In undertaking visits, the bidder will do so at its own cost and shall comply with EFL's OHS Policies, Rules & Regulations, and shall be deemed to have agreed to indemnify and keep indemnified EFL and their respective employees, agents and advisors from and against all claims, liabilities, costs, damages or expenses which any of them may suffer or incur as a result of the actions of the bidder (including the actions of the bidders' employees agents and advisors), including the undertaking of any remedial work required as a result of such actions. Whilst in the Meter Testing Station, all communication shall be directed to the Project Manager who will be on site.

Bidders may request video calls by coordinating with the supply chain department to make arrangements for inspecting the existing setup and the meter test station layout.

14. Technical Specifications

14.1. Extent of Work

Under the Fiji Electricity Act 2017 the testing and calibration of all energy meters has been prescribed.

EFL intends to replace the existing Old Meter Test Bench with a “state of the art” automated meter test bench at its Meter Testing Station in Kinoya.

Current setup of the Meter Testing Station as well dimensions of the Old Meter Test Bench are given in **Appendix 24.1**.

14.2. Scope of Contract

The scope of this Contract is for complete Supply, Installation, Commissioning, Training & Warranty of one Meter Test Bench/Work Station at the Meter Testing Station located in Kinoya Depot, Kinoya.

The Contractor shall develop and execute a suitable work program to ensure that the entire project is successfully completed and on time. The Bidder’s Work Program must be submitted with the Tender Documents.

The Bidder should also take complete responsibility for all works such as transportation from the port(s) to the Kinoya Meter Testing Station, as well as associated cabling works. EFL will provide the required 3 phase electricity outlet at site. The bidder must supply the male socket relevant to the 3 phase electricity outlet at site.

14.3. Power System Details

The System Details for Low Voltage in Fiji are stated below and the supply must adhere to the 3 phase 4 wire system:

EFL supplies energy using alternating current (ac)

i). at single phase 2 wire system at 240Volts ± 6%

ii). at 3 phase 4 wire systems at 415Volts ± 6% (phase to phase) and 240Volts ± 6% (Phase to Neutral)

The system frequency is **50 Hz.**

14.4. Weather Conditions

Fiji has a tropical climate and details are given below:

Daily Ambient Temperature	32 ˚C
Maximum Ambient Temperature	40 ˚C
Annual Average Ambient Temperature	30 ˚C
Minimum Ambient Temperature	5 ˚C
Relative Humidity	90%
Attitude	< 50m

All plant/equipment provided must be rust proof and vermin proof and designed to be suitable for the abovementioned conditions. The test bench will be installed in an Air-conditioned sealed room.

14.5. General Design Criteria

14.5.1 Insulation Co-ordination

The design of the meter test bench shall be such that insulation co-ordination is provided between different components of items within the test bench and also with other equipment.

14.5.2 Interchangeability

Corresponding items or parts shall be interchangeable as much as possible.

14.5.3 Maintainability

The Meter Test Bench supplied under this Contract shall be maintainable. The bidder must provide all necessary tools and equipment as well as operations and maintenance manuals required for this purpose. All special tools shall be supplied by the contractor in 2 sets.

14.5.4 Ventilation

Cubicles and similar enclosed compartments shall be adequately ventilated to restrict condensation. All components shall be suitably protected against corrosion.

14.5.5 Risk of Fire

All apparatus, cabling and connections shall be designed and arranged to minimise the risk of fire and any damage which might be caused in the event of fire.

14.6. Quality of Material & Workmanship

All materials used under this contract shall be new and of the quality and class most suitable for working under the conditions specified and shall withstand variations of temperature, atmospheric conditions arising under working conditions without distortion or deterioration or the setting up of undue stresses in any part and also without affecting the strength and suitability of the various parts of the work which they may have to perform. All work shall be carried out in a neat and professional manner to the approval of the Project Manager.

14.7. Standards

Generally, IEC standards are to be adopted at all times. British and Australian/New Zealand Standards may also be applied wherever necessary. Any other national or international standard may also be used as long as they are equivalent or superior to the corresponding IEC standard. In such an instance, a copy of the relevant standard must be forwarded to the Project Manager(s).

The design, construction and performance requirements must be fully tested. The Meter Test Bench must be fully certified by a recognised International Testing Institution.

In accordance with the Fiji Electricity Act, any equipment or apparatus must fully comply with AS/NZS Wiring Rules. According to the AS/NZS 3000:2018 Wiring Rules, electrical equipment shall be selected to satisfy the following provisions:

a). Safe Design & Construction.
b). Proper functioning under external influences to which the electrical equipment is expected to be exposed.
c). prevention of any adverse effects that the electrical equipment might cause on the electrical installation.

EFL is guided by the abovementioned wiring standards and wiring regulations. Any equipment introduced in Fiji must meet the requirements of AS/NZS Wiring Rules.

14.8. Detailed Design of Meter Test Bench

The detailed design and installation of the Meter Test Bench must be carried out by the Contractor in accordance with acceptable standards and codes of practice.

Notwithstanding the specifications, technical schedules and requirements specified by the tender document, the successful contractor shall be fully responsible for ensuring that the design, manufacture and construction of all items of the Test Bench and associated equipment under this contract to be fully compliant, functional and compatible with each other technically and otherwise, complying with IEC and/or other relevant standards and safety regulations applicable and to have the installation complete in all respects including training and warranty.

14.9. Meter Test Bench and Equipment to be Supplied

The Meter Test Bench and associated materials and equipment supplied under this contract shall be of proven design, manufacture and construction and shall have been in commercial operation for at least five (5) years without any negative history. The Bidder should submit a list of past orders, indicating the type of equipment, location, country etc. in support of this information. Type test certificates or other certifications from other independent International organizations may also be furnished.

The Contractor shall guarantee the availability of spare parts for all items of the Test Bench and equipment for a period of at least fifteen (15) years.

14.10. Factory Acceptance Testing

Type test certificates shall be furnished for all new items of plant and equipment with the tender.
The contractor shall, at its own cost, carry out all routine tests as or relevant IEC or equivalent standards.

EFL will require two (2) EFL representative to inspect the test bench manufacturing facility and the test bench (with associated equipment) offered by the successful bidder, prior to shipment under the contract and to witness some of the type tests, and all routine tests and acceptance test. All FAT works will be carried out in normal working hours (7.5 hour work day) on a normal work day. The supplier shall provide all facilities for such test and inspection to be carried out by EFL's representatives. During the test and inspection, an operator of the test bench (from the manufacturer) shall be provided and the operation of the bench shall be done by the operator under EFL test request. All associated costs of the transportation (air travel, local travel to and from hotel), internet charges, meals and accommodation shall be provided by the contractor. All associated costs for the FAT should be included in the tender price.

The test should include (but are not limited to) the following:

- A complete work through of the test bench, its operation, function and features
- Visual inspection of the test bench, workmanship
- Test and calibration of the reference meter. The testing equipment used for calibration must be valid and such certificates must be provided. The testing equipment must be supplied by the contractor at site
- Testing of single phase 2 wire, 3 phase 4 wire and 3 phase 3 wire direct connected electricity meters.
- Testing of 3 phase 4 wire and 3 phase 3 wire CT connected smart meters
- Testing of pre pay meters (single phase and three phase)
- Load and dial test kVARh, kWh (import and export depending on meter type)
- Insulation Properties of the various hardware
- Operation of the software
- Data input using wireless hand held device.

All electricity meters, test equipment, tools, software's etc. for the above test shall be provided by contractor at site.

14.11. Training of EFL Personnel

EFL requires 2 EFL personnel to be attached to the contractor's Project Team during the installation and commissioning of the test bench at EFL Kinoya Test Lab. They are to be trained on installation, operation, maintenance of the meter test bench and associated equipment supplied under this contract.

The 2 EFL personnel shall not form part of the contractor's team for the execution of project but must be attached purely for training purposes.

The cost of the associated training should be included in the tender price.

The successful bidder shall forward a suitable training program for approval by the Project Manager

Kindly note for any services conducted (including training), there is an additional withholding tax of 15% charged on the associated training. The withholding Tax component shall be borne by the bidder and shall be catered for in their bid price. For more information on taxing, you may visit www.frcs.org.fj

14.12. Tools & Equipment

The bidder shall submit a list of tools and equipment required for the successful operation and maintenance of the installation and shall include the cost of supplying such tools and equipment's in the price schedule.

14.13. Spares

The bidder shall forward a list of manufacturer's spare parts required for the operation and maintenance of the plant and equipment supplied under this contract for a period of 15 years.

The cost of these spare parts shall not form part of this contract but should be shown in a separate price schedule.

The contractor shall ensure the availability of spare parts for all items of the equipment for a period of at least fifteen (15) years.

14.14. Technical Literature – Operations and Maintenance Manuals

Bidders shall furnish technical literature including catalogues, test certificates etc. in support of plant and equipment offered by him with the tender.

The successful contractor shall forward **two (2) hard copies of all operations and maintenance manuals**, spare parts, catalogues, detailed schematics and wiring diagrams and all other documents required for successful operation and maintenance of Meter Test Bench. The same shall be provided in PDF soft copies as well. The originals of the schematics drawings in paper and one copy in digital format (dxf or dwg) are required to be handed over to the Project Manager(s).

All literature shall be in the **English language**.

14.15. Type Test Certificates

Copies of all type test certificates for all new plant and equipment shall be furnished as evidence in support of compliance with the specifications.
The contractor shall furnish copies of certificates of all routine tests, inspection tests and any other type of tests, which would have to be performed at a later stage.

14.16. Existing Conditions & Space

The Bidder is required to ascertain for himself the existing conditions, including limitation of space, geographical, climatic or other considerations.
The Bidder shall satisfy himself of the suitability of the existing meter room for the installation of the Test Bench and equipment to be supplied.

14.17. Packing

Equipment shall be carefully packed for transport and shipment in such a manner that it is protected from all dust, and climatic conditions during loading, transport, unloading, and subsequent storage in the open.

Equipment shall be suitably packed and protected against vibration, movement and shock which may occur during loading and transport. Particular care in packing shall be taken when the apparatus is transported by road. Instruments and fragile items shall be packed separately. All items, which include delicate equipment, shall be suitably sealed to prevent corrosion and avoid damages during transit.

The successful bidder may be required to pack and dispatch the item as per EFL's requirement. The package size and quantity will be determined by EFL unless the product is a standard factory package.

All packages must be clearly marked with the quantity content in the carton, crate or pallet.

14.18. Program

Within 14 days of acceptance of the tender, the Contractor shall provide the Project Manager(s) with a copy of the Program of Work covering manufacture, test, delivery and installation.
The Program shall conform to the general requirements unless otherwise approved by the Project Manager(s).

14.19. Annual Certification of Meter Test Bench & Energy Meters

The Trade Measurement Legislation provides that all instruments used for Trade purpose must have a pattern approval certificate. Therefore, before an instrument is inspected by the Department of National Trade Measurement & Standards, the instrument's design and performance must be certified. Fiji accepts instruments that have Pattern Approval Certificate from National Standards Commission Australia for Pattern Approval Examination.

The Meter Testing Stations are tested annually under the Fiji National Trade Measurement Decree 1989 by the Department of National Trade Measurement & Standards. After the Meter Test Bench is certified, the electrical energy meters are selected randomly and tested. The test results are then verified by comparison.

Bidders are required to check with the Ministry of Commerce, Trade, Tourism & Transport regarding National & Trade Measurement Decree for further clarification. Their address is:

The Director
Department of National Trade Measurement & Standards
PO Box 2118
Government Buildings
Suva
Fiji

After installation and preliminary commissioning of the test bench, the test bench shall undergo certification by the above Ministry before it can be deemed fully commissioned for use. EFL will organize the certification works by the Ministry at site however, the **contractor must provide all the necessary support and information for the onsite commissioning works**. **The contractor must be present on site for the certification works by the Ministry**. Should, for some reason, the contractor is not able to be present at site for the certification works, then online support (via live video, computer access) shall be provided by the contractor as required by EFL. This shall be only for the initial certification works.

15. Detailed Technical Specifications

15.1. Introduction

This section details the minimum requirements for an energy meter test system. The system shall be fully automated and shall be comprised of a self-contained, single three phase meter test and calibration station with interface facilities, computer controlled and Windows based testing software. The system shall be capable of testing automatically single phase as well as three phase electromechanical, static or electronic/digital type active and reactive energy meters, including three phase meters with closed IP links.

The system must work from an un-stabilized mains supply.

15.2. Test Station

15.2.1 Standards

Generally, IEC standards are to be adopted at all times. British and Australian/New Zealand Standards may also be applied wherever necessary. Any other national or international standard may also be used as long as they are equivalent or superior to the corresponding IEC standard. In such an instance, a copy of the relevant standard must be forwarded to the Project Manager(s).

In accordance with the Fiji Electricity Act, any equipment or apparatus must fully comply with AS/NZS Wiring Rules.

15.2.2 Testing Process

The testing process of the Test Bench shall be fully automatic and computer controlled. The equipment shall be capable of performing multiple load points test in sequence and also do the individual tests when selected by the Operator from the computer screen menu, via the computer keyboard.

15.2.3 Measurement System

The system shall compare values of voltage and current using the reference standard meter and not by using measuring transformers. The voltage and current generated shall be measured by the reference standard meter directly so that the accuracy of the standard meter is the accuracy of the whole system. The process control, calculation, data storage and recording must be carried out automatically.

15.2.4 Capacity

The Test Bench should be able to test up to twenty (20) single phase or twenty (20), 3 phase meters at any one time. The offer must provide a complete system to test automatically single phase and 3 phase electromechanical, static or electronic type active and reactive energy meters, including three phase meters with closed IP links.

15.2.5 Test Rack

The Test Rack should be able to accommodate up to twenty (20) single phase or twenty (20) 3 phase meters completely assembled and shall be provided with scanning devices suitable for all types of meters. The scanner shall be easily adjustable in any direction to accommodate all types of meters.

15.2.6 Safety

All safety switches, protective devices, circuit breakers and fuses must be included. Use of LASER scanning device is not acceptable due to the possibility of eye damage.

15.3. Voltage and Current Generation System

15.3.1 Power Supply

Single phase 240V and three phase 415V (±6%) at frequency 50Hz.

15.3.2 Operating Temperature

Maximum 40 °C of ambient temperature.

15.3.2 Humidity

Up to 90% humidity

15.3.4 Test Voltage Circuit

Single phase to neutral voltage output shall be from 50-300V and three phase to phase voltage output shall be from 80-500V. Accuracy of RMS voltage must be within 0.2% with high resolution. The signal generation shall be controlled by the computer. Full protection against overload and open circuit conditions must be provided. Also protection between voltage and current wiring must be included.

This circuit should be such that if any of the meters on the test rack has an electrical fault causing protective devices to trip, only the faulty meter test station shall be isolated via trip and test on the rest of the meters on the test rack shall continue and not be isolated or affected.

15.3.5 Test Current Circuit

The current output shall be from 1mA-120A per phase. Accuracy of RMS current must be within 0.2% with high resolution.

This circuit should be such that if any of the meters on the test rack has an electrical fault causing protective devices to trip, only the faulty meter test station shall be isolated via trip and test on the rest of the meters on the test rack shall continue and not be isolated or affected.

15.3.6 Phase Shift

The phase angle setting shall be 0 to ± 180° with accuracy better than 0.1°. The quick selection for changeover for any power factor (i.e. from power factor 1 to 0.5) must be provided by the test system.

15.3.7 Frequency

The frequency output shall be from 45 to 65Hz in steps of 0.1Hz.

15.3.8 Power Output

The output power of the voltage circuit shall be 500VA per phase, and the output power of the current circuit shall be 1000VA per phase.

15.3.9 Harmonic Superposition

Both voltage and current circuits shall be superimposed from the 2nd to the 10th harmonic in accordance with IEC 60687. All testing parameters shall be automatically controlled and adjusted by the PC.

15.4. High Accuracy Reference Standard Meter

The following parameters shall be tested and appear on the computer screen:

- voltage per phase
- current per phase
- frequency
- phase to phase and three phase power factor
- phase to phase and three phase active, reactive, and apparent power
- phase shift between current and voltage
- phase shift between voltage (symmetry if voltage generated)
- internal temperature

15.5. Test Rack

Proposed dimensions of the test rack shall be:
Length: 220-320cm
Width: 90-220cm
Height: 40-60cm

15.6. Process Management System

15.6.1 Computer

The computer shall be minimum intel CORE i9, 32 GB RAM and 512TB SSD with at least 2 serial ports plus all other relevant ports required to operate the Test Bench and print the test reports.

27” LCD monitor with Stand.

All relevant cables and accessories should be supplied along with the PC.

Administrative access to be provided to EFL.

15.6.2 Printer

An A4 size printer laser jet type. The toner cartridge should be readily available in Fiji.

15.7. Software

15.7.1 Characteristics of the Software

The front client software must run on Windows 11 or latest version. Backend database must be latest supported version of MS SQL on latest Windows environment. The software shall be menu driven and user friendly**. It must allow control and monitor of simultaneous testing of twenty (20) three phase meters with different constraints in the same test**. The constraint may be given in rev/kWh and similarly in impulse/kWh for static meters, and any meter types/model etc. The software must allow entry of error band tolerance for each different test point and also entry of meter parameters via the keyboard.

The average mean error and standard deviation shall be automatically calculated and printed at the end of the rest process. There shall be facility for central storage and monitoring of the testing procedures. This includes storage of results on hard disk and/or flash drives. All these information shall be compatible and be able to be transferred to other standard database such as MS Access, Excel, or any other ASCII files. Backup procedures of test results must be clearly mapped out.

The software shall produce test reports of individual meters when required in PDF document and in a format that is suitable to EFL.

The main tasks that will be executed by the software shall be:

1. Meter verification
2. Meter calibration
3. Meter Data Record

The meter verification shall allow the operator to program an unlimited number of tests with different current, voltage, and phase angle values or power factor, defining for each one an error band tolerance. The tests may be executed in sequence or individually as designed by the operator.

The meter calibration shall allow the operator to adjust the meter in the shortest amount of time possible. At the end of the sequential tests, the operator should be able to adjust those meters out of the defined tolerance ranges. The percentage (%) error of failed meters shall be displayed also on the PC screen. Graphical curve error shall also be included.

The meter data record shall allow the operator to store in MS Access database compatible data-file mainly the following information of the meters:

- manufacturer
- model
- year of manufacture
- name of owner
- serial number
- date received
- conditions of seals when received
- date tested
- mean value of error on first test
- performance after adjustment
- customer
- register value
- observations

15.7.2 Backup Facilities

The application must have an intuitive backup function that would allow the application to be rebuilt should any failure occur.

The software shall be delivered separately also for this purpose.

15.7.3 Self Diagnostic

Scanning head check; must be available when the whole system is ready to batch off meters. Voltage & current generation: direct communication between power amplifiers and the computer.

15.7.4 Interface Communication

Direct control with all the interface system connected to the system

15.7.5 Software Security

Edition of databases of test sequence and results shall only be possible under authorised password with Access Control. Access shall be given to allow others to see the results.

15.7.6 Manual for Hardware/Software Product

The manual shall consist of user's guides, maintenance, trouble shooting and software instructions, electrical and electronic diagrams and standard meter accuracy certificates.

All technical documentation and manuals shall be provided in the English language.

15.7.7 Updates

Future software updates and security patches shall be provided at no cost to EFL.

15.8. Commissioning

The Installation, Testing, Commissioning & Training Course shall be carried out at EFL's workplace by the contractor.

15.9. Warranty

The above described equipment shall be provided with minimum warranty of 24 months after commissioning. Preference will be given to bidders who will provide warranty more than the minimum value stated above.

15.10. Mandatory Requirements

The following are general mandatory requirements:

1. Three phase meter compatible all 20 positions
2. Clamp on type meter rack (pre-wired rack)
3. Testing of three phase and single phase meters with closed IP links
4. Sub-board with rated protection installed within test bench in case of fault or surge.
5. Hand lead, wireless bar code scanner with touch screen for entering meter reading and other details.
6. Computer Software to be the latest version (windows 11 pro).
7. Printer to have automatic double sided printing feature.

Optional Requirements (to be priced separately)

1. Temperature & Humidity monitoring device installed within the test bench.

16. Delivery Timeframe

Bidders are required to submit a Detail Delivery Plan on how they intend to carry out the required work based on the scope of works provided, i.e., production, assembly and delivery. Failure to provide Detail Delivery Plan will render your bid disqualified.

17. Defects Warranty Period

All goods shall be supplied with a Warranty Period of **not less than 24 months** from the date of commissioning of the Meter Test Bench at EFL. During the Warranty Period, defective items/parts shall be returned to the supplier for replacement on a pick-up exchange and return-delivery basis. The cost of the freight and repairs shall be borne by the supplier/bidder.

18. Contract Payment Terms

EFL's contract payment terms is payment to be made within 30 days from the date when invoice is received subject to the full delivery of ordered goods and service as per contract. If this is not accepted, Letter of Credit and Advance Payment are also accepted.

For Advance payment, the following condition applies:

1. Amount of bank guarantee must be equal to the advance payment contract
2. Issued to designated bank in Fiji accepted by EFL
3. Banker of supplier must liaise with banker of EFL
4. Validity of bank guarantee as per the contract terms and conditions
5. Bank guarantee should be irrevocable & non-negotiable until expiry date and satisfactory delivery of goods and services
6. The supplier's banker shall meet and satisfy the terms and conditions of the designated banker of EFL to ensure Bank guarantee is issued.
7. The cost of arranging Bank guarantee or Letter of Credit shall be responsibility of the successful bidder

Failure to accept the above payment terms will render your bid non-compliance.

Contract payments can be made according to the table below.

Payment Details	Description	Percentage payment
1st Payment	Successful delivery at site of the Meter Test Bench and accessories as per tender requirements.	70%
2nd Payment	Successful Commissioning of the Meter Test Bench as per tender requirements.	30%
3rd Payment	Successful completion of the training and local governmental certification of the Meter Test Bench as per tender requirements.	10%

EFL gives **first preference to bidders** who **do not** require advance payment and are willing to accept EFL Purchase Order and accept payment within 30days after receipt of invoice by EFL.

19. Price Validity

The price submitted shall remain valid for acceptance for 6 months from the date of opening of bids and bidders shall not withdraw or amend their proposal prior to the expiration of the validity period. Price Validity of more than 6 months is highly accepted.

In exceptional circumstances prior to expiry of the original validity period, the Authority may request the supplier for an extension in the period of validity. The request and the response thereto shall be in writing. A supplier agreeing to the request will not be permitted to amend his tender price.

EFL will enter into contractual agreement (based on AS/NZS 4911: 2003, FIDIC contract or EFL's standard contract) with the successful bidder for the Supply and Installation of Electricity Meter Test Bench.

20. Cost Details

Bidders shall use the table below to list summary of cost associated with this tender. For OVERSEAS bidders their prices must be quoted in their currency with **CIF freight term** and the delivery site is EFL, Kinoya Depot, Kinoya, Fiji.

#	**Description**	**Quantity**	**Total**
1.	Meter Test Bench complete set including PC and accessories	1	
2.	Factory Acceptance Test (For 2 EFL personnel)	1	
3.	Installation and commissioning of Meter test Bench at EFL Kinoya site by 1 x Manufacturer personnel.	1	
4.	Training and Certification	1	
5.	Freight [Sea freight]	1	
	Total [CIF, EFL Kinoya, Fiji]	-	

All **LOCAL bidders** are to provide VIP price, **FJD (VIP)** that is inclusive of freight, duty, taxes, customs clearance and delivery charges to *EFL Kinoya Depot, Kinoya*.

Training

The successful bidder will have to provide mixture of On Job Training and face-face classroom training to EFL technical staffs.

The cost of training shall be borne by the successful bidder and shall comprise of instructor's travel expenses, accommodation, meals, local travel, training and any other expense. Training room will be provided by EFL.

The bidders will be required to breakdown the training component for ease of distinguishing between Labour and Non-Labour component such as instructor's travel expenses, accommodation, meals etc.

#	**Description**	**Days**	**Labour Component (Inclusive of WHT)**	**Non-Labour Component)**	**Currency, Total**
1	Installation, Commissioning, Training and Certification **[Item 3 & 4 in section 20]**				**Note: Total should match with sum of Item 3 & 4 in Section 20**
	Total	-	-	-	

NOTE: 1. LABOUR COST WILL ATTRACT 15% WITHHOLDING TAX (WHT) AS PER FIJI'S TAX LAWS

The withholding Tax component shall be borne by the bidder and shall be catered for in their bid pricing.

21. Tender Evaluation

After the bids are received, it will go through a normal tender evaluation process as per EFL's Tender Policy and Procedures. The successful and unsuccessful bidders will be advised of the outcome after completion of the Tender evaluation process.

The evaluation of the tender submissions will be weighted as such:

No.	Components	Weighting (%)
1	Financial Components	35 %
2	Technical capability	40 %
3	Delivery Timeframe	10%
4	Proven background on products quoted.	5 %
5	Warranty, backup service and spare parts.	10 %

22. Communications Regarding this Tender

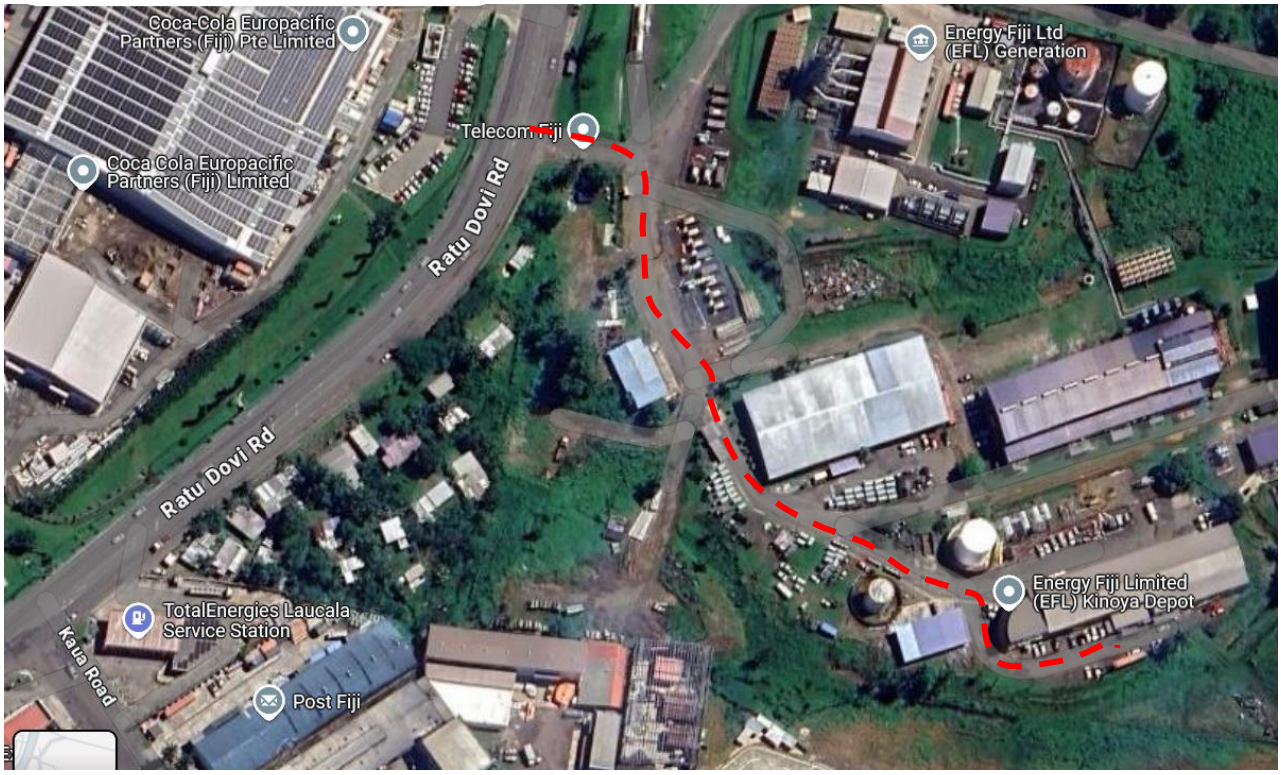
All communication in relation to this tender must be directed to the Manager Procurement, Inventory & Supply Chain who will then be responsible for disseminating to the Project Manager(s). The contact details of this person is stated below:

Jitendra Reddy
Manager Procurement, Inventory & Supply Chain
2 Marlow Street,
Suva, Fiji
Phone: +679 3224 360
Email: tenders@efl.com.fj

23. APPENDIX 1:

23.1. Location of Kinoya Meter Test Station

Direction from Ratu Dovi Road to the EFL Kinoya Meter Test Station is shown below:



The location of the existing Meter Test Station is shown below.

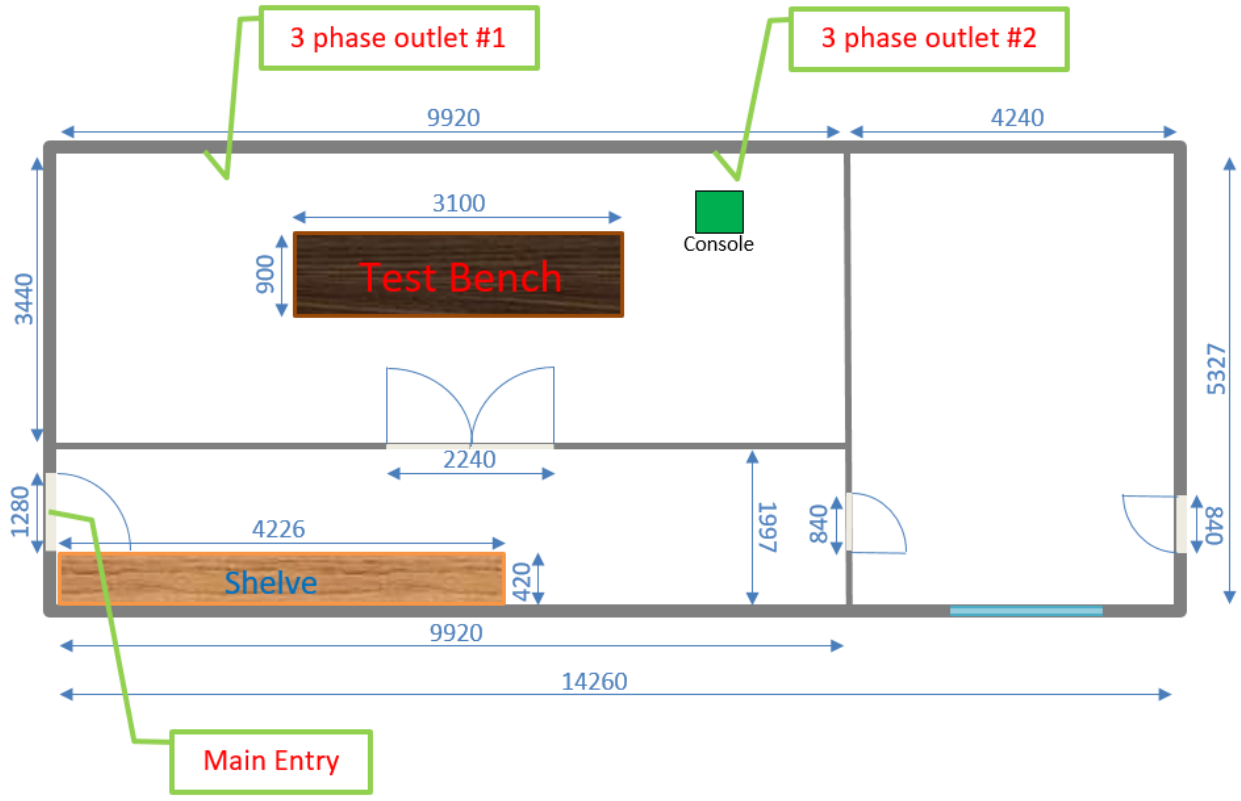
Kinoya Meter Test Station

The GPS location of the site is as follows:

https://maps.app.goo.gl/WWNXoaBcAHqrXTMeA

23.2. Current Meter Test Room Setup

The dimensions of the existing meter test station are as below.



Note: All measurements are in "mm", Room height is 2.6m.

23.3. Tender Checklist

The Bidders must ensure that the details and documentation mention below must be submitted as part of their tender Bid

Tender Number _____

Tender Name _____

1. Full Company / Business Name: _____

   (Attach copy of Registration Certificate)

2. Director/Owner(s): _____

3. Postal Address: _____

4. Phone Contact: _____

5. Fax Number: _____

6. Email address: _____

7. Office Location: _____

8. TIN Number: _____

   (Attach copy of the VAT/TIN Registration Certificate - Local Bidders Only (Mandatory)

9. FNPF Employer Registration Number: _____ **(For Local Bidders only) (Mandatory)**
10. **Provide a copy of Valid FNPF Compliance Certificate (Mandatory- Local Bidders only)**
11. **Provide a copy of Valid FRCS (Tax) Compliance Certificate (Mandatory Local Bidders only)**
12. **Provide a copy of Valid FNU Compliance Certificate (Mandatory Local Bidders only)**
13. Contact Person: _____

I declare that all the above information is correct.

Name: _____

Position: _____

Sign: _____

Date: _____

23.4 Tender submission

Bidders are requested to upload electronic copies via Tender Link by registering their interest at: https://www.tenderlink.com/efl

EFL will not accept any hard copy submission to be dropped in the tender box at EFL Head Office in Suva.

This tender closes at 4.00pm (1600hrs) on Wednesday 11th June, 2025.

For further information or clarification please contact our Supply Chain Office on phone **(+679) 3224360 or (+679) 9992400** or email us on tenders@efl.com.fj

The bidders must ensure that their bid is inclusive of all Taxes payable under Fiji Income Tax Act. Bidders are to clearly state the percentage of VAT that is applicable to the bid prices.

The lowest bid, will not necessarily be accepted as the successful bid.

The Tender Bids particularly the "Price" must be typed and not hand written.

Any request for the extension of the closing date must be addressed to EFL in writing three (3) working days prior to the tender closing date.

Tender Submission via email or fax will not be accepted.