



ENERGY FIJI LIMITED

BIDDING DOCUMENT

MR 326/2024

**SUPPLY OF FIVE (5) POWER QUALITY
ANALYZER**

Section 1. Instructions to Bidders

- 1. Scope of Bid** Energy Fiji Limited (hereinafter referred to as "the Employer"), wishes to receive bids for supply of Five (5) Power Quality Analyzer as specified in this bidding documents
- 2. Eligible Bidders** This Invitation to Bid is open to bidders who have sound financial and technical background and have expertise in supplying such equipment with arrangement for servicing/repairing or facilitating for such.
- 3. Qualification of the Bidder** To be qualified for award of Contract, bidders shall submit all relevant documents, brochures, details and filled evaluation criteria document which shall be providing sufficient detail to confirm the bidder's capability to fulfil the contract.
- 4. Cost of Bidding** The bidder shall bear all costs associated with the preparation and submission of its bid and the Employer will in no case be responsible or liable for those costs.
- 5. Deadline for Submission of Bids** Bids must be received by the Employer at the address specified below no later than Wednesday 9th October 2024, 1600 hours (Fiji Time).

The Employer may, at its discretion, extend the deadline for submission of bids by issuing an addendum, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will thereafter be subject to the deadlines extended.
- 6. Late Bids** Any bid received by the Employer after the deadline for submission of bids prescribed will be rejected.
- 7. Modification and Withdrawal of Bids** The bidder may modify or withdraw its bid after bid submission, provided that written notice of the modification or withdrawal is received by the Employer prior to the deadline for submission of bids.
- 8. Employer's Right to Accept any Bid and to Reject any or all Bids** The Employer reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids, at any time prior to award of Contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for the Employer's action.

9. Bid Prices

- a. The Bidder shall indicate on the appropriate Price Schedule the unit prices (where applicable) and total Bid Price of the offered goods.
- b. The Bidder's separation of price components will be solely for the purpose of facilitating the comparison of Bids by EFL and will not in any way limit the EFL's right to contract on any of the terms offered.
- c. All non-exempt duties, taxes and other levies payable by the Contractor under the Contract/Purchase Order, or for any other cause shall be included in the rates, prices and total Bid price submitted by the Bidder.

10. Bid Currency

- a. Unless otherwise specified in Section II, the unit rates and Prices shall be quoted by the Bidders Country of Origin.

**11. Period Of Validity
Of Goods**

- a. Unless otherwise specified in Section II, bids shall remain valid for a period of 180 days after the deadline for the receipt of Bids. A Bid valid for a shorter period shall be rejected by EFL as non-responsive.
- b. In exceptional circumstances, EFL shall may solicit the Bidders' consent to an extension of the period of validity. The request and the responses thereto shall be made in writing.

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1. General Description

This tender is to purchase new Power Quality Analyzer complete with accessories. The device is to be durable and reliable designed for Electrical Utilities able to deliver the following data features:

- Power frequency
- Magnitude of supply voltage
- Flicker
- Supply dips/swells
- Voltage Interruptions
- Voltage unbalance
- Current profile and load
- Voltage harmonics (by reference to IEC 61000-4-7)
- Voltage Inter-harmonics (by reference to IEC 61000-4-7)
- Mains signaling
- Suitable for all weather conditions
- Software for automated report generation
- Certified to IEC61000-4-30 Class A

The supplier is to supply **Five (5) Units** as per the specification below and shall include sufficient information and supporting documentation in order to determine compliance with this specification without further necessary inquiries.

NOTE: A face-to-face training on the Power Control Analyzer must also be provided at EFL's depot in Kinoya and Navutu.

2. Specifications and Evaluation Criteria

Note to bidders: Please submit a copy of the table below with your products details (in the BIDDERS Remarks column) in comparison to what is required by EFL. Failure to submit the mandatory technical specifications in the table below will automatically result in the disqualification of the tender bid. Find below table that contains the technical specifications for the **one (1) set of Power Quality Analyzer complete with Accessories**

Specifications			Bidders Remarks
	Voltage	Current	
Input Channels	4	4	
Measuring Range (RMS)	A, B & C channels: 0-600 VAC GND channel: 0 - 60 VAC	0-3000 Amp	
Frequency Range	50Hz nominal	50Hz nominal	

Instrument Accuracy	A, B & C channels: $\pm 0.4\%$ reading ± 1 lsd GND channel: $\pm 1\%$ reading ± 1	$\pm 0.4\%$ reading ± 1 lsd	
System Accuracy	$\pm 0.4\%$ reading ± 1 lsd	1% reading ± 1 lsd (0.5M Current probes)	
Resolution Logged Data	A, B, C & GND channels: 0.01 Volt	0.01 Amp	
Resolution Display	0.1 Volt	0.1 Amp	
Voltage & Current Unbalance	Standard: IEC61000-4-30		
Waveform Capture	Duration: 400ms Triggers: Half cycle RMS dV/dt		
RMS Capture	Half Cycle RMS 50Hz - 5s to 30s configurable		
Sag / Swell Capture	Half Cycle RMS		
Circuit Connections	Star/Wye, Delta, Delta, Split Phase, Single Phase, Generic Independent Measurement.		
Display	Graphic LCD 128 x 64bits		
Power Consumption	Maximum 12 VA (10 W typical) from Phase A		
Power Source Main	Phase A to Neutral 60 – 600 Volts AC 50Hz		
Power Source Backup	6 V 0.5 Ah Rechargeable Sealed Lead Acid		
RTC Battery	3 V 950 mAh Li-Manganese Dioxide / Organic Electrolyte		
Ambient Temperature	-20°C to +60°C (-4°F to +130°F) Note: standby battery is disabled when ambient temperature exceeds +45°C (113°F)		
Nominal AC Phase to Phase Voltage	600 Volts		
Nominal AC Phase to Neutral Voltage	600 Volts		
Nominal AC Phase to Ground (earth)	600 Volts		
Unit IP rating	IP66 minimum		

The following are the accessories that must come with the power quality analyzer kit.

Note: The table only provides details for one kit, the accessories below must come with all the five (5) kits.

Category for Evaluation Criteria (Mandatory)	Bidders Remarks
Supplier should also provide:	
1. Mounting plate and nylon safety strap	
2. Data and power supply cable	
3. 2 channel voltage lead - measures Phase A and Ground (earth) with respect to Neutral. Power cable for GPO connection. Suitable for CAT II 300V environments.	
4. 4 channel voltage lead - measures A, B, C & Ground (earth) with respect to Neutral using 5 fused voltage clamps. Safety rating CAT IV 600 V	
5. 4 channel voltage lead - measures A, B, C, & Ground (earth) with respect to Neutral using 5 fused banana plugs. Safety rating CAT IV 600 V	
6. 4 Flexible current probes	
7. Instruction Manual	
8. Software CD	
9. Carry bag	
10. GPS Antenna (if unit has built-in GPS)	

Category for Evaluation Criteria (Mandatory)	Bidders Remarks
Supplier should also provide:	
1. Calibration Certificate of instrument along with the traceability	
2. Standard International Guarantee /Warranty certificate	
3. Service Center Information.	
4. Quoted price should have a validity of 6 months	
5. Instruction Manual	
6. Bidder to provide following information along with technical data in their technical bid <ul style="list-style-type: none"> • Physical dimensions of the instrument. • Weight of the instrument. • Weight of the instrument with accessories • List of the customers to whom they have supplied the quoted model. 	
7. Bidder must be able to provide back-up service/ repair and recalibration	
8. Bidder shall provide for face-to-face training on the use of the equipment to EFL Technicians and Engineers on site (EFL Kinoya & Navutu Depots)	
9. Price Validity of 180 days	
10. 3 years warranty period	

3. Carrying Facility, Dimension and Weight

There shall be a transport case for each unit. It must be of hard and rugged material with carrying handles and locking facility. The interior of the cases shall have shock proof material for the units such as foam layer.

The Power Quality Analyzer must be at least of the dimension 230mm x 120mm x 90mm and the case must cater for these dimensions together with the storage of cables.

1. Bidders remark on below dimension of the units.

	Length	Width	Height
Power Quality Analyzer			

2. Bidders remark on below dimension of the Transport Cases.

	Length	Width	Height
Power Quality Analyzer Carrying Case			

Note: Also mention if case is provided as package.

The weight of the test equipment's shall be light enough for one person to lift, carry and load it easily. The weight must not exceed 5kgs.

Bidders Remarks on below weights of the units.

	Power Quality Analyzer (only)	Power Quality Analyzer Case (only)
Weight (Kg)		

4. Standard Compliance

The power quality analyzer should have the standard of **IEC61000-4-30** in the following:

- Logged parameters (V, A, Min/ Max, Freq, TPF, DPF, kW, KVA, kVAR)
- Frequency (+/- 0.02Hz)

The power quality analyzer should have the standard of **IEC61000-4-7** in the following:

- Total harmonic distortion (THD-F & THD-R)
- Harmonics (up to 48th, magnitudes & angles)
- Inter-harmonics ((up to 48th)

The power quality analyzer should have the standard of **IEC61000-4-15** in the following:

- Flicker (Pst & Plt) – (10min Pst, 2hr Plt, logged every 10min)

5. Memory Capacity

The memory capacity of the power quality analyzer shall be a minimum of 1GB.

6. Warranty

3 years warranty on the Power Control Analyzer unit is to be provided. The warranty shall start from the point the item has been received by EFL and confirmed operational and defect free **after a face-to-face training**.

7. Communications

The power quality analyzer should use USB 2.0 for local operations. WiFi must be built-in to allow data download from a distance.

8. Protection Class

The power quality analyzer should be of **AS 60529-2004 - IP66** standard in protection class. The power quality analyzer must have the capability to be used in all weather conditions and must be protected by the standards of **AS 60529-2004 - IP66**.

9. User Operation Manual

A user manual is to be provided for each function, usage detail and onscreen options is to be provided with the Power Quality Analyzer unit. Where possible, virtual training software and media copies (video/cd) are to be provided to enable easier understanding of the equipment.

10. Safety

The power quality analyzer shall be of IEC 61010-1 2001, pollution degree 3 and Measurement Category of IV 600 Volts (Double Insulation or Reinforced Insulation, Altitude up to 2000 m).

11. Training

Bidders are to provide training for an approximate of 20 participants in Fiji at EFL's Kinoya Depot AT NO COST TO EFL which must be part of the supplier's value added services. Training shall be provided within 4 weeks after receiving the Power Quality Analyzer by EFL. The details of the face-to-face training must be provided in the tender bid which may include:

- Classroom exercise – turning on equipment, features, maintenance, etc.
- Field exercise – actual setup, setting up of the power analyzer control in field and operating it.

12. Operating Conditions

The equipment will be used at tropical (fairly humid, rainy and hot) conditions with temperatures ranging from 10 to 50 Degrees Celsius installed on power poles. The nominal frequency of electrical reticulation in Fiji is 50Hz. The equipment shall be water resistant, dust resistant as specified in the criteria tables above.

13. Delivery

All items shall be delivered to Nadi Airport (Fiji) on CFR basis. The bidder must consider all logistics and costs involved to have the item sent via air to Nadi Airport.

14. Period of validity of Goods

14.1.1 Bids shall remain valid for a period of 180 days after the deadline for the receipt of Bids. A bid valid for a shorter period shall be rejected by EFL as non-responsive.

14.2 In exceptional circumstances, EFL may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing.

15. Bid Currency

Unless otherwise specified, the unit rates and prices shall be quoted by the bidder's country of origin.

The following table must be filled and then returned with the bid. The prices must be valid for a minimum period of 6 months.

Description	Quantity	Total Price (CFR) to Nadi Airport	Currency
Power Quality Analyzer with 3 years warranty period	5		

*Please state currency

NOTE: It is mandatory for overseas suppliers to quote in CFR incoterms.

The above table is to be filled and submitted with the bid. Failure to submit price as per CFR terms may result in the bid being rejected for evaluation and award. PLEASE STATE CURRENCY.

16. Optional Accessories

All optional accessories are to be stated in the bid with delivery prices per unit item. It shall be EFL discretion to either purchase or forego the optional accessories stated. Picture references must be provided for clarity in choosing the accessory.

Prices are to be submitted in a table similar to below format.

Accessory Description	Quantity	Total Price (CFR) to Nadi Airport
1.	5	

17. Company Information

1.	Name of Bidding Company	
2.	Contact Person Name	
3.	Telephone	
4.	Fax	
5.	Email	
6.	Mobile	
7.	Name of Company CEO/Director	
8.	Sales Tax/ Commercial Tax/ CST Nos.	
9.	Service Tax No.	
10.	Income Tax No.	

1.	Name of Authorized Person for bidding	
2.	Signature of Authorized Person	
3.	Company Stamp	

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: _____

Tender submission

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

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 4pm (1600hrs) on Wednesday 9th October 2024.

For further information or clarification please contact our Supply Chain Office on phone **(+679) 3224360** or **(+679) 9999240** 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