

# Global Tender Notification for EDS

(Tender date: 23<sup>rd</sup> October 2024)

This is an RFQ (Request for Quote) for procurement of Energy Dispersive X-ray Spectrometer (EDS) for the Centre for Nano Science and Engineering (CeNSE) at IISc, Bangalore. CeNSE is a multidisciplinary research department at IISc that houses a 14,000 sq. ft. cleanroom and characterization facility used by more than 100 faculty members from various disciplines at IISc. CeNSE also runs a program called Indian Nano electronics Users Program (INUP) which has allowed 8000 participants and 1500 faculty from more than 700 universities and institutes all over India to use the facilities at CeNSE. Consequently, any utility/facility at CeNSE receives significant exposure to scientific community at IISc and beyond. The vendors are requested to factor in the value of this exposure into their quotes. Details of existing facilities are available at:

<http://mncf.cense.iisc.ac.in/>

<http://nnfc.cense.iisc.ac.in/>

## Section 1 –The Process

1. **This order is open to all global Original Equipment Manufacturer (OEM) or their Indian authorized distributor.**
2. Only the Original Equipment Manufacturer or their authorized representatives shall participate in the bid.
3. The order will be placed only on the bidder who participated in the bid
4. Vendors will be required to submit a technical proposal and a commercial proposal in **two separate sealed envelopes**. Quotes in violation of this will be rejected.
5. **The deadline for submission of proposals is November 13<sup>th</sup>, 2024, 5:30 pm Indian Standard Time.** Proposals should arrive at the CeNSE office, GF-15, Centre for Nano Science and Engineering, Indian Institute of Science, Bangalore 560012, India, by the above deadline. Please mention **“Tender for EDS”** on the envelopes.
6. The technical proposal should have:
  - a. Relevant technical datasheets. The committee reserves the right to cross-check the information in these datasheets with publicly available information.
  - b. A compliance table with 5 columns. The first column must list the technical requirement, in the order that they are given below. The second column should describe the capability of the tool for that specific requirement. Please be quantitative and consistent with the technical datasheets. In case the technical requirement is a text, second column must provide a technical answer. In case the requirement is a number, please provide a number. Third column must specify whether the technical requirement is met with a “Yes”, “No”, or

“Partially”. If the response is “Partially” or “No” the third column, the fourth column must explain the extent of the deviation and, if possible, the reasons for the deviation. The fifth column is for other “Remarks”. You can use it to compare your tool with that of your competitors or provide more details/justifications.

- c. Technical capabilities of any *suggested* accessories/add-ons that may enhance the usability, capability, accuracy or reliability of the tool. Vendors are encouraged to quote for as many add-ons as their tool portfolio permits.
  - d. Any additional capabilities or technical details, which you would like to bring to the attention of the purchase committee. Vendors are encouraged to highlight the advantages of their tools over comparable tools from the competitors
7. If multiple systems fulfil the requirement, vendors can offer multiple bids.
  8. The technical proposal will be evaluated against the technical requirement. Only vendors who meet the technical requirement will be considered for the commercial comparison and negotiation.
  9. The lowest bid L1 will be calculated based on the total price of all items tendered for Basic equipment along with accessories selected for installation, selected optional items, recommended spares and warranty.
  10. The commercial bid must conform to the following:
    - a. The quotations should be CIP Bangalore with validity of 90 days.
    - b. Mention itemized cost of the system, optional items and *required* accessories, such as software, power supply, etc.
    - c. Mention itemized cost, as an option, for any *suggested* accessories/add-ons that may enhance the usability, capability, accuracy, or reliability of the tool. Vendors are encouraged to quote for as many add-ons as their tool portfolio permits.
    - d. Mention the warranty provided with the tool.
      - i. Warranty of 1 year is mandatory. Warranty of 3 years or more is preferred.
      - ii. All electronics and instrumentation must be covered under the warranty. Clearly indicate any part that is not included in the warranty.
  11. The decision of the purchase committee on the execution and evaluation of the tender, is absolute and final.
  12. The RFQ must include references of 5 previous installations, preferably in India. Please provide the names and contact addresses of the referees, so that the committee can contact them independently.
  13. We encourage vendors to give technical presentations, physically or online, so that we can better understand the technical capabilities of their tools and vendors can better understand the requirements.

14. To schedule the presentations or for technical questions, please contact Dr. Suresha, COO Micro and Nano Characterization Facility (MNCF), Centre for Nano Science and Engineering, Indian Institute of Science, Bangalore 560012, India. ([sureshasi@iisc.ac.in](mailto:sureshasi@iisc.ac.in))

## Section 2-Cancellation of Tender

Notwithstanding anything specified in this tender document, the IISc purchase committee, in its sole discretion, unconditionally and without having to assign any reason, reserves the rights:

1. To accept OR reject the lowest tender or any other tender or all the tenders.
2. To accept any tender in whole or in part.
3. To reject the tender, if it does not conform with the terms.

## Section 3- Validity of the Offer

The offer shall be valid 120 Days from the date of opening of the commercial bid.

## Section 4- Delivery, Installation and Training

1. The bidder shall provide the lead time to delivery, installation and made functional at IISc, Bangalore, from the date of receipt of a purchase order.
2. The system should be delivered, installed and made operational within 90 days from receipt of the purchase order.
3. The supply of the items will be considered as effected only on satisfactory installation and inspection of the system and inspection of all the items and features/capabilities tested by the IISc, Bangalore.
4. After successful installation, the handover date shall be the start of the warranty period.
5. No partial shipment is allowed.
6. The bidder should provide onsite technical and application training for the local facility technologists and users.

## Section 5-Payment Terms

The payment will be through a Letter of Credit and the milestone of the payment will be determined after mutual discussions with the successful bidder.

## Section 6- Statutory Variation

Any statutory increase in the taxes and duties subsequent to bidder's offer, if it takes place within the original contractual delivery date, will be borne by IISc, Bangalore subject to the claim being supported by documentary evidence. However, if any decrease takes place the advantage will have to be passed on to IISc, Bangalore.

## Section 7- Disputes and Jurisdiction

Any legal disputes arising out of any breach of contract pertaining to this tender shall be settled in the court of competent jurisdiction located within the city of Bangalore, India.

## Section 8- Technical Specifications

### Latest EDS system:

We are looking for EDS system providing core functionality for qualitative and quantitative microanalysis in research and education with future upgradation possible. The EDS system should be latest, state of art system designed to work with our Zeiss FESEM model Ultra 55. The supplier would be responsible for supply of all the necessary hardware and software to prove field integration of EDS system with the SEM.

### **EDS System: -**

1. The EDS system should include latest hardware and software that comply with ISO 15632/2012 specifications.
2. The EDS system should include the LN2 free Silicon Drift Detector (SDD) having SDD area of at least 60 mm<sup>2</sup> or more.
3. EDS detector Energy Resolution: < 129eV at Mn-k $\alpha$  even at 100,000cps
4. The elemental quantification range: Boron (B) to Californium (Cf)
5. Complete EDS system should be field serviceable & repairable to ensure minimum downtime
6. The EDS system hardware should be ready to acquire images up to 8K wide resolution and X-ray Maps up to 4K wide Resolution. The Line Scanning should allow the data to be collected from more than 8K points along the line.
7. The EDS system software should offer Real time Live functionality such as
  - a. Live Imaging
  - b. Live Spectrum with Live quantification
  - c. Live Auto Peak Labelling
  - d. Live Mapping
8. The EDS system software should allow the spectrum acquisition from point, rectangle, ellipse or freehand area. Overlaying of previously acquired spectrum should be available for live comparison
9. EDS Software support the acquisition of images, spectra, objects, line scans, maps with pixel resolved spectral acquisition, including automated quantification for standardless quantitative spectra analysis. Data handling and management in projects, report generation, and multi user log-on should be available.
10. Mapping function should store the EDS spectrum from each pixel so as to reconstruct the EDS spectrum and line scan data at a later date.
11. Both hardware and software should be compatible with the Zeiss Ultra 55 SEM.
12. Vendor should provide a interface kit containing hardware interlock and control cable for the ZEISS Ultra 55 FESEM along with license for serial interface remote operation via RS 232 to enable necessary control functions of the microscope from the EDS operating software. This interface kit is mandatory for interfacing the SEM control and EDS

hardware to work in synchronized way to have desired elemental analysis and mapping data .

13. EDS system software should include Reporting Templates. The Images, Spectra, X-ray maps, Layered Images and Line scans data can be saved, copied, printed and e-mailed directly from the EDS system software.
14. EDS calibration standard sample should be offered.
15. EDS acquisition and analysis software with free software upgrades for at least five years.
16. Specify the date the tool was launched and the period till which the software will be supported.
17. Please quote any additional hardware/software which can improve the throughput as optional items such as application software etc
18. The vendor must commit to supporting the software and control the computer for at least 10 years from the date of installation.
19. A complete set of instructions and service manuals must be provided along with the system.
20. After installation of the system by the engineers, the system performance must be demonstrated to the customer's satisfaction as per the specifications detailed here.
21. The supplier must provide onsite training to the users after installation.
22. **Service support.**
  - a. The vendor should have qualified technical service personnel for the equipment based in India.
  - b. The firm must guarantee technical and service support for the entire system and supply spares for a minimum period of 10 years or more from the installation date.
  - c. Service response time must be <48 hours.
23. The above-mentioned technical specifications are highly desired. However, lower technical specifications may be considered if the above-mentioned specifications are found to be unsuitable in financial terms. The Institute reserves the right to go for lower specifications taking into consideration its financial constraints and technical preferences.
24. All the specifications must be demonstrated on-site for acceptance.

## Section 9- Technical Bid

The technical bid should furnish all requirements of the tender along with all annexures in this section and submitted to

CeNSE Office

GF-15,

Attn: Dr. Suresha S J

Centre for Nano Science and Engineering

Indian Institute of Science

Bangalore – 560012, India

## Annexure-1

### Details of the Bidder

The bidder must provide the following mandatory information & attach supporting documents wherever mentioned:

### Details of the Bidder

Sl. No	Items	Details
1.	Name of the Bidder	
2.	Nature of Bidder (Attach attested copy of Certificate of Incorporation/ Partnership Deed)	
3.	Registration No/ Trade License, (attach attested copy)	
4.	Registered Office Address	
5.	Address for communication	
6.	Contact person- Name and Designation	
7.	Telephone No	
8.	Email ID	
9.	Website	
10.	PAN No. (attach copy)	
11.	GST No. (attach copy)	

Signature of the Bidder

Name

Designation, Seal

Date:

## Annexure-2

Declaration regarding experience

To,

The Chairperson,

Centre for Nanoscience and Engineering,

Indian Institute of Science,

Bangalore – 560012, India

Ref: Tender for EDS

Dated: XXXXX

RFQ for procurement of Energy Dispersive X-ray Spectrometer (EDS) at CeNSE, IISc Bangalore

Sir,

I've carefully gone through the Terms & Conditions contained in the above referred tender. I hereby declare that my company / firm has ---- years of experience in supplying and installing EDS.

(Signature of the Bidder)

Printed Name

Designation, Seal Date:



## Annexure-3

Declaration regarding track record

To,

The Chairperson,

Centre for Nano Science and Engineering

Indian Institute of Science,

Bangalore – 560012, India

Ref: Tender for EDS

Dated: XXXXX

RFQ for procurement of Energy Dispersive X-ray Spectrometer (EDS) at CeNSE, IISc Bangalore

Sir,

I've carefully gone through the Terms & Conditions contained in the above referred tender. I hereby declare that my company/ firm is not currently debarred / blacklisted by any Government / Semi Government organizations / institutions in India or abroad. I further certify that I'm competent officer in my company / firm to make this declaration.

Or

I declare the following

Sl.No	Country in which the company is Debarred /blacklisted / case is Pending	Blacklisted / debarred by Government / Semi Government/Organizations /Institutions	Reason	Since when and for how long
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(NOTE: In case the company / firm was blacklisted previously, please provide the details regarding period for which the company / firm was blacklisted and the reason/s for the same).

Yours faithfully

(Signature of the Bidder)

Name

Designation, Seal

Date:

## Annexure-4:

Declaration for acceptance of terms and conditions

To,

The Chairperson,

Centre for Nano Science and Engineering

Indian Institute of Science,

Bangalore – 560012, India

Ref: Tender for EDS

Dated: XXXX

RFQ for procurement of Energy Dispersive X-ray Spectrometer (EDS) at CeNSE, IISc

Sir,

I've carefully gone through the Terms & Conditions as mentioned in the above referred tender document. I declare that all the provisions of this tender document are acceptable to my company. I further certify that I'm an authorized signatory of my company and am, therefore, competent to make this declaration.

Yours faithfully,

(Signature of the Bidder)

Name

Designation, Seal

Date:

## Annexure-5:

Details of items quoted:

1. Company Name
2. Product Name
3. Part / Catalogue number
4. Product description / main features
5. Detailed technical specifications
6. Remarks

Instructions to bidders:

1. Bidder should provide technical specifications of the quoted product/s in detail.
2. Bidder should attach product brochures along with technical bid.
3. Bidders should clearly indicate compliance or non-compliance of the technical specifications provided in the tender document.

## Section-10: Commercial Bid

The commercial bid should be furnished with all requirements of the tender with supporting documents as mentioned under along with HSN code:

S.No	Description	Cat. Number	Quantity	Unit Price	Sub total
1.	Essential items noted in the technical specification				
1.a	... (details of essential items)				
1.b	...				
2.	Optional items noted in the technical specification				
2.a	... (details of essential items)				
2.b	...				
3.	Accessories for operation and installation				
4.	All Consumables, spares and software to be supplied locally				
5.	Warranty				
6.	AMC beyond warranty				
7.	Cost of Insurance and Airfreight				
8.	FOR-IISc Bangalore				

Any additional items

S.No	Description	Cat. Number	Quantity	Unit Price	Sub total

Addressed to

The Chairperson,

Attn: Dr. Suresha S J

Centre for Nano Science and Engineering

Indian Institute of Science

Bangalore – 560012, India

## Section-11: Checklist

(This should be enclosed with technical bid- Part A)

The following items must be checked before the Bid is submitted:

### 1. Sealed Envelope "A": Technical Bid

4. **Section 9- Technical Bid (each page signed by the authorized signatory and sealed) with the below annexures:**
  - a. **Annexure 1: Bidders details**
  - b. **Annexure 2: Declaration regarding experience**
  - c. **Annexure 3: Declaration regarding clean track record**
  - d. **Annexure 4: Declaration for acceptance of terms and conditions**
  - e. **Annexure 5: Details of items quoted**
5. **Copy of this tender document duly signed by the authorized signatory on every page and sealed.**

### 2. Sealed Envelop "B": Commercial Bid

#### **Section 10: Commercial Bid**

Your quotation must be submitted in two envelopes: **Technical Bid (Envelope A) and Commercial Bid (Envelope B)** super scribing on both the envelopes with Tender description & Due Date and both of these in sealed covers and put in a bigger cover which should also be sealed and duly super scribed with Tender description & Due Date.