



Request for Quotation (RFQ) for the Provision of Energy Meter and LCD Data Loggers Equipment

RFQ: 5516/19/09/2019

Date of issue	04/09/2019
Closing Date and Time	19/09/2019
Contact details	For submission of quotations or any other enquiries: tender@csir.co.za

1 INVITATION FOR QUOTATION

Quotations are hereby invited for the provision of Energy Meter and LCD Data Loggers Equipment to the CSIR

2 QUOTATION REQUIREMENTS

Required equipment for an Energy Meter and LCD Data Loggers

2.1 Electrical Energy Meter Requirements

A high-performance portable energy meter with 0.5% revenue grade accuracy compliance and capable of 3-phase 277/480VAC and 6900A. The meter will be used in industry and should be able to withstand industry working conditions.

2.1.1 Electrical Energy Meter Required Features

- Supports extensive range of CTs
- Built-in web server and graphical monitoring software
- Fully web-configurable
- Built-in memory
- Can operate without batteries

2.1.2 Energy Meter Specifications

SS-F-SPU-032 Rev 03 Request for Quotation 5516/19/09/2019
This is not a Purchase Order.

- AC Voltage:
 - L1: 85-277 Vrms
 - L2: 0-277 Vrms
 - L3: 0-277 Vrms
- DC Voltage: 42 Vrms
- Power: 9-60 Vdc
- Measurement: +/-60 Vdc
- Frequency; 50 or 60 Hz
- Logging Values: V, A, W, Wh, Hz, VA, VAr, deg
- Power Draw: 12W max, 2W typical
- Operating Temperature: -30 to 70 deg C
- Granularity: 1 hour/1 second

2.1.3 Number of Energy meters required

The total number of loggers that will be needed is **One (1)**

2.1.3.1 Sensors and Accessories for Energy Meter

- 7" Rogowski Coil Sensor 333mV 2775 Amp
- 20 Amp split-core CT 333mV
- 200 Amp split-core CT 333mV
- Voltage clamps 277/480VAC

If there are additional accessories required for proper use of the analog data logger, please include it into the quote with the appropriate number **e.g. Additional Cables – Four (4)**

2.1.3.1.1 Number of Energy Meter Sensors required:

The total numbers of sensors required for use of the energy meter logger are as follows:

- 7" Rogowski Coil Sensor 333mV 2775 Amp – **One (1)**
- 20 Amp split-core CT 333mV – **Two (2)**
- 200 Amp split-core CT 333mV – **Two (2)**
- Voltage clamps 277/480VAC – **Three (3)**

2.2 Analog Data Logger Requirements

High-performance Analog Data Loggers with an accuracy of $\pm 0.3\%$. The data logger will be used in industry and should be able to withstand industry working conditions.

2.2.1 Analog Data Logger Required Features

The list of required features for the analog data loggers are as follows:

- A minimum of 4 channels
- Flexible support for a wide range of external sensors which includes (but may not be limited to):
 - 4-20mA
 - AC Current
 - AC Voltage
 - Air Velocity
 - Carbon Dioxide
 - Compressed Air Flow
 - DC Current
 - DC Voltage
 - Differential Pressure
 - Gauge Pressure
 - Kilowatts (kW)
 - Temperature
- A LCD that confirms logger operation and displays near real-time measurement data
- Provides minimum, maximum, average and standard deviation logging options
- On-screen alarms that when a sensor reading exceeds set thresholds
- Stores a large number measurements for long period of logging (at least 2 weeks)

2.2.2 Analog Specifications

- Operating range logging:
 - 20° to 70°C
 - 0 to 95% RH (non-condensing)
- Logging rate: 1 second to 18 hours, 12 minutes, 15 seconds
- Battery type: Two AAA 1.5 V alkaline batteries, user replaceable
- Memory: 4 MB (1.9 million measurements, maximum)

- Download type: USB 2.0 interface

2.2.3 Number of Analog meters required

The total number of loggers that will be needed is **Nine (9)**

2.2.3.1 Sensors and Accessories for Analog Meters

- Current Sensor with a range between 20 – 200 Amp AC
- Current Sensor with a range between 2 – 20 0Amp AC

The AC Current sensors should be have an AC input current, sine wave, single phase 50 Hz or 60 Hz and load power factor 0.5 to 1.0 lead or lag.

If there are additional accessories required for proper use of the analog data logger, please include it into the quote with the appropriate number **e.g. Additional Cables – Four (4)**

2.2.3.1.1 Number of Sensors required:

The total numbers of sensors required for use of the analog data logger are as follows:

- Current Sensor with a range between 20 – 200Amp AC – **Six (6)**
- Current Sensor with a range between 2 – 20 Amp AC – **Nine (9)**

2.3 Summary of Requirements

The total number of each component is listed in the table below:

Equipment	Quantity
Electrical Energy Meter	1
7" Rogowski Coil CT Sensor	1
20 Amp split-core CT 333mV	2
200 Amp split-core CT 333mV	2
Voltage clamps 277/480VAC	3
Analog Data Logger	9
Current Sensor with a range between 20 – 200 Amp AC	6
Current Sensor with a range between 2 – 20 0Amp AC	9
Additional required components a	As required
Additional required components b	As required

Please adhere to the specifications listed above.

3 EVALUATION CRITERIA

- 3.1 Selection of suppliers will be based on the 80/20 preference point system.
- 3.2 **Please submit valid BBBEE Certificate or Sworn Affidavit. Suppliers are advised to take note that CSIR accept BBBEE Certificate Issued by SANAS Accredited Agency or Sworn Affidavit which is a Department of Trade and Industry Format.**
- 3.3
- 3.4 Indicate CSD number (National Treasury Central Supplier Database) on quotation. If not registered yet on CSD, use www.csd.gov.za to register.
- 3.5 No order will be issued or no contract will be signed without a valid CSD number.

4 PRICING QUOTATION

- 4.1 Price needs to be provided in South African Rand (excl. VAT), with details on price elements that are subject to escalation and exchange rate fluctuations clearly indicated.
- 4.2 Price should include additional cost elements such as freight, insurance until acceptance, duty where applicable, etc.
- 4.3 Payment will be according to the CSIR Payment Terms and Conditions.

5 OTHER TERMS AND CONDITIONS

- 5.1 The supplier shall under no circumstances offer, promise or make any gift, payment, loan, reward, inducement, benefit or other advantage, which may be construed as being made to solicit any favour, to any CSIR employee or its representatives. Such an act shall constitute a material breach of the Agreement and the CSIR shall be entitled to terminate the Agreement forthwith, without prejudice to any of its rights.
- 5.2 A validity period of 90 days will apply to all quotations except where indicated differently on the quote.

6 No goods and/or services should be delivered to the CSIR without an official CSIR Purchase order. CSIR purchase order number must be quoted on the invoice. Invoices without CSIR purchase order numbers will be returned to supplier.

7 Note: This is not a Purchase Order.