राष्ट्रीय प्रौद्योगिकी संस्थान मेघालय



National Institute of Technology Meghalaya Bijni Complex, Laitumkhrah, Shillong 793 003 Meghalaya, India

Phone: 0364-2501215 Fax : 0364-2501113 Web: http://www.nitm.ac.in/

Date: - 02.11.2021.

Date: 02.11.2021

No. NITMGH/ES/FIST-DST/PH/2021-22/956

E-NOTICE INVITING QUOTATION (e-NIQ) FOR SUPPLY & INSTALLATION OF RF/DC MAGNETRON SPUTTERING SYSTEM UNDER DST-FIST PROJECT IN THE DEPARTMENT OF PHYSICS, NIT MEGHALAYA, SOHRA CAMPUS (CHERRAPUNJEE)

NIT Meghalaya invites online Tenders through **CPP Portal https://eprocure.gov.in/eprocure/app** from eligible Bidders for procurement of equipment.

Prescribed Tender document, detailed fees and specifications, bid instructions and Terms & Conditions can be downloaded from the CPP Portal (https://eprocure.gov.in/eprocure/app) or from the Institute website (http://www.nitm.ac.in/). However, the bidding process (submission and finalization) will be done in online mode at CPP Portal. The bidders may submit their bid only though uploading in the CPP Portal https://eprocure.gov.in/eprocure/app.

BID INSTRUCTIONS:

- 01. The offer must be submitted in Two Bid Two Files/Covers only through uploading in the CPP Portal, before the last date & time for bid submission. Bidders must submit their digitally signed bids. The covers will contain the following documents:
 - i. Cover 1 which consists of technical requirements and general terms & conditions.
 - ii. Cover 2 which consists of the Price Bid (in BoQ Ms-Excel format).

NOTICE INVITING QUOTATION (NIQ) FOR SUPPLY AND INSTALLATION OF RF/DC MAGNETRON SPUTTERING SYSTEM IN THE DEPARTMENT OF PHYSICS, NIT MEGHALAYA, SOHRA CAMPUS(CHERRAPUNJEE)

No. NITMGH/ES/FIST-DST/PH/2021-22/956

LAST DATE OF SUBMISSION on 02.12.2021 at 1:00 pm

Technical bids will be opened on 03.12.2021 at 3:30 pm

After evaluation of technical bids, financial bids of the successful bidders will be opened on a later date which will be duly notified.

- 02. **Submission of Compliance Certificate:** Duly filled and signed Compliance Certificates (as per formats at Annexure-I A & B) are must with the Technical bid.
- 03. **Bid not transferable:** The bid documents are not transferable and the seal and signature of the authorized official of the firms must appear on all the papers and envelopes submitted.
- 04. The quantity mentioned for each item in the Annexure-III may vary depending on requirements.
- 05. GST Registration Certificate should be enclosed along with the tender documents.
- 06. Relevant catalogue of the items (if any) must be enclosed.
- 07. Interested vendors may interact with Dr. K. Senthilkumar, Assistant Professor, Department of Physics, NIT Meghalaya, for any queries @ 9402102371 and email ID @ akskumar@nitm.ac.in
- 08. For e-waybill the successful vendor has to apply online via https://ewaybill.nic.in/ewb.html.
- 09. Softcopy of the Technical bid either in Microsoft Word or Microsoft Excel format must also be submitted in a CD along with the Technical Bid, in addition to the hard copies.

NIQ TERMS & CONDITIONS:

01. Rates: Rates quoted in the Price Bid should be on DOOR DELIVERY NIT Meghalaya, Sohra (Cherrapunjee) Campus basis, as per details below to be quoted in the BOQ:

Grou	ip: Item Sl. No. Item name	
Sl. No.	Particulars	Rate
I	Basic Price (per unit)	
	Discount if any	
	Total	
	GST (pl. break up CGST/SGST/IGST)	
	Total (per unit)	
	Grand total for the item	
II	Transportation charge up to NIT Meghalaya, Sohra	
	(Cherrapunjee) Campus basis (if applicable)	
III	Transit Insurance covering all risk up to 10 days after delivery	
	(if applicable)	
	Grand total on door delivery at NIT Meghalaya, Sohra	
	(Cherrapunjee) Campus basis	
IV	Annual Maintenance Contract rate (after expiry of warranty	
	period) for 1 st year/2 nd year/3 rd year	

Note: Vague terms like "packing, forwarding, transportation etc. extra" without mentioning the specific amount will not be accepted. Such offers shall be treated as incomplete and rejected. Bidders shall indicate their rates in clear/visible figures as well as in words and shall not alter/overwrite/make cutting in the quotation. In case of a mismatch, the rates written in words will prevail. Usage of "White ink" to erase and then rewrite the rates will not be accepted. Bidders are advised to strike out wrong entries and rewrite clearly beside them. In such cases, the bidder shall have to sign and place their official seal for every corrected entry.

- 02. Quotations have to be submitted in Indian Rupees only. If goods are to be imported, the quotations shall include all charges for customs clearance, clearing agent fees, landing port handling charges, insurance etc. and onward transportation of the goods from the port/airport of landing for door delivery upto NIT Meghalaya, Sohra Campus (Cherrapunjee),Meghalaya. NIT Meghalaya has a valid registration with the Department of Scientific and Industrial Research (DSIR), Ministry of Science & Technology, Government of India for availing Customs/Central Excise Duty exemption. NIT Meghalaya will provide all necessary certificates, authorizations and documents required for clearing the consignment and for onward transportation upto Shillong.
- 03. All documents submitted should be self-attested with seal of the bidder.
- 04. Bidder must unconditionally accept all terms and conditions stipulated in the tender document and all pages of the bid including all enclosures should be numbered and must be duly filled in, signed and stamped by the bidder or his authorized representative. Offers received without signature and seal on all pages are liable to be rejected.
- 05. The bidder must also upload a digitally signed copy of the Tender Acceptance Letter in the format given at Annexure-IV.
- 06. Validity of Quotation: Quoted rates must be valid for 120 days from the date of quotation.
- 07. Warranty: The quoted equipment and components must be warranted for a minimum of Three Years from the date of successful installation and training.
- 08. Literature must: All the quotations must be supported by the printed technical data sheet/ literature and the specifications mentioned in the quotation must be reflected/ supported by such

printed technical data sheet/ literature. The model no. and specifications quoted should invariably be highlighted in the data sheets/ literature for easy reference.

- 09. Details of supply of similar items to Institutes of National Importance (preferably those located in the Northeastern region) must be provided.
- 10. **Presentation:** Technically qualified bidders may be called upon to give full presentation of the quoted equipment at NIT Meghalaya campus before opening of Price bid as a support of their Technical Quotations and for any clarifications.
- 11. **Equipment breakdown**: Any Equipment breakdown must be attended to within 72 hours during the warranty period of the equipment free of cost.
- 12. **Training:** If required, free training is to be provided to NIT Meghalaya personnel on the operation, installation, training, maintenance and trouble shooting of the supplied items.
- 13. **After Sales Service**: Vendor should clearly state the available nearest after sales service facilities in the North Eastern region, without which the offer will be rejected.
- 14. **Dealership Certificate**: The bidder/tenderer should be either a manufacturer or authorized agent of the foreign/Indian manufacturer. Dealers or Agents quoting on behalf of Manufacturer must enclose valid dealership certificate.
- 15. EMD:- As per OM No. F9/4/2020-PPD issued by the Department of Expenditure, Ministry of Finance, Government of India dated 12.11.2020 vendors are exempted from submission of EMD/Bid Security. However, in lieu of Bid Security, the vendor must submit a "Bid Security Declaration" accepting that if they withdraw or modify their bids during period of validity etc., they will be suspended for the time specified in the tender documents.
- 16. **Performance Bank Guarantee (PBG):** The successful bidder shall furnish an unconditional PBG (as per format at Annexure II) for 3 % of the Purchase Order value from a Nationalized/Scheduled Bank of India, before release of the payment. Else 3 % of the billed amount will be deducted as security deposit. Where the PBG is obtained by a foreign bank, it shall be endorsed by a Nationalized/Scheduled Indian bank and shall be governed by Indian Laws and be subject to the jurisdiction of courts at Shillong. The PBG shall guarantee that,
 - The Vendor guarantees satisfactory operation of the Equipment & components against poor workmanship, bad quality of materials used, faulty designs and poor performance.
 - The Vendor shall, at his own cost, rectify the defects/replace the items supplied, for defects identified during the period of guarantee/warranty.

The PBG shall remain valid for period of sixty days beyond the date of completion of all contractual obligations of the supplier including warranty obligations.

17. **Delivery:**

- a. Time Limit: Maximum within 180 (One Hundred & Eighty) days from the date of issue of purchase order.
- b. Safe Delivery: All aspects of safe delivery shall be the exclusive responsibility of the vendor. At the destination site, the package will be opened only in the presence of NIT user/representative and vendor's representative. The intact condition of the package and the seal/indicators for not being tempered with, shall form the basis for certifying the receipt in good condition.

- c. Insurance: The supplier is to establish 'All Risk Transit Insurance' coverage till door delivery at NIT Meghalaya, Sohra Campus (Cherrapunjee).
- d. Part Delivery: As far as possible no part delivery shall be entertained. However, in extreme cases, acceptance of part delivery shall be a prerogative of the Institute.
- e. Penalty for delay in delivery: The date of delivery should be strictly adhered to otherwise the Director, NIT Meghalaya reserves the right not to accept delivery in part or full. The Director, NIT Meghalaya also reserves the right to impose penalty, as deemed fit, for delay in delivery of the equipments including the imposition of Liquidated Damages (LD). The decision of the Director shallbe final and binding to all.
- 18. **Genuine Pricing:** Vendor is to ensure that quoted price for the particular item is not more than the price quoted to any other customer in India, particularly to IITs/NITs and other Government Organization. Copy of the latest price list for the quoted item, applicable in India, must be enclosed with the offer.
- 19. **Conditional tenders not acceptable**: All the terms and conditions mentioned herein must be strictly adhered to by all the vendors. Conditional tenders shall not be accepted on any ground and shall be rejected straightway. Conditions mentioned in the tender bids submitted by vendors will not be binding on NIT Meghalaya.
- 20. **Late and delayed tender**: Late and delayed tender will not be considered. In case any unscheduled holiday occurs on the prescribed closing/opening date the next working day shall be the prescribed date of closing/opening.
- 21. Payment: 80% payment within 30 (thirty) days from date of Successful delivery & Balance 20% after successful installation, training and acceptance.
- 22. **Enquiry during the course of evaluation not allowed**: After opening the Technical Bid, no enquiry from the bidder(s) shall be entertained during the course of evaluation of the tender till final decision is conveyed to the successful bidder(s). However, the Purchase Committee or its authorized representative may make enquiries/seek clarification from the bidders. In such a case, the bidder must extend full cooperation. The bidders may also be asked to arrange demonstration of the offered items, in a short period of notice.
- 23. At any time prior to the date of submission of bid, NIT Meghalaya may, for any reason, either of its own or in response to a clarification from a prospective bidder, modify the bidding documents by an amendment / corrigendum. Any such amendment / corrigendum will be duly notified through the CPP Portal (https://eprocure.gov.in/eprocure/app). Prospective bidders are advised to check the Institute's website every now and then for any amendment / corrigendum. In order to provide reasonable time to take the amendment into account in preparing the bid, NIT Meghalaya may extend the date and time for submission of bids.
- 24. The acceptance of the quotation will rest solely with the Director, NIT Meghalaya, who in the interest of the Institute is not bound to accept the lowest quotation and reserves the right to himself to reject or partially accept any or all the quotations received without assigning any reasons.
- 25. **Force Majeure**: If the performance of the obligation of either party is rendered commercially impossible by any of the events hereafter mentioned that party shall be under no obligation to perform the agreement under order after giving notice of 15 days from the date of such an event in writing to the other party, and the events referred to are as follows: (a) Any law, statute or ordinance, order action or regulations of the Government of India, (b) Any kind of natural disaster, and (c) Strikes, acts of the Public enemy, war, insurrections, riots, lockouts, sabotage.

26. Termination for default: Default is said to have occurred

- (a) If the equipment or any of its component is found having poor workmanship, faulty designs, poor performance and bad quality of materials used.
- (b) If the supplier fails to deliver any or all of the services within the time period(s) specified in the purchase order or any extension thereof granted by NIT Meghalaya.
- (c) If the supplier fails to perform any other obligation(s) under the contract. Under the above circumstances NIT Meghalaya may terminate the contract / purchase order in whole or in part and forfeit the EMD/PBG as applicable. In addition to above, NIT Meghalaya may at its discretion also take the following actions: NIT Meghalaya may procure, upon such terms and in such manner, as it deems appropriate, goods similar to the undelivered items/products and the defaulting supplier shall be liable to compensate NIT Meghalaya for any extra expenditure involved towards goods and services obtained.

27. Applicable Law:

- a. The contract shall be governed by the laws and procedures established by Govt. of India and subject to exclusive jurisdiction of Competent Court and Forum in Shillong / India only.
- b. Any dispute arising out of this purchase shall be referred to the Director, NIT Meghalaya, and if either of the parties hereto is dissatisfied with the decision, the dispute shall be referred to the decision of an Arbitrator, who should be acceptable to both the parties, to be appointed by the Director of the Institute. The decision of such Arbitrator shall be final and binding on both the parties.

Sd/-Registrar

Encl.: ANNEXURE-I, ANNEXURE-II, ANNEXURE-III, ANNEXURE-IV.

<u>Annexure –I</u>

A. <u>COMPLIANCE CERTIFICATE FOR NIQ TERMS</u>

(To be enclosed in the Technical bid)

Sl. No.	NIQ Terms and Conditions	Yes/No
01	Rate quoted as per instruction	
02	AMC rate after warranty provided	
03	Validity of quoted rate for 120 days agreed	
04	"Bid Security Declaration" accepting that if they withdraw or modify	
	their bids during period of validity etc., they will be suspended for the	
	time specified in the tender documents.	
05	PBG term agreed	
06	Payment term agreed	
07	Delivery terms agreed	
08	Warranty period agreed	
09	Literature: Printed Literature provided	
10	Dealership / distributorship certificate (in case of dealers/agents) provided	
11	Details of supply to other Institutes of National Importance provided	
12	Equipment breakdown clause agreed	
13	After Sales Service: address of nearest after Sales Service centre in the region	
	provided	
14	Manufacturer certificate provided	
15	Applicable law terms agreed	
16	All other terms and conditions mentioned in the NIQ (Technical & Financial) agreed	

Signature wi	th Se	eal:	 	 			
Vendor: M/s			 	 	 		

Annexure -I

B. COMPLIANCE CERTIFICATE FOR SPECIFICATIONS

(One for each item, must to be enclosed in the Technical bid)

Item Sl. No.		Item Na		
Quoted Product:	Make:	Model No:		
Specifications	as per Annexure-III	Quote	Complied/ Deviation	
Parameter	Specification			
_			·	

Signature with Seal:	
Vendor: M/S	

^{*} Vendor must quote the parameter specification of the quoted product in this column and not just copy the specification from the tender call document. Failure to do so will lead to rejection of the tender.

Annexure -II

PERFORMANCE BANK GUARANTEE

To: The Director, National Institute of Technology Meghalaya Bijni Complex, Laitumkhrah, Shillong-793 003	
Meghalaya	
WHEREAS	
	, in pursuance of Contract No
neremaner caned the order.	
	in the said order that the Supplier shall furnish you the sum specified therein as security for compliance ecordance with the order.
Supplier, up to a total of	Guarantors and responsible to you, on behalf of the (Amount of the Guarantee y you, upon your first written demand declaring the thout cavil or argument, any sum or sums within the tee) as aforesaid, without your needing to prove or to
This guarantee is valid until theday of	20
	Signature and Seal of Guarantors
	Date20
	Address:

All correspondence with reference to this guarantee shall be made at the following address:

The Director, National Institute of Technology Meghalaya Bijni Complex, Laitumkhrah, Shillong-793 003 Meghalaya

<u>ANNEXURE-III</u> (Technical Specification)

Item: RF/DC Magnetron Sputtering System

Quantity: 01 (One)
Specification details

Sl. No.	Items		Specifications
1.	Sputtering	(A)	VACUUM CHAMBER:
	Sputtering Chamber	(A) (B)	•
		(D)	 One number of 300W, 13.56 MHz, RF power supply with auto matching network. SUBSTRATE HOLDER & HEATER Substrate holder to handle up to a 4 inch diameter substrate. Substrate heater of 800 deg.C with proportional integral derivative (PID) controller. The substrate heater should be oxygen compatible up to maximum temperature. Temperature accuracy should be within ±5 Deg.C Substrate holder shall have provision for substrate rotation variable speed up to 20 RPM. Motorized motion along the 'Z' axis to vary the substrate to target distance.

		(E)	MASS FLOW CONTROLLERS:
		(E)	Three numbers of Mass Flow Controllers (MFCs for Argon,
			Oxygen, and Nitrogen (2-100sccm) with necessary accessories
			should be provided.
2.	Vacuum	(A)	<u>VACUUM PUMP</u> :
	Pumping		The vacuum pumping system should consist of turbo molecular
	System		pumping system (having the pumping speed of 400 Ltrs/sec or
			better) backed by appropriate dry scroll vacuum pump (displacement capacity of 10 m³/hr or better).
			 Ultimate vacuum of 5 x 10⁻⁷ mbar range should be achieved in
			clean, degassed chamber after high vacuum valve opens and
			initially back filled with pure and dry Nitrogen gas.
		(B)	HIGH VACUUM VALVE:
			Motorized high vacuum Poppet valve with built in facility to
			automatically throttle the pumping system by 'cracking' the valve, for maintaining accurate process pressure for plasma
			processes.
			> Drawing of the poppet valve should be provided along with the
			technical bid.
			> Inbuilt liquid nitrogen trap is incorporated below high vacuum
		(G)	valve.
		(C)	VACUUM VALVES: Electro proumetically energed right angle valves for roughing
			Electro pneumatically operated right angle valves for roughing, backing process should be provided.
			 Electro magnetically operated Vent valve should be provided.
		(D)	
		(D)	SS Plumbing line &Collar ➤ SS Plumbing line with flexible hoses & KF connections
			wherever required with necessary interlocks should be provided.
		(E)	VACUUM GAUGES:
		, ,	Digital Pirani (2 No's) and a Penning Gauge
			Preferable : Edwards/Inficon/Leybold
3.	Control		Control console to house all the displays of Power Supplies,
	Console &		Substrate heater control, Substrate rotation, MFC controllers,
4.	Instrumentation Mounting		vacuum gauges, ON/OFF switches, etc. Main cabinet should be powder coated and it should have front
_ - .	Frame /		and back side door for easy servicing and maintenance.
	Support Stand		 Main cabinet should be mounted on 4 castor wheels for mobility
			and easy maneuverability with jack bolt for keeping in specified
			location.
			> 19" control console to mount the Magnetrons power supplies,
5.	System Control		HMI, etc.PLC with HMI for semi automatic operation of the system. The
<i>J</i> .	System Control		following operation should be performed.
			Automatic vacuum cycle
			> Automatic shutter control.
			> Substrate rotation control.
			Heater control
			Water flow switch interlock status Vocume interlock status
			Vacuum interlock statusAlarming, failure indication
6.	Safety and		All necessary safety interlocks to be provided.
	Interlocks		

7.	Warranty	> 36 months from the date of installation
8.	CE Certification	> CE Certification must be provided for the proposed system.
		➤ The CE certificate should be provided with the Unit.
9.	Acceptance Criteria (mandatory)	 The thickness uniformity should be ±5% over 50mm (2 inch) diameter substrate. A measurement certificate of thickness uniformity of any metal (for example Al/Cu/Ag) on Si substrate of appropriate size should be provided with Technical Bid. The thickness should be measured using ellipsometry/profilometer showing variation of thickness along the radius of the Si substrate. The committee reserves the right to verify the certificate and thickness uniformity at the customer site/manufacturer site. If it is done at Manufacturer site, then Manufacturer has to arrange the necessary facilities for assessing uniformity.
10.	Eligibility Criteria (mandatory)	 Manufacturer or their Authorized Agent should have ISO or equivalent international standard certificate. Manufacturer or their Authorized Agent should haves export experience for similar products Must have supplied minimum 10 nos. of similar equipments to Government labs / Govt. Institutions / Universities, etc. List of Organization names with user details to be submitted along with offer where similar type supplied earlier to above said institutions / Universities / etc. Original Warranty Certificate, Original Test certificate of OEM should be submitted for all imported Items System Catalogue and all the spares catalogues should be produced with the Technical Bid Supplier will support the user with all the spares for a minimum period of 10 years. Bidder has to submit audited accounts of last three financial years. Audited statement must be signed and stamped by qualified chartered accounted. Income Tax return for assessment year – 2015-16, 2016-17 and 2017-18. Up to date GST clearance certificate.
11.	Drawings	 Up to date GST clearance certificate. Conceptual Drawings (exm: Schematic drawing of whole unit) and Technical brochures must be submitted along with the unit.
12.	Utilities	 Details to be provided in the offer for space, power supply, gases, etc for system operation
13.	Manuals	Operation Manual to be given after installation and acceptance of equipment
14.	User Training	> Training for 2 users should be provided to make them well familiar with the operation of various components.

ANNEXURE-IV

TENDER ACCEPTANCE LETTER

(To be given on Company Letter Head)

Re	f. No Date:
То	
	The Registrar
	National Institute of Technology Meghalaya
	Bijni Complex, Laitumkhrah
	Shillong 793003, Meghalaya
Te	b: Acceptance of Terms & Conditions of Tender. nder Reference No.: NITMGH/ dated2021 me of Tender:
INA	me of Tender:-
Sir	
1.	I/ We have downloaded / obtained the tender document(s) for the above the web site of NIT Meghalaya, Shillong as per your advertisement, give

- e mentioned Tender from ven in the CPP Portal and the above mentioned website.
- 2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents from Page No.....to (including all annexure(s), schedule(s), etc.,), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.
- 3. The corrigendum(s), if any, issued from time to time by NIT Meghalaya, Shillong, have also been taken into consideration, while submitting this acceptance letter.
- 4. I / We hereby unconditionally accept the tender conditions of above mentioned tender document(s) / corrigendum(s) in its totality / entirety.
- 5. I / We do hereby declare that our Firm has not been blacklisted/ debarred by any Govt. Department/Public sector undertaking.
- 6. I / We certify that all information furnished by our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then NIT Meghalaya, Shillong shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully	
(Signature of the Bidder, with Official Seal)	
*********	****