



Tender No.  
GERMI/SRW/2015/013

GUJARAT ENERGY RESEARCH & MANAGEMENT  
INSTITUTE (GERMI)

**GUJARAT ENERGY RESEARCH AND MANAGEMENT INSTITUTE INVITES  
QUOTATIONS FOR PROCUREMENT OF I-V TESTER FOR ITS SOLAR  
ENERGY RESEARCH WING**



Issue Date: 5<sup>th</sup> November, 2015

Last date for submission of  
quotations: 17<sup>th</sup> November, 2015

**Address:**

1<sup>st</sup> Floor, Energy Building,  
Pandit Deendayal Petroleum University Campus,  
Raisan, Gandhinagar, Gujarat - 382 007, INDIA  
Phone: +91 79 2327 5364  
Fax: +91 79 2327 5380  
Web: [www.germi.org](http://www.germi.org)

## 1. Introduction

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### 1.1 Background of the GERMI

- 1.1.1 Gujarat Energy Research & Management Institute (hereinafter referred to as “GERMI”), is promoted by Gujarat State Petroleum Corporation Ltd. (GSPC) is a fully integrated energy company.
- 1.1.2 GERMI is a centre of excellence in industry learning and has been set up to develop human resource assets to cater to the petroleum and allied energy sectors, improve knowledge base of policy makers and technologists and provide a competitive edge to leaders to compete in the global arena. GERMI has already established Pandit Deendayal Petroleum University (PDPU) which is actively pursuing initiatives in the areas of education and research in alternative energy resources.
- 1.1.3 GERMI plans to develop a World-Class Research Centre with all the high-tech state-of-the-art facilities. The research centre is currently at a very nascent stage and needs a long way to go.
- 1.1.4 It is presently developing Solar Energy Research Laboratory and for one of its major projects we require I-V Tester.

## 2. Detailed Scope of Supply and Technical Specifications

### 2.1 Scope of Supply

- 2.1.1 Sealed quotations are invited for supply of I-V Tester for the Solar Energy Research Wing of GERMI.
- 2.1.2 Prices should be quoted inclusive of all taxes, transportation, freight charges etc.
- 2.1.3 No other charge shall be paid extra.

### 2.2 Technical Specification

- 2.2.1 The technical specifications for I-V Tester are as given below:

#### SOLAR I-V (ANALYZER + SENSOR)

	ANALYZER	SENSOR
<b>Measurement</b>	I-V characteristic curve, short circuit current, open circuit voltage, power, MPP current, MPP voltage	Global irradiation, module temperature, inclination angle
<b>Calculated values</b>	STC values (short circuit current, open circuit voltage, MPP current, MPP voltage), fill factor, MPP power, manufacturer's ideal characteristic curve	–
<b>Voltage measurement range</b>	Up to 1000 Vdc (< ±1 %) (Uoc > 5 V)	–
<b>Current measurement range</b>	10.0 A/12.0A/15.0A (< ±1 %)	–
<b>Temperature measurement range</b>	–	0...100 °C (±3 % with reference to a black body)
<b>Irradiation measurement range</b>	–	0-1500 W/m <sup>2</sup> (±5 %)
<b>Measuring connection</b>	Standard 4 mm test leads to PV module	Infrared (contactless)\bluetooth
<b>Characteristic curve measurement duration</b>	approx. 15...30 second	–
<b>Storage space for measurement curves</b>	dependent on SD memory card size (> 1000 measurement curves per GB)	
<b>Reference cells</b>	–	1 x monocrystalline cell, 1 x polycrystalline cell
<b>Display</b>	3.2" colour LCD screen (240 x 320 pixels, RGB)	S/W LC display (2 lines, 16 characters)
<b>Power supply</b>	Chargeable, with chargers operating time approx. 8 hours	Lithium polymer accumulator, operating time approx. 8 hours
<b>Auto-Power-Off</b>	adjustable (1...15 minutes)	–
<b>Interface</b>	Wireless connection to SENSOR, SD/SDHC	Wireless connection to

	memory card for PC	ANALYZER
<b>Ambient temperature</b>	0...+50 °C	0...+60 °C
<b>Protection degree</b>	IP20	IP20
<b>Measurement category</b>	CAT II / 1000 V, CAT III / 600 V	–
<b>Software CD</b>	yes	yes
<b>Software Manual</b>	yes	yes
<b>Carrying Bag</b>	yes	yes
<b>PV test lead set</b>	MC3, MC4, Huber+Suhner, Tyco, SunClix as well as without PV connectors	

### 3. Instructions to Suppliers

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#### 3.1 Submission of quotation

- 3.1.1 Last date for submission of quotation is 17<sup>th</sup> November, 2015 before 1500 hrs. Director, GERMI reserves the right to reject any/all offers without assigning any reasons thereof.
- 3.1.2 Along with the price quotation, the supplier shall also submit a copy of this tender document duly signed and stamped on each page.
- 3.1.3 The envelop should be properly sealed, clearly mentioning on the top of it “**Quotations for supply of I-V Tester for SRW of GERMI - Tender No. GERMI/SRW/2015/013**”.
- 3.1.4 Quotations should be submitted to:

**The Director**

**Gujarat Energy Research and Management Institute,**

1<sup>st</sup> Floor, Energy Building, Pandit Deendayal Petroleum University Campus,

Raisan Village, Gandhinagar, Gujarat – 382007, India

Phone: +91 79 2327 5364

Fax: +91 79 23275380

Email: [madhu.c@germi.org](mailto:madhu.c@germi.org)

Any queries related to the scope of supply may be addressed to Ms. Madhu Choudhary, Dy. Manager (Commercial) on above given contact details.

#### 3.2 Opening and Evaluation of Quotations

- 3.2.1 The quotations received from all the suppliers shall be opened on 17<sup>th</sup> November, 2015 by 1530 Hrs at GERMI office in front of the suppliers only.
- 3.2.2 It is not mandatory for suppliers to participate the quotation opening meeting, but their absence during opening shall mean that they have given their consent to open the same in front of other available suppliers.
- 3.2.3 Our technical team shall roughly check the specifications and if everything as required in the tender, prices of different quotations received shall be declared.
- 3.2.4 If the specifications provided by supplier matched our requirement, the supplier with lowest price shall be considered as L1 supplier and shall be selected.

#### 3.3 Security Deposit

- 3.3.1 The Supplier shall furnish, as part of its quotation, a Security Deposit in the form of a Demand Draft in the favor of Gujarat Energy Research and Management Institute, payable at Gandhinagar, Gujarat. The Security deposit amount shall be Rs. 1,700 (Rupees Seventeen Hundred only) and shall be submitted along with their quotation.
- 3.3.2 GERMI shall not be liable to pay any interest on the Security deposit so made and the same shall be interest free.

- 3.3.3 A quotations submitted without the Security deposit shall not be considered and summarily rejected.
- 3.3.4 The Security deposit shall specifically bind the supplier to keep its offer valid for acceptance and to abide by all the conditions of the tender document in the event of the GERMI desiring to award the work to the said supplier.
- 3.3.5 GERMI shall have an unqualified discretion to invoke the Demand Draft and claim the amount there under in the event: (i) supplier fails to keep the quotation valid up to the date specified; or (ii) refuses to unconditionally accept purchase order and carry it out in accordance with the quote in the event such supplier is chosen as L1 party.
- 3.3.6 GERMI shall, however, arrange to release the Security deposit in respect of unsuccessful bidders, without any interest, as soon as possible after a decision is taken about the award of the order.
- 3.3.7 The Security deposit in respect of the successful bidder shall be released once the bidder accepts the purchase order unconditionally.

## 4. General Terms and Conditions

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### 4.1 General Instructions:

- 4.1.1 GERMI reserves the right to reject the tender without assigning any reason thereof or select any specific supplier based on special recommendations received from our Technical team.
- 4.1.2 The time allowed for completion of work shall be **Twenty One (21) days**, which shall be reckoned from the date of issue of Purchase Order.
- 4.1.3 The Quotation should remain valid for **at least 45 days**.
- 4.1.4 All or any Claim(s), dispute(s) or difference(s) arising out of or in with connection with this agreement shall be subject to the jurisdiction of the Courts at Gujarat (Gandhinagar/Ahmedabad) only.

### 4.2 Warranty/Guarantee

- 4.2.1 The supplier should transfer the original manufacturer's warranty received from the manufacturer to GERMI.
- 4.2.2 Such warranty should also cover all accessory instruments that work in conjunction with the main instrument, if any and should be clearly specified.
- 4.2.3 The supplier must ensure that the instrument supplied is new, unused and of most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise.

### 4.3 Terms of Payment

- 4.3.1 The normal terms of payment are 100% of the payable amount shall be paid within 30 days time after delivery of the instrument at GERMI through cheque.
- 4.3.2 Subject to any deduction which GERMI may be authorized to make, the Supplier shall be entitled to payment as follows:
  - a) All payments shall be made in Indian Rupees.
  - b) The Supplier shall submit the bill / invoice for the work executed showing separately VAT, Service Taxes and any other statutory levies in the bill / invoice.

## 5. Price Format

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### 5.1 Format of price/quotation to be filled

(On company's letterhead)

Quotation No.: \_\_\_\_\_ Date: \_\_\_\_\_

#### **Price quotation submitted to Gujarat Energy Research and Management Institute (GERMI)**

Sr. No.	Particulars	Make & Model	Rate (In INR)	Taxes (In INR)	Amount (In INR)
1.	Instrument Details				
<b>Total</b>					
<b>Total in words:</b>					

Terms and conditions, if any

\_\_\_\_\_  
Name, Sign and Stamp

\_\_\_\_\_  
Sign & Stamp