भारतीय विज्ञान शिक्षा एवं अनुसंधान संस्थान मोहाली

मानव संसाधन विकास मंत्रालय, भारत सरकार द्वारा स्थापित

सैक्टर 81,नॉलेजसिटी,प॰ओ॰ मनोली, एस॰ ए॰ एस॰ नगर,मोहाली, पंजाब 140306

INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH MOHALI

(Established by Ministry of Human Resource Development, Govt. of India)

Sector-81, Knowledge city, PO-Manauli, SAS Nagar Mohali-140306, Punjab

PAN No. - AAAAI1781K GST: 03AAAAI1781K2ZS

• **Phone : +91-172-2240086 & 2240121** • **Fax : +91-172-2240124, 2240266** • **http://www.iisermohali.ac.in** • **Email:** stores@iisermohali.ac.in

CPPP/Institute Website

IISERM (1082)18/19-Pur Dated : 30.11.2018

NOTICE INVITING E-TENDER

Online tenders are invited on behalf of Director, IISER Mohali in **TWO BID SYSTEM** for **Supply and installation of Online Integrated CAAQMS Air Quality station and consumables for 1 year warranty period and 4 year CMC** from reputed companies/firms/ individuals/ societies etc. those are in the similar business at CPPP i.e. **https://eprocure.gov.in/eprocure/app**. Tender documents may please be downloaded from the E-procurement portal website **https://eprocure.gov.in/eprocure/app**& Institute website **www.iisermohali.ac.in.**

-sd-
(Mukesh Kumar)
Assistant Registrar (P&S)

भारतीय विज्ञान शिक्षा एवं अनुसंधान संस्थान मोहाली

मानव संसाधन विकास मंत्रालय, भारत सरकार द्वारा स्थापित

सैक्टर 81,नॉलेजसिटी,प॰ ओ॰ मनोली, एस॰ ए॰ एस॰ नगर,मोहाली, पंजाब 140306

INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH MOHALI

(Established by Ministry of Human Resource Development, Govt. of India)

Sector-81, Knowledge city, PO-Manauli, SAS Nagar Mohali-140306, Punjab

PAN No. - AAAAI1781K GST: 03AAAAI1781K2ZS

• **Phone : +91-172-2240086 & 2240121** • **Fax : +91-172-2240124, 2240266** • **http://www.iisermohali.ac.in** • **Email:** stores@iisermohali.ac.in

CPPP/Institute Website

E-TENDER NOTICE

Tender Ref.- IISERM(1082)18/19-Pur	Dated :- 30th November, 2018

Critical Date Sections

Sr.	Description	Date	Time
1.	Tender Publishing Date and time	30th November, 2018	6:00pm
2.	Tender Document download start Date & Time	30th November, 2018	6:00pm
3.	Bid Submission start Date &Time	30th November, 2018	6:00pm
4.	Bid Submission End date and Time	20th December, 2018	Upto 11:00am
5.	Tender opening Date and Time	21th December, 2018	At 11.30 am

Online tenders are invited on behalf of the Director, IISER Mohali in **TWO BID SYSTEM** for following item(s) from the original manufacturer/supplier at CPPP i.e. **https://eprocure.gov.in/eprocure/app**. Tender documents may please be downloaded from the E-procurement portal website **https://eprocure.gov.in/eprocure/app** & Institute website **www.iisermohali.ac.in.**Tender fee in shape of DD/Banker Cheque of Rs 590/- (Non-refundable) and EMD of Rs.100000/- should be submitted by DD /Banker Cheque/FDR/ Bank Guarantee in favour of the Registrar, IISER Mohali payable at Mohali. However, scanned copy of the both tender fee and EMD should be upload on website along with technical bid part. The hard copy of the same in original to be send to the address mentioned below duly superscribing the supply/work name and reference/ tender ID on the envelope and same must reach before opening the bid and if not received within due date the bid will be rejected summarily.

The Original EMD and Tender Fee should be sent to:

Assistant Registrar (P&S)
Indian Institute of Science Education and Research,
Mohali Sector 81, SAS Nagar, Mohali, Punjab,
India, Pin: 140306

Non-receipt of original EMD and Tender Fee will lead to rejection of tender.

Item Details:

S. No.	Details of Specifications of the Stores	Qty.
1.	**Supply and installation of Online Integrated CAAQMS Air Quality station** **Technical Specifications and relevant details:** Quotations are invited for the supply and installation of an **online integrated** continuous ambient air quality station with air quality analysers / instruments meeting detailed technical specifications as given below and consisting of the following essential components: (i) open type dual bay 19 inch rack cabinets for mounting the analyzers/instruments (ii) state of the art local central data acquisition, logging and reporting software and system with coloured printer. (iii) Heated (upto 45 degree Celsius) gas sampling systems with multiple ports and provision for regulation of temperature between 35-45 degree Celsius. **NOTE: Part supply through quote for subset of the seven air quality analyzers / instruments listed below will not be acceptable as the requirement is for a fully integrated online air quality station.** The quotes for instruments/analyzers and components must be quoted separated from the quotes for the consumables. Therefore, separate quote should be enclosed for a 4 year CMC post the one-year warranty period of analyzers and the instrumental consumables /accessories/parts required to cover CMC for the 5-year period (that is 1 year of warranty and four years of CMC after first year of warranty is over). **Delivery and Commissioning must be executed before 31-03-2019 due to Project Deadline.** **Detailed Technical specifications of Air quality analyzers to be supplied as part of the Online Integrated Continuous Ambient Air Quality Station** **1) OZONE ANALYZER**	1 No.

Ozone Analyzer	
Detection Principle	Should be based on Ultraviolet (UV) absorption spectrometry
Certification	Must be USEPA approved model
Range	0 - 20 ppm
Lower Detectible Limit	≤ 0.50 ppb
Noise at zero	≤ 0.25 ppb
Sample flow rate	≤ 1 LPM (suction to be maintained preferably by external AC pump)
Linearity	≤ ±1% of full scale
Precision	≤ 1 ppb
Weight	≤ 25 kg
Response Time	30 seconds or better
Operating Temperature Range	0-40° C

Operating Power	220 - 240 VAC, 50 – 60 Hz
Zero drift	< 1 ppb/ 24 hour < 2 ppb/ 7 days
Span Drift	< 1 %

2) CARBON MONOXIDE ANALYZER

Detection Principle	Should be based on Non Dispersive Infra Red (NDIR) gas filter correlation technology
Certification	Must be USEPA approved model
Range	0 - 100 ppm
Lower Detectible Limit	≤ 0.04 ppm for range up to 20 ppm
Noise	≤ 0.02 ppm for range upto 10 ppm
Sample flow rate	≤ 1 L /min (Suction to be maintained preferably by external AC pump)
Linearity	≤ 1 % of full scale (0-50 ppm)
Precision	≤ 0.1 ppm
Weight	≤ 25 kg
Response Time	1 min
Temperature Range	0 - 40 °C
Operating Power	220 - 240 VAC, 50 - 60 Hz
Zero drift	< 0.1 ppm/ 24 hour
Span Drift	≤ 1%

3) NITROGEN OXIDES (NO and NO_2^*) ANALYZER

Detection Principle	Should be based on Chemiluminescence spectroscopy
Certification	Must be US EPA approved
Range	0 - 1 ppm
Lower Detectible Limit	≤ 0.4 ppb (for 1 minute averaged data)
Noise	≤ 0.02 ppb (for 1 minute averaged data)
Sample flow rate	≤ 1 L /min (suction to be maintained preferably by external AC pump)
Linearity	± 1 % of full scale
Precision	± 0.4 ppb
Weight	≤ 25 kg
Response Time	< 1 minute for 95 %
Temperature Range	0 to 40 °C
Operating Power	220 - 240 VAC, 50 - 60 Hz
Zero drift	< 0.5 ppb for 24 hours
Span Drift	< 1 % for 7 days

4) SULPHUR DIOXIDE ANALYZER

Detection Principle	Should be based on pulsed UV fluorescence detection
Certification	Must be USEPA approved model

Range	0 - 10 ppm
Lower Detectible Limit	≤ 0.5% of reading
Noise	≤ 0.5 ppb
Sample flow rate	≤ 1 L /min (Suction to be maintained preferably by external AC pump)
Linearity	≤ 1 % of full scale (0-10 ppm)
Precision	≤ 0.5 ppb for readings less than 1000 ppb
Weight	≤ 20 kg
Response Time	1 min for 95% signal
Temperature Range	0 - 40 °C
Operating Power	220 - 240 VAC, 50 - 60 Hz
Zero drift	< 0.5 ppb/ 24 hour
Span Drift	≤ 1%

5) NITROGEN DIOXIDE (NO_2) ANALYZER

Detection Principle	Should be based on Cavity Attenuated Phase Shift (CAPS) Spectroscopy
Filter , Dryer and pressure measurement requirements	1. Sample disposable filter unit (DFU) with particle cut off of 1 nm should be used to remove particulates from sample air 2. A Nafion dryer to dry the air sample prior to detection 3. A pressure transducer should be installed to measure the sample pressure in the cell to monitor and flow and correct pressure variations.
Certification	Should be USEPA approved
Range	0-1 ppm
Lower Detectible Limit	≤ 0.04 ppb
Noise	< 0.02 ppb
Sample flow rate	≤ 0.5 L/min
Linearity	±4 % of full scale
Precision	0.04 ppb or better
Weight	≤ 25 kg
Response Time	1 minute or better
Temperature Range	0 °C - 40 °C
Operating Power	220-240 VAC, 50 to 60 Hz
Zero drift	Temperature dependent: 0.1 ppb per °C < 0.4 ppb < 1.0 ppb for 7 days
Span Drift	Temperature dependent: 0.1 % per °C < 1 % of reading for 7 days

6) <u>CALIBRATOR UNIT with MFCs and MIXER</u>

Dilution ratio	2000:1 or better
Range	0 - 20 ppm or better
Linearity	≤ 1% of full scale
Response time	30 seconds to 95%
Operating gas	100h Pa – 200 hPa or better

	pressure		
	Output ports for standards	≥4	
	MFCs	Atleast one 10 sccm range MFC	
	Accuracy of total output flow	Better than 3 %	

7) PORTABLE ZERO AIR GENERATOR

	Flow Range of output zero air	0-10 L/min
	Zero air output pressure	≥ 200 hPa
	Air scrubber canisters	Must be equipped with air canister scrubbers to remove from ambient air under Indian pollution levels NOx, NO, NO_2, O_3, SO_2, H_2S, NH_3 to less than 0.1 ppb in zero air output With provision for removal of CO to below 100 ppb CO and ambient CO_2
	Modularity	Should have option to be fitted with storage tank with output greater than 2 bar pressure

2)	**Consumables for 1 year warranty period and 4 year CMC**	1 No.

NB :-

I. The online updated Price BOQ is in INR format. If bidder want to quote other than INR please specify the quoted currency in the technical bid/part and fill the amount in same updated BOQ.

II. Please bifurcate the price on shipping terms i, e, Ex-works -> FCA/FOB -> CIP/CIF in price BOQ and specify the same in technical bid without price.

SUBMISSION OF TENDER

I. All bid/ tender documents are to be uploaded online at Central Public Procurement portal i.e. **https://eprocure.gov.in/eprocure/app** only and in the designated cover/ part on the website against tender ID. Tenders/ bids shall be accepted only through online mode and no manual submission of the same shall be entertained except tender fee and EMD. Late tenders will not be accepted.

II. The online bids shall be opened at the office of the Assistant Registrar (P&S), IISER Mohali, on above given date and time. If the tender opening date happens to be on a holiday or non-working day due to any other valid reason, the tender opening process will be attended on the next working day at same time and place. IISER Mohali will not be responsible for any error like missing of schedule data while downloading by the Bidder.

III. The bidder shall upload the tender documents duly filled in and stamped by the authorized signatory on each and every page. Tender not submitted/uploaded in the prescribed form and as per the tender terms and conditions shall be liable for rejection.

IV. The bidder shall upload scanned copy of the PAN Card, GST number duly signed and stamped.

V. E-procurement system ensures locking on the scheduled date and time. The system will not accept any bid after the scheduled date and time of submission of bid.

INSTRUCTIONS

1. The Online bids should be submitted directly by the original manufacturer/supplier, If quotation is submitted/filled by any representative/agent/dealer then they must upload a authority certificate from the principal company for quoting the price otherwise such quotation will be rejected.

2. The quantity mentioned in this inquiry is and shall be deemed to be only approximate and will not in any manner be binding on the Institute. Before the deadline for submission of the online bid, IISER Mohali reserves the right to modify the tender document terms and conditions. Such amendment/modification will be notified on website against said tender ID.

3. The rates offered should be FOR Chandigarh/Mohali in case of firms situated outside Chandigarh/Mohali, and free delivery at the Institute premises in case of local firms. Supplier from outside India should mention the Ex-works/FOB/FCA/CIF/CIP price clearly. Conditional tenders will be summarily rejected.

4. In case of Ex-godown terms the amount of packaging forwarding freight etc. should clearly be indicated by percentage or lump sum amount. Institute has policy not to make any advance payments towards any purchase, Letter of credit can be opened if required.

5. THE INSTITUTE IS EXEMPTED FROM EXCISE AND CUSTOM DUTY under notification no-TU/V/RG/-CDE(1062)/201 CUSTOM DT.30.08.2016.

6. Tax: This Institute is not exempted from the payment of GST. The current rate (i.e. percentage of GST should be clearly indicated included or excluded) wherever chargeable. Please also provide/upload the copy of PAN card, GST number duly self-attested.

7. Concessional GST is applicable for all the items purchased for Research labs vide Ministry of Finance, notification no. 45/22017 dated 14.11.2017 and 47/2017 dated 14.11.2017.

8. Bidder/s quoting in currency other than **Indian Rupee (INR**) should explicitly mention the currency in which tender quoted wherever applicable in Technical Bid along the tender documents.

9. The delivery period should be specifically stated. Earlier delivery will be preferred.

10. The firms are requested to provide/upload detailed description and specifications together with the detailed drawings, printed leaflets and literature of the article quoted. The name of the manufactures and country of manufacture should also invariably be stated. In the absence of these particulars, the quotation is liable for rejection.

11. Validity of offer: 90 days. The warranty period after satisfactory installation should be mentioned and firm should replace all manufacturing defect parts/ whole item under warranty without any extra cost including clearance, freight, taxes. Security deposit/ Bank Performance Guarantee @ 10 % of the value of supply order as per norms may be sought from the firms.

12. The right to reject all or any of the quotation and to split up the requirements or relax any or all the above conditions without assigning any reason is reserved by the IISER Mohali. For any corrigendum and addendum please be checked the website https://eprocure.gov.in/eprocure/app and http:/www.iisermohali.ac.in

13. Disputes, if any, shall be subject to jurisdiction in the court of Mohali only.

–sd/-
(Mukesh Kumar)
Assistant Registrar (P&S)