



Basic Details

Organisation Chain	Indian Institute of Technology Ropar		
Tender Reference Number	404-23		
Tender ID	2024_IITRP_789806_1	Withdrawal Allowed	Yes
Tender Type	Open Tender	Form of contract	EOI
Tender Category	Goods	No. of Covers	1
General Technical Evaluation Allowed	No	ItemWise Technical Evaluation Allowed	No
Payment Mode	Not Applicable	Is Multi Currency Allowed For BOQ	No
Is Multi Currency Allowed For Fee	No	Allow Two Stage Bidding	No

Cover Details, No. Of Covers - 1

Cover No	Cover	Document Type	Description
1	Fee/PreQual/Technical/Finance	.pdf	EOI for Nitrogen (N2) Gas Generation System and Gas Compressor for Cold Spraying System

Tender Fee Details, [Total Fee in ₹ * - 0.00]

Tender Fee in ₹	0.00		
Fee Payable To	Nil	Fee Payable At	Nil
Tender Fee Exemption Allowed	No		

EMD Fee Details

EMD Amount in ₹	0.00	EMD through BG/ST or EMD Exemption Allowed	No
EMD Fee Type	fixed	EMD Percentage	NA
EMD Payable To	Nil	EMD Payable At	Nil

Work /Item(s)

Title	EOI for Nitrogen (N2) Gas Generation System and Gas Compressor for Cold Spraying System				
Work Description	EOI for Nitrogen (N2) Gas Generation System and Gas Compressor for Cold Spraying System				
Pre Qualification Details	Please refer Tender documents.				
Independent External Monitor/Remarks	NA				
Tender Value in ₹	NA	Product Category	Laboratory and scientific equipment	Sub category	NA
Contract Type	Tender	Bid Validity(Days)	180	Period Of Work(Days)	45
Location	M Visvesvaraya Block IIT Ropar	Pincode	140001	Pre Bid Meeting Place	M Visvesvaraya Block IIT Ropar
Pre Bid Meeting Address	Store and Purchase R and D Section M Visvesvaraya Block IIT Ropar 140001	Pre Bid Meeting Date	22-Jan-2024 10:00 AM	Bid Opening Place	Store and Purchase R and D Section
Should Allow NDA Tender	No	Allow Preferential Bidder	No		

Critical Dates

Publish Date	10-Jan-2024 06:00 PM	Bid Opening Date	31-Jan-2024 03:30 PM
Document Download / Sale Start Date	10-Jan-2024 06:00 PM	Document Download / Sale End Date	31-Jan-2024 03:00 PM
Clarification Start Date	10-Jan-2024 06:00 PM	Clarification End Date	26-Jan-2024 11:00 AM

Bid Submission Start Date		10-Jan-2024 06:00 PM		Bid Submission End Date		31-Jan-2024 03:00 PM	
Tender Documents							
NIT Document	S.No	Document Name		Description		Document Size (in KB)	
	1	Tendernotice_1.pdf		EOI for Nitrogen (N2) Gas Generation System and Gas Compressor for Cold Spraying System		1414.05	
Work Item Documents	S.No	Document Type	Document Name	Description		Document Size (in KB)	
	1	Tender Documents	123.pdf	EOI for Nitrogen (N2) Gas Generation System and Gas Compressor for Cold Spraying System		1397.39	
Tender Inviting Authority							
Name		The Assistant Registrar R and D Section					
Address		Store and Purchase R and D Section M Visvesvaraya Block IIT Ropar 140001					



INDIAN INSTITUTE OF TECHNOLOGY ROPAR
RESEARCH AND DEVELOPMENT SECTION
Rupnagar-140001 (Punjab) India
Contact No. 01881-23-1149 Email: purchase.rnd@iitrpr.ac.in

File No. 404-23/DST/TDT/AM/2022/143/F290/ME-10007/

Dated 10.01.2024

Indian Institute of Technology Ropar is in the process of purchasing following item(s) as per details as given as:-

Details of the item	EOI for Nitrogen (N ₂) Gas Generation System and Gas Compressor for Cold Spraying System
Earnest Money Deposit to be submitted	NA
Warranty	03 years comprehensive warranty
Delivery Schedule	As per tender document

Tender Documents may be downloaded from Central Public Procurement Portal <http://eprocure.gov.in/eprocure/app>. Aspiring Bidders who have not enrolled / registered in e-procurement should enroll / register before participating through the website <http://eprocure.gov.in/eprocure/app>. The portal enrolment is free of cost. Bidders are advised to go through instructions provided at 'Instructions for online Bid Submission'.

Tenderers can access tender documents on the website (For searching in the NIC site, kindly go to Tender Search option and type 'IIT'. Thereafter, Click on "GO" button to view all IIT Ropar tenders). Select the appropriate tender and fill them with all relevant information and submit the completed tender document online on the website <http://eprocure.gov.in/eprocure/app> as per the schedule given in the next page.

No manual bids will be accepted. All quotation (both Technical and Financial should be submitted in the E-procurement portal).

(Registrar)

SCHEDULE	
Name of Organization	Indian Institute of Technology Ropar
Tender Type (Open/Limited/EOI/Auction/Single/Global)	EOI
Tender Category (Services/Goods/works)	Goods
Type/Form of Contract (Work/Supply//Service/Buy/Empanelment)	Supply
Product Category (Civil Works/Electrical Works/Fleet Management/ Computer Systems/Lab Equipment)	Lab Equipment
Date of Issue/Publishing	10/01/2024 (18:00 Hrs)
Document Download/Sale Start Date	10/01/2024 (18:00 Hrs)
Pre-bid Meeting Date	22/01.2024 (10:00 Hrs)
Document Download/Sale End Date	31/01/2024 (15:00 Hrs)
Last Date and Time for Uploading of Bids	31/01/2024 (15:00 Hrs)
Date and Time of Opening of Technical Bids	31/01/2024 (15:30 Hrs)
Tender Fee/EMD	Rs. ___NIL___/- (For Tender Fee) Rs. NIL (For EMD)
	(To be paid through RTGS/NEFT. IIT Ropar R & D Account Bank details are as under:
	Name of the Bank A/C : IIT Ropar R & D Account
	SBI A/C No. : 32325870435
	Name of the Bank : State Bank of India
	IFSC Code : SBIN0013181
	MICR Code : 140002008
	(This is mandatory that UTR Number is provided in the on- line quotation/bid. (Kindly refer to the UTR Column of the Declaration Sheet at Annexure-F)
No. of Covers (1/2/3/4)	2
Bid Validity days (180/120/90/60/30)	180 days (From last date of opening of tender)
Address for Communication	Assistant Registrar, R&D Section, Store & Purchase, M. Visvesvaraya Building, Indian Institute of Technology Ropar, Rupnagar – 140001
Contact No.	01881-231149
Email Address	Purchase.rnd@iitrpr.ac.in, jr.rnd@iitrpr.ac.in

Registrar

Instructions for Online Bid Submission:

As per the directives of Department of Expenditure, this tender document has been published on the Central Public Procurement Portal ([URL:http://eprocure.gov.in/eprocure/app](http://eprocure.gov.in/eprocure/app)). The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

More information useful for submitting online bids on the CPP Portal may be obtained at:

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

REGISTRATION

- 1) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal ([URL:http://eprocure.gov.in/eprocure/app](http://eprocure.gov.in/eprocure/app)) by clicking on the link “Click here to Enroll”. Enrolment on the CPP Portal is free of charge.
- 2) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- 3) Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- 4) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.), with their profile.
- 5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse.
- 6) Bidder then logs in to the site through the secured log-in by entering their userID / password and the password of the DSC / eToken.

SEARCHING FOR TENDER DOCUMENTS/

- 1) There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, organization name, location, date, value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other keywords etc. to search for a tender published on the CPP Portal.
- 2) Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective ‘My Tenders’ folder. This would enable the CPP Portal to intimate the

bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.

- 3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

PREPARATION OF BIDS

- 1) Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- 2) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- 3) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF formats. Bid documents may be scanned with 100 dpi with black and white option.
- 4) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use “My Space” area available to them to upload such documents. These documents may be directly submitted from the “My Space” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

SUBMISSION OF BIDS

- 1) Bidder should log into the site well in advance for bid submission so that he/she upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- 2) The bidder has to digitally sign the bid document and upload the required bid documents one by one as indicated in the tender document.
- 3) Bidder has to select the payment option as “on-line” to pay the tender fee / EMD as applicable and enter details of the instrument. Whenever, an EMD / Tender fee is sought, bidders need to pay the tender fee and EMD separately on-line through RTGS.
- 4) A standard BoQ format has been provided with the tender document to be filled by all the bidders. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. Bidders are required to download the BoQ file, open it and complete the white colored (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.

- 5) The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
- 6) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done.
- 7) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 8) Upon the successful and timely submission of bids, the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
- 9) Kindly add scanned PDF of all relevant documents in a single PDF file of compliance sheet.

ASSISTANCE TO BIDDERS

- 1) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
- 2) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk. The contact number for the helpdesk is 1800 233 7315.

General Instructions to the Bidders

- 1) The tenders will be received online through portal <http://eprocure.gov.in/eprocure/app>. In the Technical Bids, the bidders are required to upload all the documents in .pdf format.
- 2) Possession of a Valid Class II/III Digital Signature Certificate (DSC) in the form of smart card/e-token in the company's name is a prerequisite for registration and participating in the bid submission activities through <https://eprocure.gov.in/eprocure/app>. Digital Signature Certificates can be obtained from the authorized certifying agencies, details of which are available in the web site <https://eprocure.gov.in/eprocure/app> under the link "Information about DSC".
- 3) Tenderer are advised to follow the instructions provided in the 'Instructions to the Tenderer the e-submission of the bids online through the Central Public Procurement Portal for e Procurement at <https://eprocure.gov.in/eprocure/app>.



**Expression of Interest (Eol) for Nitrogen (N₂) Gas Generation System and
Gas Compressor for Cold Spraying System**

All the manufacturers from India as well as from global market are invited.

Introduction and Application Requirements

IIT Ropar wishes to purchase Nitrogen (N₂) Gas Generation System and Gas Compressor for Cold Spraying System [Plasma Giken PCS100] for the DST-AMT project entitled “CoE - Degradation Resistant Thermal Spray Coatings Engineered for Indigenous Industrial Applications” [Reference no. DST/TDT/AM/143]. The cold spray system uses Nitrogen gas up to a pressure of 50 bar and a temperature of 1000 oC. Nitrogen gas with a minimum purity of 99.99% (O₂ Content <100PPM) is required to fill the existing two N₂ gas pallets of 16 cylinders each. Each cylinder is 80 litres in capacity at a pressure of 200 bar. Nitrogen (N₂) Gas Generation System and Gas Compressor are required to be integrated with our existing cold spray system as a Turnkey project (please refer to the detailed technical specifications).

The documents to be submitted by OEM or Authorized Representative of OEM:

- Model number(s) of the instrument that meets the specifications.
- Brochures/Catalogues with respect to each point specified in technical specifications.
- Compliance sheet of the specifications mentioned in the EoI. The compliance sheet must be vetted by the OEM. If any of the specifications is not complying, mention the actual parameter value that the instrument model offers in the OEM’s technical specification document.
- Valid authorization letter from OEM.
- Domestic user list of similar system with Model No.

Technical Specifications for Nitrogen (N₂) Gas Generation System and Gas Compressor for Cold Spraying System

Nitrogen Gas Generator – Nitrogen Gas Generation System for Cold Spray System (Plasma Giken PCS100) having the following specifications:

- Capacity: Minimum 30m³/hour
- N₂ Purity: Minimum 99.99% pure (O₂ Content <100PPM)
- N₂ Generator Inlet Pressure: 10-15 bar
- N₂ Generator Outlet Pressure: 8-10 bar
- Highly Corrosion Resistant tower of the state-of-the-art material
- Carbon Molecular Sieve with a minimum operating life of 6 years or better.
- N₂ Generator should be compliant with safety and other mandatory requirements, for which documentary proofs will be desired at an appropriate time.
- Filtering system should be able to filter ≤ 0.01 microns including coalesced liquid water and oil, with an oil aerosol content of ≤ 0.01 ppm @ 21°C with an efficiency of 99.9999%. The material of the nano fibre filtration media should be mentioned clearly.
- Refrigerated air dryer should have the following specifications: pressure: 10bar g (compatible with the nitrogen generator); flow rate: 120 – 140 CFM.
- Screw type air-cooled air compressor compatible with the N₂ gas generator with a free air delivery (FAD) of 110 – 130 CFM.
- Reciprocating Piston type Booster Compressor for N₂ gas: Number of stages: minimum 3; flow capacity: 30 m³/hour (compatible with nitrogen generator); outlet pressure: 200 bar. Service kit should be provided including Piston Ring set required for an overall operating time of 5000 hours.
- Buffer Vessel for N₂ gas having a capacity of 1000 litres (minimum) at a working pressure of 10 bar g. Complete with all accessories required for interconnecting work as per site.
- Nitrogen Storage Tank having a capacity of 5000 litres (minimum) at a working pressure of 10 bar g. Complete with all accessories required for interconnecting work as per site.
- Nitrogen Gas Cylinder Manifold to fill ten cylinders complete with High Pressure Copper Pipe, Cylinder Block, Cylinder Valve, SS 304 double wired braided hose with SS 316 inner corrugated tubing, mounted on suitable metal channel. Gas cylinder brackets with chain for holding gas cylinders. The manifold should be capable of filling standard nitrogen gas cylinders up to 200 bar gas pressure having capacity of upto 80 litres. There should also be safety relief valve of suitable capacity with a pressure gauge of appropriate rating.

High Pressure Piping System (as per the actual site)

- Interconnecting pipework to connect all the equipment like Generator, Filters, Air Dryer, Air Compressor, Booster Pump, Cold Spray Chamber etc is to be done with all accessories like elbows, tees, connectors, pressure gauges, valves, etc.
- High pressure piping to connect booster compressor with the existing two N₂ gas pallets of 16 cylinders each. Each cylinder is 80 litres in capacity at a pressure of 200 bar.
- Installation and commissioning of suitable shed with an RCC platform and fencing cover to house all the above equipment safely from sunlight, rain etc, and for the safety of operators.
- Maintenance of the existing gas piping from N₂ gas pallet to the Cold Spray system is to be done for next 3 years from the date of installation of N₂ Gas Generator.
- The vendors may visit the site to have a better understanding of the site requirements.

Eligibility Criteria:

- The supplier must have experience of execution and implementation of nitrogen gas generators of similar specifications.
- The supplier must have executed high-pressure piping, supply, and installation work for high-pressure (of the order of 250-300 bar) gas manifold systems in last three years.
- The supplier must agree for three years maintenance of the cold spray gas supply related equipment.
- The supplier should have a minimum annual turnover of 2 crore in the last three years.

Important Notes:

- Supply, Installation, Testing and Commissioning (SITC) and training costs if any should be included.
- The cost of accessories, spare parts, and utilities if any should be included.
- The prices should include all the taxes and charges such as transportation etc: FOR-IIT Ropar.
- A turnkey solution is required according to our site and cold spray equipment.