



Indian Institute of Technology Kanpur Samtel Centre for Display Technologies

Enquiry No.: SCDT/FlexE/2016-17/25

Opening Date: 23/12/2016

Closing Date: 12/01/2017 Extended till 16/01/2017

Expressions of Interest are invited for design, build and validate of cleanroom facility at NCFlexE, IIT Kanpur.

National Centre for Flexible Electronics is in the process of building a cleanroom facility within the new NCFlexE building at IIT, Kanpur. Companies interested, in India or globally, with demonstrated capabilities are invited to discuss their plans for cleanroom facility. Basic requirements and specifications of the cleanroom facility are included in the attached Annexure.

The interested companies are expected to send, along with requirement above, company profile, product portfolio, and list of purchase orders of equivalent work in past by 12/01/2017 at flexe@iitk.ac.in or by post to the Coordinator Prof. Monica Katiyar, National Centre Flexible Electronics, SCDT, IIT Kanpur-208016, U.P., India.

The companies showing interest would be required to submit details and make a visit to IIT Kanpur within the month of December 2016 – January 2017 for site visit & for discussion on customization of the clean room facility based on their own expertise and design capability.

Dr. Monica Katiyar

Invitation for Expression of Interest

Proposed Cleanroom Facility for National Centre for Flexible Electronics IITK campus. Details of the Areas & Class of Cleanliness required are as under:

1.0 PHOTOLITHOGRAPHY (Yellow Room) LAB - ISO 6 (Class 1000)

Description of Lab Considered	Photolithography LAB (refer drawing)
Class of Cleanliness	ISO 6 (Class 1000)
Temperature	22 deg C +/- 2 deg C
Relative Humidity	50 % +/- 5 %
Area of the clean room	40 Sq. M
height of false ceiling above FFL	2.4 M

2.0 Wet Process - ISO 6 (Class 1000)

Description of Lab Considered	Wet Process LAB (refer drawing)
Class of Cleanliness	ISO 6 (Class 1000)
Temperature	22 deg C +/- 2 deg C
Relative Humidity	50 % +/- 5 %
Area of the clean room	65 SQ M
height of false ceiling above FFL	2.4 M

3.0 Vacuum Process LAB - ISO 7 (Class 10000)

Description of Lab Considered	Vacuum process LAB (refer drawing)
Class of Cleanliness	ISO 7 (Class 10000)
Temperature	22 deg C +/- 2 deg C
Relative Humidity	50 % +/- 5 %
Area of the clean room	184 SQ M
height of false ceiling above FFL	2.4 M

4.0 Sensor LAB - ISO 7 (Class 10000)

Description of Lab Considered	Sensor LAB(refer drawing)
Class of Cleanliness	ISO 7 (Class 10000)
Temperature	22 deg C +/- 2deg C
Relative Humidity	50 % +/- 5 %
Area of the clean room	34.5 SQ M
height of false ceiling above FFL	2.4 M

5.0 Storage Room - ISO 7 (Class 10000)

Description of Lab Considered	Storage Room (refer drawing)
Class of Cleanliness	ISO 7 (Class 10000)
Temperature	22 deg C +/- 2deg C
Relative Humidity	50 % +/- 5 %
Area of the clean room	27 SQ M
height of false ceiling above FFL	2.4 M

6.0 Printing LAB - ISO 7 (Class 10000)

Description of Lab Considered	Printing LAB(refer in drawing)
Class of Cleanliness	ISO 7 (Class 10000)
Temperature	22 deg C +/- 2deg C
Relative Humidity	50 % +/- 5 %
Area of the clean room	116 SQ M
height of false ceiling above FFL	2.4 M

7.0 R2R LAB - ISO 7 (Class 10000)

Description of Lab Considered	R2R LAB(refer in drawing)
Class of Cleanliness	ISO 7 (Class 10000)
Temperature	22 deg C +/- 2deg C
Relative Humidity	50 % +/- 5 %
Area of the clean room	184 SQ M
height of false ceiling above FFL	2.8 M

8.0 Gowning ROOM --ISO 8 (Class 100000)

Description of Lab Considered	Gowning ROOM
Class of Cleanliness	ISO 8 (Class 100000)
Temperature	22 deg C +/- 2deg C
Relative Humidity	50 % +/- 5 %
Area of the clean room	36.5 SQ M
height of false ceiling above FFL	2.4 M

9.0 INCOMING EQPT ROOM - ISO 8 (Class 100000)

Description of Lab Considered	Changing Room(refer in drawing)
Class of Cleanliness	ISO 8 (Class 100000)
Temperature	22 deg C +/- 2deg C
Relative Humidity	50 % +/- 5 %
Area of the clean room	41 SQ M
height of false ceiling above FFL	2.4 M

10.0 Service Chase - ISO 8 (Class 100000)

Description of Lab Considered	Service Chase(refer in drawing)
Class of Cleanliness	ISO 8 (class 100000)
Temperature	22 deg C +/- 2deg C
Relative Humidity	50 % +/- 5 %
Area of the service Corridor	73.5 SQ M
height of false ceiling above FFL	2.4 M

11.0 Visitor Corridor - ISO 8 (Class 100000)

Description of Lab Considered	Visitor Corridor(refer in drawing)
Class of Cleanliness	ISO 8 (class100000)
Temperature	22 deg C +/- 2 deg C
Relative Humidity	50 % +/- 5 %
Area of the corridor	84 SQ M
height of false ceiling above FFL	2.4 M

I) General statement of objectives and brief description of the project:

The National Centre for Flexible Electronics IIT Kanpur proposes to engage reputed professional agency to Design, Build & Validate Cleanroom facility suitable for Flexible Electronics. It proposes to construct a cleanroom facility in the Campus with a new building on its land. The proposed Cleanroom building is predominantly reinforced concrete framed structure.

The prospective Vendors shall be well versed with the state of the art Cleanroom Technology & should have relevant experience in designing and Building Cleanroom Facilities as per ISO-14644:2001 standard.

The cleanroom parent Building is a research building having G + 5 Floors with a total built-up area of approximately 4500SqM. The Cleanroom built up area is about 750 SqM (as per attached drawing).Civil structure /parent Building will be provided by National Centre Flexible Electronics Kanpur.

Vendors shall provide the details of the Space requirements for the proposed Facility. The space details required are: Cleanroom space, air locks, Change rooms, false ceiling space, Service & utility areas & other areas as required to complete the Facility.

II) Scope of work:

The proposed cleanroom is to be designed, built, installed, commissioned and validated on 'TURN KEY BASIS' & shall be as per ISO-14644:2001 standards. The Prospective Vendors shall comply with the requirements specified/provided in the various sections of this EOI document and as per specifications needed by National Centre Flexible Electronics IIT Kanpur

Details of the Scope of the Work:

- a) DESIGN, BUILD & VALIDATE THE CLEANROOM FACILITY: To design, build, install, commission and validate the Cleanroom comprising of ISO 6, ISO 7 and ISO 8 including the relevant HVAC System as per the provisional Layout drawings & data provided by National Centre Flexible Electronics IIT Kanpur and shall meet the ISO standards 14644:2001 standards in total. Vendors shall comply with the requirements specified/provided in the various sections of this EOI documents and as per specifications needed by National Centre Flexible Electronics IIT Kanpur
- b) Scope of Work Shall Include
 - i) Clean room & related HVAC System
 - ii) Cleanroom Accessories
 - iii) Cleanroom related Electricals & Lighting
 - iv) Smoke & Fire Detection, Fire Suppression system.
 - v) Building Management system for Cleanroom
 - vi) Validation and certification of Cleanroom.

III) Expression of Interest for the purpose is invited from the interested parties as perAnnexure-I (APPLICATION FORM)

It may be noted that this is an invitation for EOI and should not be construed as the Tender/ Request for Proposal (RFP) in any form and would not be binding on the Institute in any manner whatsoever.

Expression of Interest prepared in accordance with the Procedure enumerated in this document should be submitted to the Coordinator Prof. Monica Katiyar, National Centre Flexible Electronics, SCDT, IIT Kanpur-208016, U.P., India.

The EOI should be submitted within 21 days from the date of advertisement. The EOI should be valid for 60 days from the date of opening.

The application should be accompanied with the following information:

1. Evidence of incorporation
2. Company / Organisation profile giving details of current activities and Management structure
3. A capability statement (Not more than two pages)
4. A write-up on the understanding of the assignment (Not more than two Pages)
5. Qualification & Experience of key technical and management Personnel that are proposed to be deployed on this contract, if awarded.
6. Certified Annual report including balance sheet and profit and loss Account statement forthe pastthree years.
7. Information on litigations if any in which the bidder is involved.
8. Solvency Certificate recently issued by any Nationalised Bank for a Sum of Rs.100Lakhs.

IV) Expectations from the professional agency/Vendors

The agency is expected to take the entire responsibility of Comprehensive design, installation & Validation of Clean rooms, Related HVAC, cleanroom accessories, Cleanroom related Electricals & Lighting, Integrated Building Management System (BMS), surveillance, fire detection and Safety, fire suppression system, Sprinkler system etc., in a turnkey manner.

V) Pre-qualification of the Vendors/agency

Such vendors/agencies expressing the interest will be short listed who either singly or in association with others (Service providers), is capable of rendering high degree of professional services in the field of work mentioned above and such short listed agencies may be invited later to submit their proposals.

Pre-qualified bidders shall be invited to National Centre for Flexible Electronics IIT Kanpur at a specified date to give a presentation on their proposed approach for carrying out the work.

Their presentation will be followed by technical discussions with the National Centre for Flexible Electronics IIT Kanpur team, and a site visit, if necessary. Subsequently, the shortlisted bidders shall be informed separately and a detailed Request for Proposal (RFP) shall be sent to them for submission of their bids at a later date. National Centre Flexible Electronics IIT Kanpur reserves the rights to accept/reject any application at the prequalification stage without assigning any reason whatsoever. Among other things the agency must broadly fulfil the following criteria: it should be a reputed and established company/organization.

- a) It should have been in existence in the Cleanroom Business for minimum of Three years under taking the jobs of Cleanrooms along with related HVAC in INDIA .Mere existence since three years without executing cleanrooms & related HVAC are not eligible to participate.
- b) The vendor must have at least Three years of experience in design, supply, installation, commissioning, testing and validating at site of cleanrooms with related HVAC on Turnkey basis in INDIA with relevant proof & satisfactory certificate.
- c) It should have rendered services of similar nature of work for at least one clean room Facility of ISO 6 (class 1000) not less than 84 Sq. M (80% of 105 sq.M proposed) along with Related HVAC for Cleanroom in a single order in any Government Sector or large reputed Private Sector Enterprises/National Institutes etc.
- d) 'Similar nature of works' means one which involved designing, supplying, building, installing, commissioning, testing and validating ISO6 (Class 1000) or better Cleanrooms including related HVAC, electrical and lighting Integrated Building Management System (BMS), surveillance, fire detection and Safety, fire suppression System, Sprinkler system etc., in a turnkey manner in INDIA.
- e) In support of experience in non-government bodies-companies TDS certificates shall also be enclosed in addition to work order and satisfactory completion certificates.
- f) The value of works completed should not have been less than Rs.400 Lakhs of minimum one Clean room in a single order.

Or

Two Cleanroom rooms of not less than Rs 200 Lakhs each in a single order

- g) With reference to the above, the building cost (civil part) shall not be included in the value of cleanroom project. The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7 % per annum, calculated from the date of completion to the last date of receipt of Completion Certificate.

In each of the above case, documentary evidence in the form of Work Order/Purchase order indicating the nature and value of along with reference/contact person & address, telephone/ E mail details should be

submitted for verification. The Completion certificate of the job issued by the respective client is necessary. The experience certificate and statement showing the value of existing commitments and on-going works as well as the stipulated period of completion, remaining for the each of the works listed shall be issued by the firm.

h) Documentary Evidence along with reference/contact person & address, telephone/ E mail details of Clients should be submitted along with Technical BID for Verification. The Documentary evidence shall be in terms of Work Order/Purchase order indicating the Scope / nature of work, value of Work order /purchase order, Value of Contract & period of Execution etc.

The Completion certificate of the job issued by the respective Client is a Must. Without submission of above mentioned Documents & the Completion certificate, the offer will be liable to be rejected by NCFlexE at their discretion. The committee will visit your Clients (if deemed fit) to ascertain the Works executed by you as per the Documents submitted by your Company. Necessary arrangements have to be made by the bidder for such visit. No claim is admissible for the same. Cost of visit shall be borne by the institute.

NOTE: Cleanroom Jobs Executed outside India will not be considered. Hence Provide the References of the Works executed in India Only

- i) It should be a Registered Local state PWD/CPWD/MES Class 1 Contractor OR any Government Sector or large reputed Private Sector Enterprises/National Institutes etc.
- j) It should have an Annual turnover not less than Rs. 400Lakhs in any one of the last three financial years.
- k) The vendor should have capability to provide future maintenance and services & support with Annual maintenance for a period of minimum 5 years.
- l) Vendor should point out all the relevant critical issues that they will be addressing while establishing this facility.
- m) Vendors should be Capable of Supplying, installing, commissioning, testing & maintaining all the services needed for the Facility. Vendors can also identify the service providers for services & utilities along with them as a team subjected to the Approval National Centre for Flexible Electronics IIT Kanpur. Else or otherwise vendors shall utilize the services of Service providers approved & Qualified by National Centre for Flexible Electronics IIT Kanpur.
- n) In case Indian vendors, agents/Sub Contractors are not eligible to participate in the BID. Only the Registered Companies fulfilling the Criteria mentioned above are eligible & shall authorize their regular/permanent Employees/executives to Correspond & participate in the Bid. The authorized person shall have Identity Document to prove their employment with the Bidder & shall have Email ID of the participating Company. If the participating Person failed to provide the said Documents & do not possess the valid official Email ID of the Participating Vendor company, the authorised person will not be allowed to participate in the Process of BID. The Bidder is liable to be rejected at the discretion of NCFlexE.
- o) Foreign vendor(s) should have their establishment in India or at least have their branch office / representative office in India for execution, follow-up, and maintenance. This establishment/ branch office/ representative office shall be registered in India. These Branch offices should have been registered

branch office/representative in India **at least three years earlier than** the date of Publishing of this EOI. And they shall have technically skilled personnel and project team in India to execute, maintain & undertake **Annual Maintenance Contract for a period of 5 years.**

- p) In case of Foreign Vendors, the details of the branch in India/representative in India shall be produced. They shall produce documentary proof of MOU duly registered in INDIA **at least three years earlier than** the date of publishing this EOI. If the relevant Documents are not submitted, the offer is liable to be rejected by NCFlexE authorities.
- q) In case of Foreign Vendors, the NCFlexE committee may visit the Premises of the Vendors branch office in India / representative office in India & verify the Documents for their existence as per the documents Submitted by them. If found not Satisfactory the respective vendor will not be allowed to Participate in the proposed Cleanroom project. Also if found not existing the respective Vendor will be disqualified from Participating in the proposed Cleanroom project & will be BLACK LISTED.
- r) The Documents /Completion Certificates etc. submitted by the Vendor, if found Manipulated/Forged/Corrected, the Vendor will not be entertained to participate in the BID & will be disqualified & Black listed at the discretion of NCFlexE.
- s) Even after submission of documents, if the foreign company does not possess the qualified personnel to take care the project during Construction & their after Annual maintenance for a minimum period of **FIVE** years, the offer is liable to be rejected at the discretion of NCFlexE authorities. EMD/security deposit (if any) shall be forfeited.
- t) In case of foreign vendors, the NCFlexE Committee may visit & verify the existence of the above said Establishment/ Branch Office/Representative Office in INDIA & their Technical ability & managerial Capabilities at the discretion of the NCFlexE. If found not satisfactory, the respective vendor will be disqualified from participating in the BID.
- u) This branch office/ representative of the Foreign Vendor in INDIA must have at least THREE years of experience in design, supply, installation, commissioning, testing and validating at site of cleanrooms of ISO 6 or better along with HVAC, electrical and lighting, integrated Building Management System (BMS), surveillance, fire detection and safety, gas based fire suppression system, Sprinkler system etc, and in INDIA. The relevant Documentary evidence shall be produced regarding the experience of their branch office/representative in INDIA.
- v) In case of Foreign Vendors, the Order will be placed on the foreign vendor only & not on their Branch office /agents in India or their representative in India.**
- w) Foreign companies shall possess the qualified personnel in INDIA to take care the project during Construction & their after Annual maintenance, the offer is liable to be rejected at the discretion of NCFlexE authorities if the above criterion is not met by the Foreign Vendor. The details of their qualified Branch office/Representative/ personnel in INDIA along with Documentary evidence to prove their Experience shall be provided otherwise the offer will be liable to be rejected.

- x) The vendor(s) who do not individually meet the criteria mentioned in the above clauses may form a consortium of companies to qualify the above criteria. In such case, it is necessary that majority of the partners of the consortium have comprehensively fulfilled all the qualifying criteria given in this document.

Further, there should be one vendor (“lead bidder”) in the consortium who shall submit the indent and shall take responsibility of bidding, commissioning, validation and operation.

The lead bidder shall be a CLEANROOM VENDOR & this CLEANROOM Vendor will be liable for the entire scope of work and risks involved thereof. The service provider to the Lead Bidder will not be considered as lead Bidder. **The lead bidder must have experience of executing CLEAN ROOM facility in INDIA & should meet the eligibility Criteria mentioned in this document & to be supported by documentary evidence**

- y) Vendors can download the brief scope of work from our website, <http://www.iitk.ac.in/new/tenders-notice> The EOI, along with the details of the vendor as prescribed in the scope of work document, should reach National centre for Flexible Electronics IIT Kanpur’ within 20 days from the date of this publication.
- z) National centre for Flexible Electronics IIT Kanpur, will evaluate the bidders based on the data furnished by them and may call the Eligible Vendors for a Detailed Presentation as part of prequalification of bidders for the above mentioned scope ofwork.