



**NATIONAL INSTITUTE OF TECHNOLOGY  
ROURKELA – 769 008, ODISHA**

**Advertised Tender Enquiry**

**Department: Electrical Engineering**

**Tender Notice No: NITR/PW/EE/2023/305**

**Date: 20/07/2023**

**IMPORTANT DATES**

**To**

**Bidding Through CPP Portal**

**(e- Procurement)**

<https://eprocure.gov.in/eprocure/app>

<b>Event</b>	<b>Date</b>	<b>Time</b>
Pre-bid meeting	<b>NA</b>	<b>NA</b>
Last date of submission of bid	<b>14/08/2023</b>	<b>11:00 AM</b>
Date of opening of techno-commercial bid	<b>16/08/2023</b>	<b>11:00 AM</b>

Dear Sir,

We intend to purchase the commodities specified below and invite quotations in accordance with the terms and conditions detailed in the bid document. If you are interested, kindly send, your offer with prices and complete terms within the time mentioned above.

For any clarification:

Yours sincerely,

**Attention:**

Prof. Paresh G. Kale  
Department of Electrical Engineering  
National Institute of Technology  
Rourkela – 769 008, Odisha  
Phone: 0661 – 2462447  
Email: pareshkale@nitrkl.ac.in

**Prof. Paresh Kale**  
(PIC)

**Encl:**

- 1) Schedule of requirement, specifications, dates etc.**
- 2) Bid document containing detail terms and conditions.**

## 1. Schedule of requirements

SL.NO	Description of Goods/Service	Quantity
1.	Semiconductor Parameter Analyzer (Semiconductor Characterization Setup)	1

2. Specifications and allied Technical Details: As per the specification attached in the **Annexure-I**

3. Format of Quotation (tick appropriate box)

It is a two-part with separate techno-commercial and price bids.

4. The bid should be submitted through <https://eprocure.gov.in/eprocure/app>.

5. Quotations should be valid for a period of **90 days** from the date of opening of techno-commercial bid.

6. Some important dates:

i.	Pre-bid Conference	Date:	<b>NA</b>	<b>NA</b>
ii.	Last date for submission of bid	Date:	<b>14/08/2023</b>	<b>11:00 AM</b>
iii.	Date of opening of techno-commercial bid	Date:	<b>16/08/2023</b>	<b>11:00 AM</b>

7. **Warranty:** 3 Years onsite standard warranty.

## 8. Eligibility Criteria of the Bidder:

- i. The bidder must have valid authorization from the OEM specific to this tender. Documentary proof regarding this must be attached.
- ii. The bidder should be a Private/ Public Limited Proprietorship/Partnership firm registered under the Companies Act, 1956 or a registered firm. The company/firm should be in existence for more than 3 years as on date. Copy of Certificate of incorporation/commencement should be submitted.
- iii. The bidder must have GST registration and would be charged at applicable rate. GST details should be submitted.
- iv. The average annual financial turnover of the tenderer for last three consecutive financial years ending on 31<sup>st</sup> March, 2022 should be minimum **Rs. 30 lakhs**. Copy of Audited Balance Sheet and P/L Account to be submitted, duly certified by a Chartered Accountant.
- v. The bidder/OEM must have supplied similar Solution in any Govt./PSU/Education Institute/Corporate in India in last 3 years ending on 31<sup>st</sup> March, 2023 and must submit scanned copies of at least one Purchase Order.
- vi. Considering primary support from the bidder, the bidder should have office cum service support setup of 24X7 customer support service form smooth support in Eastern India. Supporting documents like office address and phone number must be submitted.
- vii. Bidders must submit a declaration on their letter head that they are not black listed in any Govt. body, undertaking, and PSU or Autonomous bodies. If found the declaration is false, their offer will be out rightly rejected and their EMD amount will be forfeited.

- viii. The Vendor shall provide the following information with the bid to provide background information on vendor to Tender Committee.
- a. **The list of clients** (contact details of a person phone/ mob. no. with e-mail ids should be attached) where the bidder/OEM had supplied the similar type of materials (as mentioned in schedule of requirements) with successful installation in last three years.
  - b. **Delivery period** Within 30 days from the date of placement of the Purchase Order.
  - c. **Customer support:** 24x7 hours.
  - d. Possible quicker **availability** of the vendor when problem occurs.
  - e. Mode of handling complains (whether by fault ticket/complain even by email or by phone etc.)
  - f. Any other points may have deemed fit by the committee at time of technical evaluation of bid documents.
  - g. Details of Software included in offer.
  - h. Details of Technical Specification and other specifications so as to enable technical assessment of the proposal. Unpriced bid document exactly same as the price bid with full break up without the costs mentioned.
9. **Earnest Money Deposit (EMD)/Tender Cost:** Tender cost (Non- refundable) in the shape of **Demand Draft for INR 1,000/- (Rupees One Thousand only) / Earnest Money Deposit (Refundable) for INR Rs. 50,000/- (Rupees Fifty Thousand only)** in favor of **“Director, NIT Rourkela” Payable at Rourkela** from any Scheduled Commercial Bank except Co-operative and Gramin bank. EMD will remain valid for a period of 45 days beyond the bid validity period from the date of opening of technical bids. EMD of unsuccessful bidders will be refunded to them without any interest at the earliest on or before 30 days after award of contract to L1 bidder. Tender Cost/EMD should reach physically through speed post/ register post/courier, containing in an envelope & superscripted with subject, tender reference number addressing to **Registrar, NIT Rourkela- 769008, Odisha; on or before 16/08/2023 at 11:00 AM.**
10. **Performance Security: 3% of the contract value** should be deposited to the Institute in shape of Demand Draft (DD) within 15 days from the issue of Purchase Order, in favor of “Director, NIT Rourkela and payable at Rourkela” from any Scheduled Commercial Bank except Co-operative and Gramin bank. And Performance security should remain valid for a period of 60 days beyond the date of completion of all contractual obligations of the suppliers including warranty obligation. EMD amount will be returned to after receipt of performance security in case of Award of Contract to successful bidder.
11. Please go through the enclosed “bid document” carefully for other bidding instructions.
12. Please send your quotations through: <https://eprocure.gov.in/eprocure/app>
13. **Technical Bid Evaluation Criteria:**
- I. Bids are invited from OEM or Authorised vendor. Authorised vendor will submit the Bid Specific OEM MAF along with bid document. Authorised Vendor or Original Equipment Manufacturer (OEM) should have own service center in India. The Authorized Vendor or OEM must enclose details of their infrastructure with reference to locations and technical manpower. A valid GST registration certificate of Authorized Vendor or OEM should be submitted along with bid.

- II. Scanned copies of the technical brochure of the above equipment / software and accessories (Annexure-I) given in the quotation must be included in the technical bid.
- III. Web references must be provided along with the technical bid.
- IV. Point wise technical compliance along with any deviation of the mentioned specifications (Annexure-I) must be indicated along with technical documents.

**Financial Bid Evaluation Criteria:**

1. Final Price comparison for the award of contract to decide Lowest price (L1) will be made based on the prices quoted for overall in Price Bid (BOQ).

**14. For technical details, you may contact**

Prof. Paresh G. Kale  
Department of Electrical Engineering  
National Institute of Technology, Rourkela  
Odisha - 769 008,  
Phone:0661-246-2447  
E-mail: [pareshkale@nitrkl.ac.in](mailto:pareshkale@nitrkl.ac.in)

**NB: Please furnish your Dealership Certificate (must) and Proprietary Nature Certificate (If applicable).**



# NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA – 769 008, ODISHA

## BID DOCUMENT

### 1. Instructions to the bidders

- 1.1 Bids are invited on behalf of the Director, National Institute of Technology (NIT), Rourkela– 769008, Odisha, from the intending bidders for supply of the goods/stores/equipment for the Institute as detailed in the enquiry letter.
- 1.2 The bidders should quote their offer/rates in **BOQ** in clear terms without ambiguity.
- 1.3 In Case of any discrepancy between the rate in figures and that in words, the rate in words will be accepted as correct.
- 1.4 The last date for receipt of the bid is marked in the tender document.
- 1.5 The bids should be uploaded in <https://eprocure.gov.in/eprocure/app>. Please follow the guidelines of the site.
- 1.6 If a prospective bidder requires any clarification in regard to the bidding documents, s/he may make a request the concerned officer or faculty member at least 15 days before the deadline for receipt of bids.
- 1.7 Bid received after deadline of receipt indicated in para 1.4 above, shall not be taken in to consideration.
- 1.8 Each bidder shall submit only one bid. A bidder, who submits more than one bid, shall be disqualified and considered non-responsive.
- 1.9 (In respect of high value plant, machinery etc. of a complex and technical nature). The bids may be submitted in two parts, viz., techno-commercial bid and financial bid.
- 1.10 The bidder has to sign in full at all pages of the scanned part of the bidding document. No over-writing in those pages is acceptable.
- 1.11 If any bidder does not fulfil technical specification, his/her eligibility will be cancelled even if his/her price got L1 status.
- 1.12 Bidders registered with any of the following agencies/ bodies as per Public procurement policy for Micro & Small Enterprises (MSE) order 2012 are exempted categories from payment of EMD provided that the registration Certificate issued by any one of these below mentioned agencies must be valid as on close date of tender. Micro small or medium enterprises who have applied for registration or renewal of registration with any of these agencies/bodies but have not obtained the valid Certificate as on close date of tender are not eligible for exemption.
  - i) Khadi and Village Industries Commission (KVIC)
  - ii) National Small Industries Corporation (NSIC)
  - iii) Any other body specified by Ministry of MSME/GOI

### 2. Conditions of the bid

- 2.1 The rates quoted should preferably be net, inclusive of packing, forwarding, freight, Insurance and all other incidental charges including taxes. In case these charges are quoted extra in addition to the quoted rates, the amount thereof or ad-valorem rate must be specified.

Packing, forwarding, freight, etc., when quotes separately are reimbursable at actuals. If external agencies are employed, their receipts must be enclosed with the invoice.

- 2.2** Duties and Taxes are to be quoted separately. Ad-valorem rates thereof should be clearly indicated with reference to the relevant Acts and Rules.
- 2.3** The goods are required to be delivered at the indenting Department of NIT, Rourkela, and must be reached within **30 days** from the date of placement of the Purchase order under the risk and arrangement of the bidder and offers with delivery beyond the above period shall be treated as unresponsive. In case the delivery time is higher, the same must be mentioned clearly in the quotation.
- 2.4** The bid should remain valid for a period of **90 days** from the date of opening. In case your offer has a different validity period that should be clearly mentioned in the quotation.
- 2.5** Conditional discount, if any, offered by the bidder shall not be considered at the time of evaluation.
- 2.6** The goods offered should strictly conform to the specification and technical details as mentioned in schedule of requirements in the tender documents.
- 2.7** The Institute may like to conduct pre-dispatch inspection of goods, where applicable.
- 2.8** Period of guarantee/warranty, where applicable, should be specified in the bid.
- 2.9** If the successful bidder, on receipt of the supply order, fails to execute the order within the stipulated period, in full or part, it will be open to the Director, NIT, Rourkela to recover liquidated damage from the firm at the rate of 1 percent of the value of undelivered goods per month or part thereof, subject to a maximum of 5 percent of the value of undelivered goods. Alternatively, it will also be opened to the Director, to arrange procurement of the required goods from any other source at the risk and expenses of the bidder.
- 2.10** The successful bidder may be required to execute a contract, where applicable.
- 2.11** The bidder has to furnish up to date GST and Income Tax Clearance Certificate along with the bid.
- 2.12** Purchase order / Work order shall be placed on the bidding firm(s). In case of deviation to this, if any, the bidding firm should produce any such sufficient documents/credentials i.e., Agreements, MOUs, Arrangements etc. with the third party/ OEM to satisfy the buyer. A consent letter from the third party/ OEM to that effect must be enclosed along with the bidding documents.
- 2.13** **Quotation is to be submitted for three years in Price Bid (BOQ) format.**
- 2.14** Payment (*100 percent*) will be made by Account Payee Cheque/Bank Draft, within 30 days from the date of receipt of the goods in good condition or receipt of the bill, commissioning of the equipment, where applicable, whichever is later/latest.
- 2.15** State Bank of India is the sole Banking partner for NIT Rourkela for operation of LC (Letter of Credit).
- 2.16** In the event of any dispute arising out of the bid or from the resultant contract, the decision of the Director, NIT, and Rourkela shall be final.
- 2.17** NIT Rourkela reserves the right to accept/reject any or all bids without assigning any reason thereof.
- 2.18** The bid document/resultant contract will be interpreted under Indian Laws.

**Specifications of Semiconductor IV, CV characterization unit**

Semiconductor IV, CV characterization unit measures current-voltage, capacitance-voltage characteristics of semiconductors for photovoltaic, light and gas sensor applications. The unit may consist of separate source, impedance analyzer or integrated system with probe station. There must be system interface to connect the measuring instrument with computer to control the parameters and collect the data.

<b>Sl. No.</b>	<b>Parameter</b>	<b>Value</b>
<b>IV Measurement Unit</b>		
1	Source/ Measuring capability:	4-quadrant sourcing and measuring capabilities
2	Maximum Output:	Voltage: $\pm 200$ V or better Current: $\pm 1$ A or better Power: 20W or better
3	Best Resolution (Source/measure):	Voltage: 10 nV or better Current: 10 fA or better Resistance: 1 $\mu\Omega$ or better
4	Basic Measure Accuracy (Voltage):	Minimum 0.012% or better
5	Display resolution:	5" Touch Display with 6½ digit Resolution or better
6	Waveform generation capabilities:	Linear staircase sweep, log staircase sweep, and Custom sweep
7	Source Memory list:	100 points or more
8	Limit Function:	Should be available
9	Protection:	OVP /OTP Protection Function should be available
10	Remote/Measuring Sensing:	2, 4, and 6-wire source and Measure capability
11	Interface:	USB/LAN/RS232
12	Software:	Free software to be provided to control & measure from PC.
13	Accessories:	Test Lead, Alligator Clip, Low noise BNC(m)-BNC(m) cable 2 Nos, Banana to BNC adapter 2 Nos, Power Cord, Instruction Manual
14	Warranty:	3 Years
15	OEM & After sales service assurance:	OEM should have their own office & service center in India, documentary evidence to be submitted.
<b>CV Measurement Unit</b>		
1	Measurement Capability:	<ul style="list-style-type: none"> <li>• LCR Measurement</li> <li>• Measurement with frequency and level sweeping up to 800 or more points</li> <li>• Continuous measurement</li> </ul>
2	Measurement Parameters:	Z: Impedance Y: Admittance $\theta$ : Phase angle Rs: Series-equivalent resistance Rp: Parallel-equivalent resistance Rdc: DC resistance

		X: Reactance G: Conductance B: Susceptance Cs: Series-equivalent static capacitance Cp: Parallel-equivalent static capacitance Ls: Series-equivalent inductance Lp: Parallel-equivalent inductance D(tanδ): Loss coefficient Q: Q factor
3	Frequency Range:	4 Hz to 8 MHz or better
4	Frequency resolution:	10 mHz or better
5	Voltage Signal level range:	5 mVrms to 5 Vrms or better
6	Current Signal level range:	10 μA to 50mArms or better
7	Basic accuracy:	0.05% or better
9	Measurement time:	1 ms or faster
10	DC Bias:	0 to 2.5 V DC or better
11	BIN function:	Should be available
12	Compensation:	Should be available
13	Display:	5.5 inch or bigger to display numeric values or graph
14	Display digits:	6 digits or better
15	Memory:	Internal memory should be available to store up to 30000 or more measurement results
16	Interface:	USB, GP-IB, LAN
17	Software:	Free software to be provided to control & measure from PC.
17	Accessories:	4 terminal probe 1m Length, Low noise BNC(m)-BNC(m) cable 4 Nos, Power Cord, Instruction Manual
18	Warranty	3 years on main equipment
19	OEM & After sales service assurance:	OEM should have their own office & service center in India, documentary evidence to be submitted.
<b>Probe Station</b>		
1	Vacuum Chuck (1 No):	Size: 90mm diameter X-Y Displacement: 50mm, manually Angular Adjustment: Manual Material: Brass
2	Micro positioner (2 Nos):	Base: Fixed Magnetic Type X-Y-Z Displacement: 20mm (X-Y), 10mm (Z) Mounting: Probe tip holder
3	PC Based Microscope:	Magnification: 50X to 1000X HDMI interface to any external display/ monitor Light: LED light source
4	Probe Tips:	Size: 10-micron tip size Material: Tungsten Termination: BNC Length: 1.5 meter



5	Probe station base:	Size: 320 mm × 320 mm × 500 mm Material: Mild Steel Surface Finish: 10 microns
6	Warranty	3 years on main equipment
7	OEM & After sales service assurance:	OEM should have their own office & service center in India, documentary evidence to be submitted.