



Fiji Electricity Authority

Tender Document

Supply of Two (2) units Battery Discharge Test Set

Tender #: MR49/2017

Tender Closing Date: 1600hrs, Wednesday, 29th March, 2017

Invitation to Bid MR49 /2017

SUPPLY OF TEST EQUIPMENT – Two (2) Units BATTERY DISCHARGE TEST SET FOR FIJI ELECTRICITY AUTHORITY

Fiji Electricity Authority (“FEA”) invites Bids from eligible, qualified and capable companies for the supply of Battery Discharge Test Set.

Interested bidders, please address your queries or questions in writing at the address given below:

Mr. Abdul Nasim,
Unit Leader Strategic Procurement, Inventories and Properties
Supply Chain Office,
2 Marlow Street, Private Mail Bag,
Suva
or email: Abduln@fea.com.fj

SECTION I - INSTRUCTIONS TO BIDDERS

Notes to Bidders: *This section provides detailed information necessary for Bidders to prepare their Bids, in accordance with the requirements specified by the FEA. It also provides information on Bid submission, opening, evaluation and the award of contract.*

1. Scope

The entity of the FEA specified above invites bids for the supply of Battery Discharge Test Set as described in the Bidding Document.

2. Eligibility of Bidders

2.1 This bidding is open to all eligible companies

2.2 FEA in its sole unfettered discretion, can disqualify or otherwise determine ineligible any potential Bidder that the FEA believes is, has been or will be, whether directly or indirectly, engaged in criminal or any other unethical behavior, financially unsound, or otherwise unfit in the FEA's opinion to participate in the bidding exercise.

2.3 In its Bid, the Bidder shall indicate the origin of Goods proposed.

2.3 A Bidder shall not be eligible to participate in this bidding or in the performance of the contract if the bidder:

- Is bankrupt or being wound up, is having its affair administered by the courts, has entered into an arrangement with creditors, has suspended business activities, is the subject of

proceedings concerning those matters or is in any analogous situation arising from a similar procedure provided in national legislation or regulations.

- Has been the subject of a judgement which has the force of judicator for fraud, corruption, involvement in a criminal organization or any other illegal activity detrimental to the financial interests of FEA.
- Is guilty of misrepresentation in supplying the information required as a condition of participation in this bidding exercise or fail to supply this information.
- Is subject to a conflict of interest.

3. Bid Prices

- 3.1 The Bidder shall indicate on the appropriate Price Schedule, the unit prices (where applicable) and total Bid Price of the offered goods.
- 3.2 The Bidder's separation of price components will be solely for the purpose of facilitating the comparison of Bids by FEA and will not in any way limit the FEA's right to contract on any of the terms offered.
- 3.3 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.

4. Bid Currency

- 4.1 Unless otherwise specified in Section II, the unit rates and Prices shall be quoted by the Bidder's Country of Origin

5. Period of Validity of Goods

- 5.1 Unless otherwise specified in Section II, bids shall remain valid for a period of 90 days after the deadline for the receipt of Bids. A Bid valid for a shorter period shall be rejected by FEA as non-responsive.
- 5.2 In exceptional circumstances, FEA 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.

Section II - Tender Specifications

Descriptions and Specifications

The goods to be supplied by the supplier include the following:

The successful tenderer shall undertake to include the scope of work as specified in a), b), c), d), e) and f) below:

a) Supply and Delivery

1. Supply and delivery of two (2) unit battery discharge test equipment (battery load bank) complete with all of necessary accessories and flexible test cable (test lead) minimum five (5) meter long for each polarity.
2. The discharge test equipment shall be supply with robust flight/storage case complete with carry handles and lockable catches.
3. To provide the reference list of the test equipment offered.
4. To provide local service support letter

b) General Requirements

1. The discharge test equipment to be used for battery system ranging from 10 to 288VDC that was often encountered in switchgear and similar equipment.
2. The discharge test equipment discharging load capacity shall not less than 160A.
3. The discharge test equipment designed primarily for maintaining the 110VDC battery system.
4. Discharge and give cell voltage of at least 60 cells at a time.
5. Can be connected to 60 cells.
6. The discharge test equipment shall be fully portable, indoor operation, light weight with top carry handle.

7. The discharge test equipment shall be able to store nine (9) memories where the settings can be stored and factory (standard) setting can be recalled.
8. The discharge test equipment shall be equipped with a self-calibration function.
9. Has the capability to control (shutdown) an external load.
10. Batteries can be "tested in service".
 - i. The discharge test equipment shall be able to carry out testing without disconnecting the battery from the equipment it serves (during normal services).
 - ii. Discharging can take place at constant current, constant power, constant resistance or accordance with a pre-selected load profile.
11. Easily expandable for larger battery banks.
 - i. The discharge test equipment is expandable by connecting two identical units of the discharge test equipment to provide higher load current.
 - ii. The discharge test equipment shall also be expandable by connecting extra load units to provide higher load current.
12. User adjustable alarm and shutdown point to avoid excessive discharge.
 - i. The discharge test equipment shall give an alarm when the discharging drops to a level slightly above the final pre-set limits (voltage, current, power and power profile).
 - ii. The discharge test equipment shall be able to automatically stop or shutdown the discharging testing should the voltage drop so low that there is a risk for deep discharging the battery.
13. Easily save results to a PC for analysis, report generation and storage.
 - i. The discharge test equipment shall have the facility to store the total voltage curve and the reading taken at the end of the testing.
 - ii. The discharge test equipment shall be able to transfer the discharging recorded information to the connected device such as computer, printer.
14. View test parameters/results "real time" as testing progresses.

- i. During the test, a builds up a voltage curve on the screen in real time and displays current, voltage and capacity reading using WIN PC software designed for the test set.
- ii. Also able to control the test using the WIN PC software designed for the test set.

c) Technical Specifications

1. Environment

Item	Descriptions	Specifications
1	Application field	The instrument is intended for high-voltage substations
2	Operating temperature	0°C to +40°C
3	Storage & transport temperature	-40°C to +70°C
4	Humidity	5% to 95% RH, non-condensing

2. General

Item	Descriptions	Specifications
1	Mains Voltage	240V AC ±10%
2	Frequency	50Hz
3	Power Consumption (max)	150W
4	Protection	Thermal cut-outs, automatic overload protection
5	Display	LCD
6	Languages	Selectable
7	Dimensions – with case (max.)	Length <300mm Width <500mm Height <850mm
8	Weight - with case (max.)	<25kg (50lbs)

3. Load Section

Item	Descriptions	Specifications
1	Max. battery voltage	288 V
2	Max. current	110 A
3	Max. power	15 kW

4	Load patterns	Constant current, constant power, constant resistance, current or power profile
5	Current setting	0 – 110.0 A
6	Power setting	0 – 15 Kw
7	Resistance setting	0.1 – 2999.8 Ω
8	Battery voltage range	4 ranges, selected automatically at start of test
9	Stabilization (for internal current measurement)	\pm (0.5% of reading + 0.5 A)

4. Measurement

Item	Descriptions	Specifications		
1	Current measurements	Display range	0.0 – 2999A	
		Basic inaccuracy	\pm (0.5% of reading + 0.2A)	
		Resolution	0.1A	
2	Internal current measurement	Range	0 – 270A	
3	Input for clamp-on-meter	Range	0 – 1V	
		mV/A - ratio	Software settable, 0.3 to 19.9mV/A	
		Input impedance	>1M Ω	
4	Voltage measurement	Display range 0.0 – 60V	Basic inaccuracy	\pm (0.5% of reading + 0.1)
			Resolution	0.1 V
		Display range 0.0 – 500V	Basic inaccuracy	\pm (0.5% of reading + 0.1)
			Resolution	0.1 V
5	Time measurement	Basic inaccuracy	\pm 0.1% of reading \pm 1 digit	

5. Inputs, maximal values

Item	Descriptions	Specifications
1	External current measurement	1 V DC, 300 V DC to ground. Current shut should be connected to the negative side of the battery
2	Start/stop	Closing/opening contact
		Closing and then opening the contact will start/stop the test set. It is not possible to keep the contact in close position.
3	Delay until start	200 – 300 ms
4	Stop delay	100 – 200 ms
5	Battery	480 V DC, 500 V DC to ground
6	Voltage sense	480 V DC, 500 V DC to ground

7	Serial	< 15 V
8	Alarm	250 V DC 0.28 A
		28 V DC 8 A
		250 V AC 8 A

6. Outputs, maximal values

Item	Descriptions	Specifications
1	Start/stop	5 V, 6mA
2	Extended load bank	Relay contact
3	Serial	< 15 V
4	Alarm	Relay contact

7. CE Marking

Item	Descriptions	Specifications
1	EMC	2004/108/EC
2	LVD	2006/95/EC

d) Included Accessories

The following items shall be included in the package:

Accessories	Bidder's Remark (✓ / X)
Mains cable	
Cable Set (×2)	
Soft case for cables	
Transport case with space for cable set	

e) Additional Accessories

The following are the additional accessories that are required with this test set:

Accessories	Bidder's Remark (✓ / X)
Sensing lead set	
DC clamp-on-probe	
Battery voltage monitor	

f) Other Requirements

Category of Evaluation Criteria		
Supplier should also provide:		
Item	Descriptions	%Weighting
1	Calibration certificate of instrument along with the traceability	10%
2	Instruction Manual, Demonstrational Videos & Software	10%
3	International guarantee/warranty certificate	5%
4	Service center information and contact details	5%
5	Bidder should provide calibration facility	5%
6	Quoted price should have a validity of 3 months	5%
7	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 • List of the customers to whom they have supplied the quoted model 	5%
8	Instrument should be housed in a rugged, transportable carrying case. IP rating of case should prevent moisture and dust ingress complete with hard carrying case with locking arrangement	10%
9	Bidder must be able to provide back-up-service/repair and recalibration	10%
10	Delivery lead time 6 weeks	5%
11	Financial	30%

Price Schedule

Equipment	Quantity	Unit Price DDU (VEP)	Total Price (CIF) to Nadi Airport
Battery Discharge Test Set	2		
Total			

General Information

1	Name and Address of the Bidder:	
2	Contacts:	
3	Telephones:	
4	E-Mail:	
5	Mobile No:	
6	Name of Chief Executive Office	
7	Sales Tax/Commercial Tax/CST nos.	
8	Service Tax No.	
9	Income Tax No.	

Name of Authorized Person	
Signature of the Bidder	
Company Stamp	
Date	

Tender Submission - Instruction to bidders

It is mandatory for Bidders to upload a copy of their bid in the TENDER LINK Electronic Tender Box no later than **1600hrs, Wednesday, 29th March, 2017.**

To register your interest and tender a response, view 'Current Tenders' at:

<https://www.tenderlink.com/fea>

For further information contact The Secretary Tender Committee, by e-mail

TDelairewa@fea.com.fj

In additional, 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, Fiji no later than **1600hrs, Wednesday, 29th March, 2017.**

Addressed as:

Tender – MR 49/2017 – Supply of Two Units Battery Discharge Test Set

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

Hard copies of the Tender bid will be accepted after the closing date and time provided a soft copy is uploaded in the e-Tender Box and it is dispatched before the closing date and time.

Tenders received after **closing time 1600hrs, Wednesday, 29th March, 2017.**

- Will not be considered.
- Lowest bid will not necessarily be accepted as successful bid.
- **It is the responsibility of the bidder to pay courier chargers and all other cost associated with the delivery of the hard copy of the Tender submission.**