अधीक्षण अभियंता का कार्यालय
OFFICE OF THE SUPERINTENDING ENGINEER
कार्य स्थापना अनुभाग, WORKS ESTABLISHMENT SECTION
राष्ट्रीय प्रौद्योगिकी संस्थान कर्नाटक, सुरतकल
NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL
पोस्ट श्रीनिवासनगर, मंगलूरु – 575025, कर्नाटक, भारत. / Post Srinivasnagar, Mangaluru – 575025, Karnataka, INDIA.
Phone: [0824] - 2473029, 2473028 Email: se@nitk.edu.in Website: http://www.nitk.ac.in

No: 155/QN-02/2024-25/DM Date: 24.05.2024

NOTICE INVITING QUOTATIONS

The National Institute of Technology Karnataka, Surathkal (in short - NITK, Surathkal or Institute) is an autonomous Institute of the Govt. of India [under the Ministry of Education - MoE] imparting technical and science education. The Institute intends to **"Providing electrical smart meters to roof top solar power panels, in NITK".** The details of work is listed in the sheet enclosed. In this connection, sealed quotations are invited by the undersigned subject to the terms and conditions enumerated here under from the manufacturers/ authorized dealers/ agencies so as to reach this office on or before **31-05-2024 at 10:30AM**. The quotations shall be opened possibly on the same day.

Terms and conditions:

1. The intending bidder shall quote his rates in the **'Quotation Format'** enclosed here with either in his letter head or using the same format. He shall sign each page with seal of the firm. Envelop super scripted as Quotation for "**Providing electrical smart meters to roof top solar power panels, in NITK"** due on **31-05-2024 at 10:30AM** and addressed to as "The Superintending Engineer, NITK, Surathkal, Post Srinivasnagar, Mangaluru – 575025" be sent so as to reach this office on or before the due date mentioned.
2. The GST registration number and the PAN number of the bidder shall be mentioned in the quotation. Quotation without this information will not be accepted.
3. Quotation may be dropped in the Tender Box kept in the office or may be sent by post/ courier. It is the responsibility of the bidder to make sure that the quotation is delivered in time. The quotations received after the due date will not be entertained.
4. No advance payment will be made. The payment shall be made only after successful completion of work. No interest will be paid for delayed payments if any.
5. The rate quoted should be firm. No claim for enhancement of rate is admissible after opening of the Quotations.
6. Terms and conditions stipulated in this Notice inviting conditions are binding on the bidder.
7. The undersigned reserve the right of rejecting all the quotations without assigning any reasons thereof.

Superintending Engineer
NITK, Surathkal
Superintending Engineer
Work Establishment Section
National Institute of Technology Karnataka
Surathkal, P.O Srinivasnagar- 575025

Name and Address of the Bidder:

Contact No:
GST registration number:-
PAN number:-

No: Date:

QUOTATION

To

The Superintending Engineer,
Office of the Superintending Engineer,
N.I.T.K, Surathkal.

Sl. No	Description of the items	Quantity	Rate in Rs. (without Tax)	GST	Amount in Rs. (with Tax)
1	Supplying, fixing, commissioning and testing of 3 Phase CT operated digital Smart Meter suitable for 440V, 50Hz power supply. The meter should display voltage, Current, frequency, Power, power factor, kVA, kWH, kVAR and other parameters. The meter should have inbuilt memory, wifi connectivity, min two-year warranty etc. The work includes making necessary cutting in existing panel board, fixing meter, necessary wiring for meter including suitable size copper wires, any busbar modification work if found necessary, control MCB of suitable capacity. Din rails, transportation charges, testing etc complete. The meter should give real time readings in any remote computers / mobile devices through network. (Detailed specification of meter is mentioned in **Annexure I**)	11No's			
2	Supplying, fixing and wiring 100/5 A Class I Current Transformer	18No's			
3	Supplying, fixing and wiring 200/5 A class I Current Transformer	06No's			
4	Supplying, fixing and wiring 250/5 A class I Current Transformer	03No's			
5	Supplying, fixing and wiring 300/5 A class I Current Transformer	06No's			
				Total Amount	

ANNEXURE I

3 Phase Power Quality Meter - Panel mount

Specification:

Measurement of

Line to line voltage all phases V12 V23 V31

Line to neutral voltage V V1 V2 V3

Phase current all phase A A1 A2 A3

Frequency Hz

Angle between voltage and current V & A, RPM

Unbalance Voltages and Currents and Neutral Current

Power of all phases and total power

VA of all phases and total VA

Power Factor of all phases

VAR of all phases and total

THD for Voltage and Current

Individual Harmonics up to 25th

High Low - Last Minute (VLL and Amps)

Power Cycles

Energy (Wh)

Volt Amps hour (Vah)

Inductive VAR hour (VARh -Ind)

Capacitive VAR hour (VARh-Cap)

Load Hours

Phase Energy and Load hours

ON hours

CO2 Emission

RD (IE)

Bargraph (% Load)

Rising Demand (Sliding/Block - Programmable)

Forecast demand

Maximum demand

12am & 31st day snap shot

Data Logger - 512kb (fixed parameter with 15/30min interval or batter

1MB (programmable parameters 1min to 12hrs) or better Load Efficiency

Dynamic communication

RS485 (MODBUS) - Device ID&Parity: 1 - 125 & even Baud rate: 9600 bps to 38400 bps (preferred 9600

bps) Isolation: 2000 volts AC isolation for 1 minute between communication & other circuits.

ETHERNET - TCP IP / BACNET IP

WiFi - Protocol: 802.11 b/g/n; Frequency: 2.4 Ghz - 2.5 Ghz Security: WP/WPA2, WPA-PSK/WPA2-PSK

Encryption: WEP/TKIP/AES; Network Protocol: IPV4, TCP Receive Sensitivity: -83 dBm

ENVIRONMENTAL CHARACTERISTICS

Operating temperature: -10°C to +55°C (14°F - 130°F) or better

Storage temperature: -25°C to +70°C (-13°F - 158°F) or better

Humidity: 5% to 95% non-condensing or batter

Altitude: Below 2000 mts

Protection: IP 51 & Double insulation (as per IEC 61010-1)

Measurement category: CAT III or better

Pollution degree: 2 (As per IEC 61010)

SAFETY AND STANDARDS C

construction: IEC/EN 61010-1 EDITION 3, CAT III, 300V LN / 600V LL, Protection Class II or batter

Standards: UL 61010-1, IEC/EN 62052-11

GENERAL CHARACTERISTICS

Display type: LED

Integrated 8 digits, Instantaneous 4 digits.

Sensing / Measurement: True RMS, 1 sec update time, 4 Quadrant power & energy or batter

Rated operation Voltage: 50 - 600 VLL

Rated Current: 10 mA - 6A

Frequency: 45 - 65 Hz

Sampling rate 512 samples

Measured accuracy class: Class 0.2S as per IEC 62053-22

Permissible overload: 120%, Burden: 0.2VA per phase

External fuse rating: 200 mA or batter

CT PT ratio max.: 2000 MVA programmable

Power consumption: 4VA nominal or batter