

INDIAN INSTITUTE OF TROPICAL METEOROLOGY
(An autonomous Institute under the Ministry of Earth Sciences, Govt. of India)
PASHAN, PUNE - 411008
GLOBAL TENDER NOTICE

Director, Indian Institute of Tropical Meteorology, Dr.Homi Bhabha Road, Pashan, Pune - 411008 (India) invites separate sealed tenders (Part-I – Technical Bid, Part-II – Financial Bid) in separate sealed covers from Manufacturers / Suppliers and their accredited selling agents for the supply, installation, commissioning, and satisfactory demonstration of following.

Sr. No.	Tender Notice No.	Description
01.	PS/TENDER/05/2015	Air Quality & Weather Monitoring System (AQMS) for Air Quality and Weather Forecasting & Research for Ahmedabad (SAFAR-Ahmedabad) (Turnkey Job)” Qty – 01 System
02.	PS/TENDER/06/2015	Digital Display System (DDS) for System for Air Quality and Weather Forecasting & Research for Ahmedabad (SAFAR-Ahmedabad) (Turnkey Job)” Qty – 01 System

Tender documents with details can be obtained from Purchase & Stores Section of the Institute or can be download from Institute's website.

Last date of receipt of Tender at IITM, Pune : 10th February 2016 at 12:00 hrs.
Opening of Tenders (Technical bids only) : 10th February 2016 at 15:00 hrs.

The Institute reserves the right to reject any or all tenders without assigning any reason thereof. For details please visit Government's Central Procurement Portal (CPP) <http://www.eprocure.gov.in> as well as this Institute's Website: <http://www.tropmet.res.in>

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Document Control Sheet :

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**INDIAN INSTITUTE OF TROPICAL METEOROLOGY,
PASHAN, PUNE – 411 008, INDIA**

File No.PS/125/08/2015

TENDER No.: PS/TENDER/05/2015

A. AQMS for SAFAR-Ahmedabad

Scope of the Project

The scope of the project is to establish the network of ten air quality and weather monitoring stations, acquire the data locally as well as remotely, process it at city central station and convert it to air quality index and then transmit it in FTP server (File Transfer Protocol) where data from HPC for forecast also transmitted independently by forecast team (out of scope of AQMS vendor). In addition, there are a few essential scientifically related equipment are required (mentioned in the tender document separately) which may require integration as clarified in their specifications. If some instruments from the network need to be operated independently for pilot study for some time as per the requirement of the ministry /IITM then all related additional component for DAS is a included so that main system remain unaffected. The data from all stations should be stored in local DAS with DAS software, transmitted remotely to city central station (Ahmedabad) and in master control room in Pune. The software for converting data into AQI should also be included. In case of failure of one DAS and to maintain the redundancy, a set of backup DAS is also required and mentioned accordingly. Since this is the prestigious time bound pilot project of the ministry, it needs to be implemented in stipulated time and hence the delivery time line should be followed strictly.

Preamble

The Manufacturer of Ambient Air Monitoring System should have world-wide recognition of having enough field experience in designing such system to provide high quality air pollution data. The System should be designed to minimize the time spent on maintenance and calibration. During establishing SAFAR system, following criteria /features must be adopted and the manufacturers must comply the same in order to provide high quality data.

1. Since the system is to be operated & used for data collection in and around Ahmedabad for the purpose of Air Pollution Forecasting in the Ahmedabad region, it is highly desirable that the manufacturer of the prime analyzers (SO₂, NO_x, CO, O₃, PM, etc.) must have enough expertise on operation and maintenance of such monitoring system & on data reporting of the pollutants. Also, the preference will be given to the manufacturer who has ISO9000

/ISO9001 /ISO17025 Quality Accreditation /NATA accreditation & has executed projects with Operation & Maintenance Contracts of Ambient Air Quality Monitoring Analyzers in India. Details of such projects must be enclosed in the offer.

2. Major analyzers and sensors, gas calibrator, zero air generator, Data Acquisition Systems and Data Collection and Reporting software should preferably be manufactured by one manufacturer to provide substantial control over the quality of the system and to allow the design of the system to be best suited for application. The analyzers used in the monitoring system must function efficiently in the temperature range of 2°C - 49°C as the system is to be operated in mobile module in the Ahmedabad region where expected annual range of temperature range of 12°C - 49°C.
3. All analyzers used in the system must be designed on US-EPA Equivalent Reference Methods. A certificate of US-EPA approval must be enclosed as pre-condition. Where US-EPA approvals are not applicable, equivalent or other International Certificate can be provided.
4. All analyzers in the system must have technical sophistication to be connected digitally to Data Acquisition System for providing substantial advantages in communication.
5. The Data Acquisition System must have features like automatic data validation software complete with data capture percentage.
6. All analysers should have suitable connecting ports either RS 232 /RS 422/TCP/IP and USB ports.
7. The Data Acquisition System should operate on latest version of windows with minimum of Windows 7/ Windows 8 Platform and be of a “Client/Server” configuration for improved reliability.
8. Real time or averaged data must be viewed quickly and easily through a remote CLIENT interface on the central computer
9. The Data Acquisition System feature calculated channels including nested calculations, vector averaging and rolling averages.
10. The System must support remote communication with full user interface from anywhere in the world via a TCP/IP network or dial up network.
11. Data Evaluation and Reporting Software must be multi-user version.
12. The Data Evaluation and Reporting Software must be able to collect and process data from a wide variety of data acquisition systems & analyzers.
13. All items under each heading should be quoted separately as per list deliverables

14. The engineer responsible for installation and commissioning of the station must provide onsite training for operation, maintenance & data validation as per ISO9001/ISO17025 Quality Accreditation/ NATA accreditation procedure. This provides with hands-on experience and provides them with an understanding on how the system is integrated.
15. The manufacturer should provide the advice and services of his experts in preparing air pollution forecast if they have rendered such consultations and services in connection with Ambient Air Quality Monitoring Systems for air quality data interpretation. The experts from the company who have supplied the Air Quality Monitoring equipment's, must visit all the stations periodically to ensure that Air quality monitoring system is performing well and providing accurate data.
16. It is likely that identical or near identical system may be repeated and ordered for another city within a period of 1 years from the placement of firm purchase order. The quantity of AQMS stations may vary and likely to be increased or decreased. Hence, the bidder must validate their tender and subsequent correspondence for one year from the placement of firm Purchase Order.

Note: Supplier should categorically provide detail feedback on each and every point mentioned above (Total 15) in chronicle order related to compliance (yes) /non-compliance (no) or any other explanation/justification in a tabular form

SCOPE OF THE WORK

(Quote exactly as per the format given below in section-wise)

Design, supply, installation, testing, commissioning, maintenance and operations of-

A. SPECIFICATIONS FOR SULPHUR DIOXIDE ANALYSER -10 sets		
1	Principle	UV Fluorescent
2	General Range	User selectable and automatic
3	Concentration Range	0-1000 ppb
4	Lower Detectable Limit	≤1 ppb
5	Zero drift	< 1 ppb for 30 days
6	Response time	Programmable (10 s to 80 s)
7	Averaging time	Programmable (1 min to 24 hrs)
8	Internal memory	Suitable for data storage (more than 5 MB)
9	Data storage	Built in analyzer (should store 1 min average for more that 5 day)
10	Port & compatibility	RS-232 or RS-422, USB and Compatible with Windows-7/8
11	Power supply	230 V AC - 50 Hz
12	Manual	Instruction & operation manuals
13	Approval	US-EPA approved

B. SPECIFICATIONS FOR OZONE ANALYSER -10 sets		
1	Principle	UV Photometry
2	General Range	User selectable and automatic
3	Concentration Range	0-1000 ppb
4	Lower Detectable Limit	≤0.5 ppb
5	Zero drift	< 1 ppb for 30 days
6	Response time	Programmable (10 s to 80 s)
7	Averaging time	Programmable (1 min to 24 hrs)
8	Internal memory	Suitable for data storage (more than 5 MB)
9	Data storage	Built in analyzer (should store 1 min average for more that 5 day)
10	Port & compatibility	RS-232 or RS-422, USB and Compatible with Windows-7/8
11	Power supply	230 V AC - 50 Hz
12	Manual	Instruction & operation manuals
13	Calibration unit	In Built Calibration unit with internal zero and span check feature
14	Approval	US-EPA approved

C. SPECIFICATIONS FOR NO_x -ANALYSER -10 sets		
1	Principle	Chemiluminescence
2	General Range	User selectable and automatic
3	Concentration Range	0-20 ppm
4	Lowest detectable limit	< 0.4 ppb
5	Zero drift	< 0.1 ppm per day
6	Response time	Programmable (30 s to 90 s)
7	Averaging time	Programmable (1 min to 24 hrs)
8	Internal memory	Suitable for data storage (more than 5 MB)
9	Data storage	Built in analyzer (should store 1 min average for more that 5 day)
10	Port & compatibility	RS-232 or RS-422, USB and Compatible with Windows-7/8
11	Power supply	230 V AC - 50 Hz
12	Manual	Instruction & operation manuals
13	Approval	US-EPA approved
14	NH₃ –ANALYSER (Either as an attachment to NO _x or separately). If quoted separately then quote 10 each for NO _x and NH ₃ .	Using External Converter with NO _x Analyzer or separate NH ₃ Analyser <ul style="list-style-type: none"> • Range: 0 – 1 ppm • Lower Detectable Limit: 0.001 ppm • Span Drift: < 1% per week • Zero Drift: < 1% per week • Linearity: 1% Full Scale • Communication: RS 232/ RS 422

D. SPECIFICATIONS FOR CO ANALYSER – 10 Sets		
1	Principle	Non Dispersive Infra Red with Gas Filter Correlation
2	General Range	User selectable and automatic
3	Concentration range	0-200 ppm
4	Lowest detectable limit	≤0.5 ppm
5	Zero drift	<0.1 ppm per day
6	Span Drift	1% of FS per day
7	Response time	Programmable (10 s to 80 s)
8	Averaging time	Programmable (1 min to 24 hrs)
9	Internal memory	Suitable for data storage (more than 5 MB)
10	Data storage	Built in analyzer (should store 1 min average for more than 5 day)
11	Port & compatibility	RS-232 or RS-422, USB and Compatible with Windows-7/8

12	Power supply	230 V AC - 50 Hz
13	Manual	Instruction & operation manuals
14	Calibration unit	Inbuilt unit for zero gas calibration with solenoid valve for external span gas cylinder
15	Additional CO₂ Analyzer (Either as an attachment to CO or separately). If quoted separately then quote 10 each for CO and CO ₂ .	Specifications for CO₂: Carbon dioxide measurement inbuilt in CO-analyser box or independent Measurement range 50 to 2000 ppmv Accuracy (including repeatability, non-linearity and calibration uncertainty) $\pm (2 \% \text{ of range} + 2\% \text{ of reading})$ Long-term stability $<\pm 5 \% \text{ of range} / 5 \text{ years}$ Response time (63%) 1 minute

E. SPECIFICATIONS FOR BENZENE, TOULENE, XYLENE ANALYSER - 5 sets		
1	General Range	0 - 100 ppb
2	Type	Gas Chromatograph with PID detector
3	Cycle	Min 15 min
4	Averaging time	Programmable (10 min to 24 hrs)
5	Internal memory	Suitable for data storage (more than one month)
6	Data storage	Built in analyzer (should store 1 min average for more that 5 day)
7	Port & compatibility	RS-232 or RS-422, USB and Compatible with Windows-7/8
8	Analog output	0 -10 V and 0-20 mA or 4-20 mA
9	Power supply	230 V AC - 50 Hz
10	Manual	Instruction & operation manuals
11	Operating software	Compatible with Windows-7/8
12	Calibration unit	Calibration switch for zero and span calibration unit with auto calibration or separately
13	Approval	US-EPA approved/ TUV Germany/ Any International Agency

F. SPECIFICATIONS FOR PM ANALYSER - 11 sets		
1	General Range	PM ₁₀ Measurement using Beta Gauge Absorption Principle. The analyzer to measure also PM _{2.5} and PM ₁ and preferably be in same Instrument simultaneously. If not then 3 separate Instruments to be provided for PM ₁₀ , PM _{2.5} and PM ₁ .
2	Concentration Range	0.1 $\mu\text{g}/\text{m}^3$ - 10 mg/m^3
3	Lowest detectable limit	1 $\mu\text{g}/\text{m}^3$
4	Averaging time	Programmable (1 min to 24 hrs)
5	Internal memory	Suitable for data storage (more than 5MB)
6	Data storage	Built in analyzer (should store 1 min average for more than 5 day)
7	Port & compatibility	RS-232 or RS-422, USB and Compatible with Windows-7/8
8	Power supply	230 V AC - 50 Hz
9	Manual	Instruction & operation manuals
10	Calibration unit	Inbuilt Calibration unit with auto calibration or separately
11	Approval	US-EPA approved for PM ₁₀ and PM _{2.5} .

G. SPECIFICATIONS FOR MERCURY ANALYSER - 1 set		
1.	Analyser	Measurement of Total Gaseous Mercury in Ambient Air
2.	Mercury Collector	Gold Trap
3.	Detection Limit	< 0.1 ng/m ³
4.	Sample Volume Determination	Electronic mass flow mete
5.	Sample Duration	10s-2.5min to 15-60 min.
6.	MeasuringRange	0.1 ng/m ³ to ~ 2000 ng/m ³
7.	Accessories	All required for fully operation
8.	Data Output	It should be compatible with local DAS as well as with a mobile DAS (Laptop+ Software) to be supplied with system. It should be compatible with Windows XP/7 along with licensed Office-2010)
9.	Power Supply	Compatible with 230V AC - 50 Hz . If not comparable then proper branded converter should be provided for Indian power supply.
10.	Calibration	Auto Calibration
11.	Spares	All spare parts for 5 years of operation

H. SPECIFICATIONS FOR BLACK CARBON ANALYSER – 5 Sets		
1.	Technique	Filter based absorption photometer
2.	Determination of BC Concentration	BC mass concentration should be derived from mass absorption cross section (MAC).
3.	Lowest Detection limit	~100ng m ⁻³ at two minute averaging or better
4.	General Range	0.5 µg/m ³ - 1mg/m ³
5.	Wavelengths	Measurement at seven wavelengths: 370, 470, 520, 590, 660, 880 and 950 nm.
6.	Flow of air sample	Control by a mass flow controller
7.	Collection filter	Glass fibre filter
8.	Power supply	230 V +/- 10% AC & 50Hz +/-5% Frequency
9.	Port & compatibility	RS-232 or RS-422 or USB or Ethernet and Compatible with MS-Windows 7 or higher version
10.	Manual	Instruction & operation manuals with complete circuit diagrams
11.	Operating software	Should compatible with MS- Windows 7 or higher version
12.	Calibration unit and Accessories	Automatic Calibration and all necessary accessories like pump, heater, software with CD, filter sets and size selective inlets, etc should be supplied

I. SPECIFICATIONS FOR MULTI POINT GAS CALIBRATOR (MGC) - 11 sets		
1	Power Supply	230 V; 50 Hz
2	Weight	< 20 kg
3	Pressure	Adjustable Between 0.1 and 6 Bar
4	Dilution	From High Concentration Span Gas to Diluted Gas using Mass Flow Controller
5	Manual	Instruction and Operation Manual
6	Calibration Gases, Cylinders & Regulator	Cylinder of Capacity 10 litre with SS Regulator Separate cylinders for SO ₂ , NO ₂ , CO, Benzene must be provided for each station

J. SPECIFICATIONS FOR ZERO GAS GENERATOR - 11 sets		
1	Outflow Generator	1 TO 5 Litre/Minute
2	Outlet Pressure	Adjustable Between 0.1 and 6 Bar
3	Purity	>99.999%
4	Power Supply	230 V, 50Hz
5	Manual	Instruction and Operation Manual
Scrubbers		
Hopcolite		Removal of CO (<0.1 ppb)
Purafil		Removal of NO, NO ₂ , NO _x (<0.1 ppb)
Charcoal		Removal of SO ₂ , H ₂ S, Ozone (<0.1 ppb)
Molecular Sieve		Removal of H ₂ O (Dew point -15 C)
Power		220 volts AC, 50 Hz (optional 110VAC)
Pressure		Up to 200 KPA
Flow		0-9 LMP

K. SPECIFICATIONS FOR UV-E radiometers - 5 sets		
1	UVE radiometer Spectral Range	Conforming to ISO 17166:1999; CIE S 007/E-1998
2	Measurement range	0 to 0.6 W/m ²
3	Zero offset (in darkness) , Response time (95%) and power supply	< 10 mV, < 1.5 s and standard Indian 230V respectively
4	Non-linearity (over full range) and directional error	< 1 %, and < 2.5 % (up to 70 ° zenith angle)
5	Additional Accessories: Calibration data and relevant software	(1) Nominal sensitivity, spectral response, solar zenith angle corrections, ozone column corrections. UVIATOR or equivalent software, PC & data acquisition system of latest configuration, mast mounting device, Horizontal Support, 10 meters cable & 4-20 mA analog output to integrate with the DAS of AQMS.

L. Imaging Systems and Documentation		
(A) Image System and Sensor (4 Numbers)	Outdoor IP Fixed Megapixel; 2-megapixel Progressive, 1/2.5" CMOS/CCD sensor	
Lens Type & Min Luminous	½ inch	CMOS or CCD with 6 mm; 0.5LUX(Color) 0.001Lux(Black), IR LED on
Type	IP66 Grade Day & Night with 48 pcs of IR Led, IR distance ~25M, auto-focus, digital zoom support, motion detection support	
Video Compression; Video Streaming	H.264 , Mpeg-4 , Mjpeg; Simultaneous H.264 + H.264	
Resolution	H.264: Full HD 1080p/HD 720p/SXGA/D1/VGA/QVGA/CIF,	

	MJPEG : Full HD 1080p/HD 720p/SXGA/D1/VGA/ QVGA/CIF
Frame rate and shutter speed	HD 25/30 fps, Full HD 30 fps, shutter speed 1~1/10000 sec.
Audio Input /Audio Output/ Audio talk-back, Audio compression	1channel linear input /1channel linear output/ channel Audio In port1, mic in Audio compression G.711/G.726
Audio Connector	Stereo phone jack, Ø _3.5mm
Supported Protocols	IPv4/v6, TCP/IP, UDP, RTP, RTSP, HTTP, HTTPS, ICMP, FTP, SMTP, DHCP, PPPoE, UPnP, IGMP, SNMP, QoS, ONVIF
Security	HTTPS, IP Filter, IEEE 802.1X
Browser Support	Internet Explorer (6.0+), Chrome, Firefox, Safari
System interface &SD Card Interface	10Base-T/100Base-TX; Support Video storage and image snapping; SD2.0 standard, max storage 32G to be provided
Micro SD	SDHC support
Alarm in / out, Tampering Alarm	5 V 10KΩ pull up (alarm in), Photo Relay Output 300VDC/AC, Tampering Alarm ON/OFF
Junction Box and LAN Protector	IP 66 grade outdoor enclosure, IP65 weather proof rating. It should have enough space to accommodate all the equipment like lan protector, isolation transformer, provision for mounting; suitable connections for terminating all types of cables utilized. LAN protector – Device to protect Ethernet, Isolation transformer – 2amp
(B) Video Imaging	Vendor should include the high definition recording; editing, voiceover and animation for complete SAFAR-Ahmedabad system in general to make two documentaries of long (20 min) and short (5 min) durations. (One time requirement)

M. SPECIFICATIONS FOR AUTOMATIC WEATHER STATIONS (AWS) –10
1. Wind Speed Sensors:
Range: 0 to 60 m/s
Resolution: better than 0.1 m/s
Accuracy: Better than ± 0.5 m/s for speed up to 5 m/s and $\pm 10\%$ beyond 5 m/s
Starting threshold: 0.5m/s or better
2. Wind Direction
Range: 0 to 360 °
Resolution: better than $\pm 1^\circ$
Accuracy: $\pm 5^\circ$
3. Temperature
Range: - 40 ° to 60 °C
Resolution: better than 0.1°C
Accuracy : $\pm 0.2^\circ$
4. Relative Humidity
Range: 0 to 100% RH
Resolution: 1% or better
Accuracy: $\pm 3\%$ or better
5. Pressure
Range: 920 – 1080hPa
Accuracy: ± 0.2 hPa or better
Resolution: 0.2hPa or better
6. Rain Gauge
Resolution: 0.5mm/tip or better
Accuracy: $\pm 4\%$ or better
Max. rate: Unlimited
7. Meteorological Mast
Telescopic Hand Pump operated Meteorological Mast made of Anodized Aluminium of Extendable Height 6 meters with all support to be provided and all sensors need to be mounted on top of the Walkway Shelters on the Telescopic Mast.
8. Data Logger and Software
Provision for storing and archiving the data from all sensors through software to local servers (on site) as well as central AQMS servers at Ahmedabad and Pune in desired format. Data need to be integrated with DAS software of AQMS so that data can be accessed at local station as well as in control rooms remotely through either GPRS /e-modem, etc. In case, it cannot be integrated with AQMS then vendor is required to quote separate set of data loggers with software for AWS. All SIM recurring rental and Modem charges must be borne by vendor.

N. SPECIFICATIONS FOR LOCAL AND CENTRAL DATA ACQUISITION, CONTROL SYSTEM & REMOTE NETWORKING

1	GPRS /3G Modems as required. Please note that no internet connectivity will be available in all 10 remote stations and 10 AWS. However, internet facility will be provided by IITM at the central station at IITM, Pune and center at Ahmedabad.
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2 LOCAL STATIONS: **10 for AQMS**

- Should connect through RS232 and USB communication ports.
- Should able to transmit data remotely via modem/ GPRS /3G network.
- Should provide GUI windows based application software for continuous air monitoring.
- Should provide calibration windows for analyzer calibration from computer.
- Main window for real time display major parameters & status of all analyzers& sensors.
- Control panel window for control of each analyzer.
- Real time status and diagnostics for maintenance people.
- Programmable down loading of data.
- Should provide data storage capacity for at least 5 years.

a) Configuration of local data acquisition machine for AQMS - 10 Numbers

PROCESSOR:

- Latest or 2nd Generation Intel® Core™ i5-2400 Processor (3.10GHz, 6MB) or higher
- Chipset: Intel(R) Q67 Express Chipset
- OPERATING SYSTEM: Genuine Windows (R) 8 Professional 64 bit (English)
- MICROSOFT SOFTWARE: Licensed Microsoft(R) Office Business edition 2010 or above
- DISPLAY: 17in HAS Wide Monitor, VGA/DVI
- MEMORY: 4GB (2x2GB) Non-ECC DDR3 1333MHz SDRAM Memory
- HARD DRIVE (PRIMARY): 1TB 7200 RPM 3.5" SATA Hard Drive
- OPTICAL DRIVE: 16X Max DVD-ROM Drive
- KEYBOARD: USB Keyboard
- MOUSE: USB MOUSE with PADS
- CARD READER: 19-in-1 Media Card reader
- SOFTWARES and SYSTEM RECOVERY: Windows(R) 8 Professional 64bit Media Kit (Multi-Language).
- USB Ports: Total 4;
- Ports type: as per requirements to interface all analysers

Multimedia: Multimedia Speaker with MIC

3 CENTRAL STATION: **3 (2 for Ahmedabad and 1 for Pune as mirror Server)**

- The software should have all advance features to enable remote automatic data collection from each AQMS and AWS station and should provide full control over data loggers

anywhere in the network including real time viewing, status and diagnostic information.

- Data communication and acquisition system should handle the data transmission /reception from 10 different monitoring stations of an ambient air quality network and receive incoming messages / signals from remote site. **In addition** to this it should also provide the similar connectivity and data control and transmission of 10 different automatic weather station data which are being installed there independently.
- Central station software should manage 10 remote air quality-monitoring stations &10 AWS.
- Should provide data management, analysis and reporting.
- Should compatible with latest version of Windows above 7/8.
- Should provide data storage capacity for at least 5 years.
- The remote control ability on the client server model as such should look and realize exactly the same when used from a remote location as it does when used on site. It should be a separate process that is independent of what is being displayed on the logger.
- Multiple clients should be able to connect to the server from different locations at a time to allow remote computer to view the data being logged in real time.
- The customized software interface program should be provided which can store and Transmit the data in the scientific units as well as in AQI format (mathematical formula will be provided by IITM) to FTP as well as Display servers in the desired format as per the requirement of display company. This needs to be updated every 30 minutes to 1 hour in real time.
- This software as well as standard data acquisition software should be maintained regularly and should have enough licenses to load in main and proxy servers.
- Vendor should provide /quote for 5 licences of TEAM VIEWER software along with required graphic and other data ports to be installed at Pune /Ahmedabad control /central rooms for remote access.
- Both workstation should be configured in hot stand by mode.

(a) Configuration of central data acquisition machine /workstation = 3 Numbers

i) Central Workstation for Ahemadabad (Qty. 2)

- Branded PC with Windows 8 Professional 64
- Intel® Core™ i5-4570S with Intel HD Graphics 4600 (2.9 GHz, 6 MB cache, 4 cores)
- 1 TB 7200 rpm SATA
- 8 GB 1600 MHz DDR3 SDRAM
- Intel HD Graphics 4600
- Slim Tray-load Super Multi DVD writer
- Office Professional latest version.
- KEYBOARD: USB Keyboard
- MOUSE: USB MOUSE with PADS
- DISPLAY: 23in HAS Wide Monitor, VGA/DVI
- OPTICAL DRIVE: 16X Max DVD-ROM Drive

ii) Central Workstation for Pune (Qty. 1)

- Display: Retina 5K display 27-inch (diagonal) Retina 5K display with IPS technology; 5120x2880 resolution with support for millions of colours.
- Processor: 4.0GHz quad-core Intel Core i7 (Turbo Boost up to 4.2GHz)

- OPERATING SYSTEM: OS X El Capitan
- Memory: 8GB (two 4GB) of 1867MHz DDR3 memory; four SO-DIMM slots, user accessible Configurable to 16GB or 32GB
- Storage: 2TB Fusion Drive Configurable up to 3TB Fusion Drive, or 1TB of flash storage (SSD)
- Graphics: AMD Radeon R9 M395 graphics processor with 2GB of GDDR5 memory
- Configurable to AMD Radeon R9 M395X with 4GB of GDDR5 memory. Video Support and Camera: Face Time HD camera Simultaneously supports full native resolution on the built-in display and up to two 4096x2160 external displays or one 5120x2880 dual-cable external display Support for extended desktop and video mirroring modes.
- Audio : Stereo speakers, Dual microphones, 3.5mm headphone jack, Headphone/optical digital audio output (mini-jack), Support for Apple iPhone headset with microphone.
- I-Magic Keyboard and Magic Mouse 2 and Magic Trackpad 2

(iii) Configuration of FTP Rack server = 3 Numbers

System feature

- Processor Intel® Xeon® E5-2620 (6 core, 2 GHz, 15MB, 95W)
- Operating System: Windows server Latest Version
- Number of processors and Core: 1 and 6
- Form factor (fully configured) 5U
- Power supply type (1) 460W Gold hot plug power supply kit Common Slot
- Memory, standard 8GB (2x4GB) RDIMM
- Memory slots 24 DIMM slots
- Memory type 1R x4 PC3L-10600R-9
- Included hard drives None ship standard; Supports up to (8) SFF SAS/SATA
- Optical drive type Half-Height SATA DVD-ROM
- Network controller 1Gb 331i Ethernet Adapter 4 Ports per controller
- Storage controller (1) Smart Array P420i/512MB FBWC
- Infrastructure management iLO Management Engine, Insight Control (optional) (Equivalent to HP ProLiant ML350p Gen8 E5-2620 1P 8GB-R P420i Hot Plug 8 SFF 460W PS Base Svr (646676-001) -138078.18)

5) Portable backup DAS system = 1 (One) number

- Display: 13.3-inch (diagonal) LED-backlit glossy widescreen display with support for millions of colours. Supported resolutions: 1440x900 (native), 1280x800, 1152x720 and 1024x640 pixels at 16:10 aspect ratio; 1024x768 and 800x600 pixels at 4:3 aspect ratio.
- Storage: 256GB PCIe-based flash storage
- Operating System: OS X El Capitan
- Processor: 1.6GHz dual-core Intel Core i5 (Turbo Boost up to 2.7GHz) with 3MB shared L3 cache.
- Memory : 4 GB
- Battery and Power: Up to 12 hours wireless web, Up to 12 hours iTunes film playback, Up to 30 days standby time.
- Size and Weight: Height: 0.3-1.7 cm (0.11-0.68 inches), Width: 32.5 cm (12.8 inches) Depth: 22.7 cm (8.94 inches), Weight: Around 1.35 kg
- Graphics and Video support: Intel HD Graphics 6000
- Dual display and video mirroring: Simultaneously supports full native resolution on the built-in

display and up to 3840x2160 pixels on an external display, both at millions of colours

- Camera: 720p FaceTime HD camera

(6)Data Integration, management and Portal:

The complete SAFAR Ahmedabad Data should be integrated with existing data of SAFAR Delhi, Pune & Mumbai on the same portal with dynamic data flow for updates. If the integration is not possible on the same portal, supplier should offer a completely new portal solution as desired for display of data of 4 cities. In addition, data integration and related software development of Mobile App should be done for Android, Windows /Blackberry and Apple-I phone operating system, which should be scalable to multiple cities at no extra cost. All above application and its operation is included in general OMC contract.

O. SPECIFICATIONS FOR UPS /AIR CONDITIONER /RACK, ELECTRICAL WIRING, etc for AQMS= 11 sets	
1	Supply and commissioning of online Branded UPS With Minimum 4 Hour Battery Backup of all analysers and accessories of adequate capacity (minimum 3KVA) to be provided (10 sets - 1 for each Station) with wiring and all necessary electrical work
2	Supply and commissioning of online 5 KVA Branded UPS With Minimum 4 Hour Battery Backup for Central Station to be connected to all central station servers and room displays with wiring and all necessary electrical work (1 Number only)
3	Supply and commissioning of Branded Air Conditioner System split type of two ton capacity for all AQMS stations and central station with wiring and all necessary electrical work (2 units each for AQMS shelter and 3 for central station) (hence total 20+3 =23 units)
4	Supply and commissioning of standard mounting rack to accommodate all analyzers and necessary accessories (cylinders, calibrator, etc) with sample handling moisture removal manifold system, power distribution board, exhaust /cooling, dust filter, telescopic poles, etc.
5.	Electrical Cable Lying: Lying of aluminum electrical cable (outer) with electrical earthing suitable to bring 3-phase power supply from the nearest power junction for all AQMS and AWS as per the load of complete set of AQMS shelter (11 including 1 central station) (Quote per meter rate with supply and commissioning, lying inside ground, brick coba and pipe cover, etc.) along with timer circuit. The exact amount will be calculated based on actual length, which is likely to be around 3000 meters and can vary. In addition, additional work of cabling can be given based on rate contract. All work of above electrical cable, connections, repair and its maintenance will also be under the general turnkey OMC contract for 5 years for any fault, repair or changing.

P. WALKWAY SHELTER for AQMS(10) & CENTRAL STATION (1)

(a) For AQMS (Total Number = 10)

Sr. No.	Description	Specification
1a	Material of construction (Outside)	Mild Steel 1.2 mm thickness with pre-coated paint only
1b.	Material of Construction (Inside)	Marine ply with laminate (12 mm) Boiled Water Resistance Quality. Laminate of approved shade to be used for all Inside walls
2	Size	walkway shelter of 4 mtr. (L) x 3.5 mtr. (W) x 2.7mtr. (H)
3	Door	One main door for Entrance/Exit
4	Door Size	900mm (W) x 2000mm (H) with toughened glass
5	Partition	Separate Compartment for locating UPS & Batteries to be provided
6	Wall Thickness	80 mm with Rockwool/ Glasswool
7	Roof Thickness	100 mm with Rockwool/ Glasswool
8	Base Frame	Made of ISMC 100 Channel with 50mm x 50mm x 4mm Angle
9	Floor MOC	Plywood of 12mm thickness, on GI sheet of 2 mm thick
10	Flooring	Vinyl sheet pasted on plywood (1.5 mm thick)
11	Paint shade and title	Green designed globe painted at front with IITM, MoES, CWG logos and name written as per IITM instructions.
12	Hook	I-Hook shall be provided on all the four corner to lift the shelter
13	Window	Two nos shall be provided for 10 shelters- Double glass vacuum type
14	Illumination and electrical wiring	4 Nos tube light - Inside shelter (250-300 Lux at working level), 4 Nos bulk head light - Outside shelter All electrical copper wiring inside the shelter as well as for outside lights.
15	Canopy	600mm (W) shall be provided at all sides
16	Inside separation	Sliding arrangement shall be provided as indicated in the drawing
17	Roof Design	Shall be design to take load of Four persons
18	Floor Design	Shall be design to take load of 100 KG/Square ft
19	Application	Outdoor
20	Location	In & around Ahmedabad
21	Ambient Condition	Temp: Min 2°C; Max 49°C
22	Other amenities in shelter	One Computer table (3'x2') with 3 computer chairs (armed and full back) (Standard Brand-Godrej or equivalent)
23.	Civil Work	Platform (size approximately 17x15x2 feet) with proper concrete foundation work with proper tiles finish on open area and proper iron cage for securing gas cylinders outside shelter. The foundation to

		accommodate shelter should be concrete having dimension ~ 4.5 m (L) x 4.0 m (W) x 0.5m (H) or more. For, option (b) Central station, dimension will be double as per below mentioned description.
24.	CMC	For 5 years including all parts and consumables.
(b) For Central Station (Total Number = 1)		
	Description	All specifications remains the same as above (no. 1 to 24) but 2 such walkway shelters should be combined to make one, having dimension of (4x2) mtr. (L) x 3.5 mtr. (W) x 2.7mtr. (H) with proper interconnectivity. Exception: Under serial 22 (amenities), provide customized PC/server table (no. 3) of size 5'x3', 6 chairs and a branded sofa set (3+1+1 seated) and wooden centre table (3x2) with glass top.
(c) Optional Civil Work for 10 AQMS & Central Station , wherever required		
	Additional Civil Work	Quote separately for barricading with RPC pole (6 feet height or more), barbed thick wiring and CS exit gate around the shelter
Note	1. Three Holes at top shall be provided for Entry of Gas/Dust Sample tubes for AQMS shelters. 2. At bottom there shall be holes for Cable & Drain Tube Entry/exit all inclusive.	

Q. SPECIFICATIONS FOR PORTABLE INDEPENDENT SENSORS - 10 sets		
1	Sensors	To be mounted in the Rack Cabinet of AWS and integrated with Data Logger to get the Data at Central AQMS Server at IITM, Pune
2	Display	LCD with levels and exposure
3	Power Supply	Necessary 230V, 50 Hz. AC supply or Adapter
4	Sampling	Dynamic air sampling using internal fan
5	Outputs	RS 232, USB, 4-20 mA Analog
6.1	SO ₂	0-1000 ppb Range, Detection Limit 20 ppb
6.2	NO ₂	0-250 ppb Range, Detection Limit 20 ppb
6.3	NH ₃	0-25 ppm Range, Detection Limit 0.5 ppm
6.4	CO	0-20 ppm Range, Detection Limit 50 ppb
6.5	PM10 /PM _{2.5}	0-500 µg/m ³ using Nephelometer, Detection Limit 5 µg/m ³
6.6	O ₃	0-250 ppb Range, Detection Limit 20 ppb
6.7	nmVOC	0-16 ppm Range, Detection Limit 10 ppb
7	Maintenance	Necessary Maintenance, replacement of Sensors, PCB's etc. to be taken care during the entire OMC period.

R. Optional Item: SODAR (as per below specification)*

R. SPECIFICATIONS for SODAR – 01 Set		
1.	Model	Bench Top Design
2.	Antenna weight:	As low as possible but not more than 12kg
3.	Antenna dimensions	42 cm(L) x 42 cm(W) x 7cm(H)
4.	Electronic case weight:	As low as possible
6.	Total weight	Not more than 20 kg (antenna, electronic case and support)
7.	Number of beams	Not less than 5
8.	Central frequency	3.6 Khz
9.	Operating frequencies	Up to 9 emitted frequencies on each of two coplanar beams
10.	Acoustic power	10 W
11.	Operating conditions	-40°C to +80°C with up to 100% relative humidity
12.	CPU and RAM memory:	Atom®, 1 Gbytes
13.	Power consumption:	0.75 Amp (18 W)
14.	Operating system:	Linux /Windows
15.	Average altitude range:	700m (40dBA, 15°C air temperature, 70 % Relative Humidity). Should reach not less than 1.2 KM with Software algorithm, which must be included.
16.	Minimum altitude:	15 m
17.	General Remarks	The antenna is made of 64 piezo-electric transducers, operating at 3.85 KHz (central frequency). Active antenna size is 40 cm x 40 cm.
18.	Remote Connection	Through latest powerful Notebook using Wi-Fi over 100 meters distance

****(Note – Optional Item, will not be considered for evaluating L1 criteria, however, Institute reserve the right to place the order as per requirement. Vendors are requested to quote the prices separately along with its yearly OMC charges for next 5 years)***

S. OPERATIONAL AND MAINTENANCE CONTRACT (OMC):

Total Comprehensive Operational and Maintenance Contract (OMC) for 5 years for all set of analysers including complete manned operation and managing stations and supply of the data to central station with remote handling. Supplier should quote for the comprehensive Operational maintenance contract (OMC) for a total period of 5 years. It is understood that as per the practice, there should be a total Comprehensive Maintenance Contract (CMC) for initial one year free of cost. Hence, only the manpower cost should be included in 1st year. Each and every item mentioned in this tender document should be covered under OMC whether it is a work /hardware /software, recurring or non-recurring, etc for 24x7 operation for all stations.

This OMC should be included the following items for complete system of this tender for

uninterrupted operation of all AQMS stations, analysers, walkway shelters, AWS, all accessories and related components–

- Supply of all consumable; spare parts; recurring expenses viz. GPRS /3G SIM tariff, and regular maintenance for uninterrupted operation (24x7), etc. for all stations.
- As per the literature & SOP of instruments / analyser, a periodic calibration report as per international standard should be submitted to IITM. The calibration should be done upon initial installation, after relocation, after any repairs or service that might affect its calibration, when there is prolonged interruption in operation, at some routine interval as specified by original manufacturer to identify early evidence of sensor drift. In addition, as and when IITM demands for calibration of any analyser, vendor should provide the same without any extra cost. All the instruments should be supplied with Factory calibration certificates as per standard. The method and frequency of calibration should be indicated and should be adhered to throughout the contract period. This should be clearly stated for both your own instruments and other manufacturer's instruments supplied such as AWS. Field calibration should be performed by a qualified calibration engineer on site.. In order to have uninterrupted data collection adequate spare sensors with factory calibration certificates should be available at site in case sensors are found to be not reliable or to be replaced or to be sent to Factory. IITM will not incur any expenditure whatsoever for these activities
- Stationing of **ONE** dedicated trained supervisor /engineer compulsorily in control room at Ahmedabad to take care of regular supervision related to maintenance, calibration and all hardware related issues for all stations of SAFAR-Ahmedabad.
- Stationing of **ONE** dedicated trained software engineer compulsorily in control room /master control room in Ahmedabad /Pune for all software related issues and regular monitoring of data transfer to FTP /display servers, conversion to AQI and all other features, data handling and analysis, report preparations as desired by IITM. Engineer should be able to develop the software, web portal, data communication modules and required to upgrade all the prototype developed software under the project as per the improved technology. He /she should do related software development as and when required and instructed by IITM during his contract period. Engineer should be present on all working days including Saturdays In case of emergency, engineers should report on duty as per IITM / IMD requirement.
- **Additional Staff:** In addition to the above, quote for 4 (Four) additional permanent operational staff /engineer adequate for proper maintenance, calibration, operation and data handling of all the filed stations, additional instruments, hardware maintenance /repair along with central station.
- **TOTAL OMC Staffs for SAFAR-Ahmedabad:** Hence, total staff compulsorily **deployed will be 6 (SIX)** with a guarantee to strictly follow the OMC guidelines and IITM will not accept anything below this number. However, if vendor feels that more engineer and staffs are required to fulfil the OMC responsibilities then vendor is allowed to add which should be clearly mentioned and quoted accordingly.
- These OMC staff will maintain all instruments, manage all consumables, spare sensors, keep it operational and carry out the complete operational analysis at all 10 different stations (spread around 100-200 km radius within Ahmedabad and surrounding areas) and related components on routine basis (in another city if mentioned otherwise for any item).

- The OMC engineer for **MAPAN (Modelling Atmospheric Pollution and Networking)** station (1 engineer for each MAPAN station –mentioned in relevant section B which is separated from SAFAR staff) should maintain all instruments, manage all consumables, spare sensors, keep it operational and carry out the complete operational analysis on respective stations in that city on routine basis. The contract conditions and work responsibilities of MAPAN engineers will be identical to that of SAFAR staff and dealt independently.
- Quote separately for each year for both SAFAR and MAPAN. For MAPAN quote per station basis as mentioned in B.
- OMC will be paid only for those days when instruments are operational for which a log book should be maintained and duly certified by IITM. All instruments should remain operational at all times. No OMC payment will be made for non functional days and also extension of OMC period will be done for the equivalent duration. The non functionality is defined as failure of more than 10% of the total number of instruments/ items in this contract.
- In addition to above, if individual station remains non-functional continuously for more than 3 days an additional penalty will be charged @ 2% of OMC amount of station per month. In case station is non-functional continuously for more than 7 days, a penalty will be charged @ 5% of OMC amount of station per month.
- The instrument should be commissioned, regularized and made operational without any additional facility and any extra cost to IITM. However space for erecting stations and standard Indian raw power supply will be provided by IITM.

B. AQMS for MAPAN = 2 Nos.

The Bidder to quote for additional 2 sets of Analyzers required as a part of MAPAN Project. The Set of Analyzers will be installed in central & western part of India. The Bidder also to quote for Operational and Maintenance Contract (OMC as per S) for a period of 5 years considering 1 dedicated Engineer/ Technician per system. The specifications of instruments and that of Terms and Conditions /work responsibilities of the OMC engineer will be same as that proposed for SAFAR Ahmedabad project. The following Analysers and accessories will be required to be offered:

1.	SO ₂ Analyser	As per specifications A
2.	O ₃ Analyser	As per specifications B
3.	NO _x Analyser	As per specifications C
4.	CO Analyser	As per specifications D
5.	PM Analyser	As per specifications E
6.	BTX Analyser	As per specifications F
7.	BC-Analyser	As per specification H
7.	Multi Gas Calibrator with Zero Air Generator	As per specifications I & J
8.	Local Data Acquisition System & Software (Per station: One PC for AQMS, required DAS software; 1PC and software for central DAS at Pune for data transmission /collection with 5 licences)	As per specifications N
9.	UPS/ Racks/ Electrical work for AQMS	As per specifications O
10.	AWS (Automatic Weather Station)	As per specification M
11.	Branded Air Conditions (2 sets for each station)	2 Tons capacity
12.	Remark: This will be a rate contract per AQMS for atleast 2 years after the placement of firm order. Additional number may go upto5 AQMS sets.	

List of deliverable related to AQMS for SAFAR –Ahemadabad as per specification given in this tender.

Sr. No.	Description	Qty.
01	SULPHUR DIOXIDE ANALYSER	10 sets
02	OZONE ANALYSER	10 sets
03	NO _x ANALYSER along with NH ₃ Analyzer (Attachment / independent unit)	10 sets
04	CO ANALYSER along with CO ₂ analyser (Attachment / independent unit)	10 sets
05	BENZENE, TOULENE, XYLENE ANALYSER	5 sets
06	PM ANALYSER (PM ₁₀ , PM _{2.5} & PM ₁) (Attachment / independent units)	11 sets
07	MERCURY ANALYSER along with Mobile DAS.	1 set
08	BLACK CARBON ANALYSER	5 Sets
09	MULTI POINT GAS CALIBRATOR (MGC)	11 sets
10	ZERO GAS GENERATOR	11 sets
11	UVE radiometers with PC & DAS	5 sets
12	Imaging Systems and Documentation	1 Set
13	AUTOMATIC WEATHER STATIONS (AWS)	10 Set
14	LOCAL data Acquisition machine with software	10 Set
15	Central data acquisition machine /workstation (Ahemdabad-Qty 2 Nos. & Pune – Qty. 1 No.) with software	03 Set
16	FTP Rack server	03 Set
	GPRS/3G Modem	As per requirement
17	Portable backup DAS system with software	1 Set
18	Data Integration, management and Portal	1 Job
19	UPS	11 sets
20	AIR CONDITIONER	22 sets
21	RACK, ELECTRICAL WIRING, etc	11 sets
22	WALKWAY SHELTER for AQMS	10 sets
23	WALKWAY SHELTER for CENTRAL STATION	1 sets
24	PORTABLE INDEPENDENT SENSORS	10 sets
25	Optional Civil work	Per job per station
26	Installation & Commissioning 10 AQMS & 1 Central Station	
27	Operational and Maintenance Contract (OMC) for 05 Years	

List of equipment related to AQMS for MAPAN – Qty 2 Set

1.	SO2 Analyser	As per specifications A
2.	O3 Analyser	As per specifications B
3.	NOX Analyser	As per specifications C
4.	CO Analyser	As per specifications D
5.	PM Analyser	As per specifications E
6.	BTX Analyser	As per specifications F
7.	BCAnalyser	As per specification H
7.	Multi Gas Calibrator with Zero Air Generator	As per specifications I & J
8.	Local Data Acquisition System & Software (Per station: One PC for AQMS, required DAS software; 1PC and software for central DAS at Pune for data transmission /collection with 5 licenses)	As per specifications N
9.	UPS/ Racks/ Electrical work for AQMS	As per specifications O
10.	AWS (Automatic Weather Station)	As per specification M
11.	Branded Air Conditions (2 sets for each station)	2 Tons capacity
12.	Optional Civil work	Per Job per station
13.	Installation & Commissioning	
14	Operational and Maintenance Contract (OMC) for 05 Years	
	Remark: This will be a rate contract per AQMS for at least 2 years after the placement of firm order. Additional number may go upto5 AQMS sets.	

INDIAN INSTITUTE OF TROPICAL METEOROLOGY PUNE - 411 008 (INDIA)

GENERAL TERMS & CONDITIONS

ENQUIRY NO: PS/125/08/2015/

TENDER NOTICE No.: PS/TENDER/05/2015

1) ABOUT IITM

The Indian Institute of Tropical Meteorology (IITM), Pune an autonomous body under Ministry of Earth Sciences (MoES), Govt. of India. IITM is country's premiere research Institute to generate scientific knowledge in the field of meteorology and atmospheric sciences that has potential application in various fields such as agriculture, economics, health, water resources, transportation, communications, etc. It functions as a national centre for basic and applied research in monsoon meteorology. For more details please visit <http://www.tropmet.res.in>

- 2) The Tenderers are requested to give detailed sealed tender in their own forms in two Bids i.e.
Part-I Technical Bid.
Part-II Commercial Bid

Both the bids addressed to
The Director,
Indian Institute of Tropical Meteorology,
Dr.HomiBhabha Road, NCL Post,
Pashan, Pune – 411 008, INDIA.

- 3) The offers in the prescribed format should be addressed to the Director, IITM, Dr. Homi Bhabha Road, Pashan, Pune under sealed cover. This is a two-bid system. The first cover shall be super scribed "Tender for Technical Bid". The second cover shall be super scribed "Tender for Commercial /Financial Bid". Both these envelopes, after being sealed properly, shall be put into a third envelope, which should be properly sealed before it is sent/submitted. The third sealed cover shall be addressed to the Director, IITM, Dr. Homi Bhabha Road, Pashan, Pune, India. This cover should be super scribed "**Bids for Air Quality and Weather Monitoring System (AQMS) FOR SYSTEM OF AIR QUALITY AND WEATHER FORECASTING AND RESEARCH FOR AHMEDABAD (SAFAR-Ahmedabad) –10 SETS (TURNKEY JOB) to be opened on 10 February 2016**". Incomplete offers and offers received after due date and time of submission of tenders are liable for rejection and shall not be opened without assigning any reasons. Offer received through Fax, Telegram or E-mail will not be considered.

The **TECHNICAL BID** of the tender will consist of the two sections:

SECTION-A: Consisting of technical offer and a check list showing deviations from the technical specifications. If there is no deviation with technical specifications, a "**No Deviation Certificate**" must be enclosed. (Proforma 3)

SECTION-B: Containing

- a) Commercial terms and conditions.
- b) Earnest Money Deposit.
- c) Check list showing deviations, if any from the commercial terms and conditions against each clause. If there is no deviation with commercial terms and conditions, a “**No Deviation Certificate**” must be enclosed (Proforma 3).
- d) Blank format of price bid as quoted by the bidders (WITHOUT PRICE).
- e) Sales Tax Registration Copies must be provided.
- f) A list of client served (with Contact Address) must be provided. Bidders shall enumerate the operational experience in similar environment of the AQMS system offered along with names, addresses, FAX and phone numbers, and e-mail of user installations in Proforma -04.
- g) Bidder should furnish his complete address along with the telephone, telex, e-mail, and telefax numbers for the purpose of further correspondence pertaining to the tender.
- h) Each copy of the bid should be a complete document and should preferably be bound as a volume. Different copies must be bound separately. Soft copy of the bid document in CD should also be submitted.
- i) Original brochures and other technical details of the proposed System.

COMMERCIAL BID envelope will contain only the financial bid in which price, maintenance, AMC, CMC, OMC etc. and any other information, which has financial implications, will only be given.

Total Cost of Ownership (TCO) = Cost of SAFAR-Ahmedabd + Cost of MAPAN Stations which includes: Cost of equipments (Import and Indigenous) + Installation, Commissioning & Training + OMC for Five Years.

- 4) Please indicate page number on each page of your quotation. If the quotation is containing 25 Pages, please indicate page numbers as 1/25, 2/25, 3/25 -----25/25.
- 5) The main envelope, which will contain both the bids, should be super scribed with our tender enquiry No.**PS/125/08/2015** due on **10th February 2016**.
- 6) The technical bids will be opened on the specified due date in the presence of tenderers who wish to be present & the financial bids of only those bidders will be opened later whose technical bid would be found eligible during technical evaluation process.
- 7) The Date and Time of opening for Part-II (Commercial Bid) will be intimated only to pre-qualified and technically acceptable Tenderers for the item at a later date.

Last Date and Time for receipt of Tenders: **10th February 2016 Upto 12.00 hrs.**

Date and Time of opening of Tenders: **10th February 2016 At 15:00 hrs.**

(Part-I Technical Bids only)

- 8) This tender is **not transferable**.
- 9) **Fax / E-mail / Telegraphic / Telex tenders will not be considered**

- 10) If a request is made to IITM, Pune for Tender Documents, a sum of **Rs.1,000.00 (Rs. One Thousand only)** for indigenous suppliers / Indian agents (Non-refundable) and **equivalent of INR 1,000.00 in foreign currency** for foreign suppliers (Non-refundable) has to be paid in the form of Demand Draft only drawn in favour of **The Director, Indian Institute of Tropical Meteorology, Pune**. In case the bidders download the Tender Documents from the website of this Institute, **Tender document fee is require to be submitted in Technical Bid** in the form of Demand Draft only drawn in favour of **The Director, Indian Institute of Tropical Meteorology, Pune**.
- 11) a) The Equipment are required for **Ahmedabad** and to be installed in and around **Ahmedabad (INDIA) at different locations** excepting a few (mentioned otherwise in document) and subsequently Training is to be provided to the concerned scientists / personnel of IITM, Pune. Transportation charges for all equipment's to bring it to different sites in Ahmedabad will be borne by the vendor.
- b) Packing, Forwarding, Freight, Insurance and Commissioning and training Charges, if any extra may be quoted separately in Commercial Bid.
- c) In case if your quote is FOR/FOB/FCA basis, estimated Insurance coverage charges may please be indicated.
- d) CIF / CIP, Mumbai / Ahmedabad value both by Airfreight may please be indicated.
- e) Local Body Tax (LBT) / Octroi Payment if any, the same may please be shown separately.
- 12) Cost of the items should be mentioned clearly in the Commercial Bid (Part-II) only. Any other essential items / accessories required for the maintenance of the equipment for the next five years should also be specified in the offer separately.
- 13) In case of foreign quote, the Principal supplier should clearly indicate the address of the Indian Agent and percentage (%) of Agency Commission payable if any, to be paid to the Indian Agent in Indian Currency. If Agency Commission is not applicable, the same may kindly be mentioned clearly in the offer.
- 14) Indian Agency commission shall be payable in Indian currency after the receipt of consignment in good condition at our Stores & satisfactory installation and commissioning of all the ordered equipment and on submission of copy of DGS&D registration.
- 15) Indicate the names of the Indian reputed Organizations where you have supplied the similar equipment and may attach the satisfactory performance report of the equipment from user Organization.
- 16) a) If you have supplied identical or similar equipment to other Institutes under Ministry of Earth Sciences, Ministry of Science & Technology and any other central / state Government Organisation, the details of such supplies for the preceding three years should be given together with the prices eventually or finally paid.
- b) Based on the above information IITM will have its option to obtain details of the equipment, their performance, after sales services etc. for evaluation of the tender directly from the concerned Labs. / Scientists etc.

- 17) All the Bank Charges inside and outside India, including opening of LC, communication, confirmation, amendments etc., if any to Beneficiary's Account only. This may please be noted.
- 18) Details of services rendered by vendor as well as after-sales services offered by vendor are to be made clear in the tender.
- 19) Conditional tenders will not be considered.
- 20) The vendor should have appropriate facilities and trained personnel for supply, installation, commissioning and warranty-maintenance of the equipment to be supplied. Detailed information in this regard may be furnished.
- 21) **Delivery Period:** Within 4 months from the opening of Letter of Credit.
- 22) Supply means "Supply, Installation, Commissioning and satisfactory demonstration of the whole system and training".
- 23) Kindly attach in Technical bid, a copy of your latest DGS&D, New Delhi registration Certificate under the compulsory Scheme of Ministry of Finance regarding the registration of Indian Agent of foreign supplier, wherever it is applicable.
- 24) a) The Tenderer is required to furnish the Permanent Account Number (PAN) Allotted by the Income Tax Department. If registered with the National Small Industries Corporation, the registration number, purpose of registration and the validity period of registration' etc. should also be provided in Technical Bid.

b) A copy of latest Income Tax Clearance Certificate from Income Tax Department (INDIA) for Indian Agents.
- 25) In case of foreign quote, the address of Principal's / Manufacturer's and their Banker's details should be furnished.
- 26) The item should be supplied with manuals and the manuals including technical / Electronic drawings / circuit diagrams should be complete in all respects to operate the system without any problem.
- 27) The import license is covered under OGL policy of 2015-2020.
- 28) a) In case of Indigenous Items the offer should contain the Basic Price and percentage of Excise Duty should be shown separately, since IITM, Pune is exempted from payment of Excise duty vide Govt. Notification No.10/97-Central Excise dated 15th March, 1997.

b) IITM is exempted from payment of Customs Duty vide Govt. Notification No.51/96-Customs dated 23rdJuly, 1996. Since the suppliers are requested to quote only on FOB / FCA basis, applicable freight, insurance and customs duty to R&D Institutions will be borne by IITM.

29) Tender must clearly indicate the features offered unit price, VAT tax, transport, transit insurance, installation charges. Institute cannot furnish any concessional certificate for exemption or reduction in VAT tax or any other duty / tax except mentioned above at 28 a) and b). The vendor should mention the price of the equipment and the duties / taxes to be paid such as customs duty- / excise duty / VAT taxes etc. separately.

30) **Performance Security** : To ensure due performance of the contract, the successful bidder has to furnish the Performance Security in the form of bank guarantee for **10%** of the Order value from the Indian nationalized bank before execution of ordered work but not later than 21 days from the date of receipt of the Purchase Order. The same will be returned to the successful bidder only after completion of satisfactory installation, commissioning, demonstration of the whole system.

31) a) No advance can be paid.

b) **PAYMENT:**

(i) **For Import goods:- 80%** payment shall be made by Sight Draft / an Irrevocable Letter of Credit established in favour of the supplier through the State Bank of India, Main Branch, Camp, Pune 411 001 (India) for the order value, excluding the Agency Commission due to the Indian Agents, against the presentation of original Shipping documents. **10%** payment shall be released after completion of satisfactory installation, commissioning, demonstration of the whole system, after imparting training. Balance **10%** will be released upon receipt of Bank Guarantee from Indian nationalized bank for 10% of total Order value towards performance guarantee during warranty period. The bank guarantee to be valid for warranty period plus two months from the date of completion and commissioning of the project. However Letter of Credit/Sight Draft arrangement will be made for 100% Imported goods value.

The Agency Commission to the Indian Agent will be paid only after successful installation, commissioning and satisfactory demonstration and acceptance of the items ordered for by the end user.

(ii) **For Indigenous items:- 80%** payment shall be made against delivery of indigenous goods, **10%** payment shall be released after completion of installation, commissioning and on acceptance test as per Purchase Order at site and balance **10%** shall be made after receipt of performance Bank Guarantee from Indian nationalized bank for 10% of the total order value, to be valid for entire period of warranty plus two months including extension if any. If no Bank Guarantee is given, the balance 10% will be paid after assessing, after sales service during warranty period i.e. payment after warranty period.

(iii) **For OMC Service:** Operation & Maintenance Contract payment will be made on quarterly basis on submission of performance Bank Guarantee from Indian nationalized bank for 10% of the total OMC order value, to be valid for entire OMC period and two months including extension if any. If no Bank Guarantee is given, the balance 10% will be paid after assessing, after sales service during OMC period i.e. payment after OMC period.

- 32) The prices quoted should be firm and irrevocable and not subject to any change whatsoever, even due to increase in cost of raw material components and fluctuation in the foreign exchange rates and excise duty.
- 33) The Tenderer has to state in detail the Electrical Power/UPS requirements, floor Space, head room, foundation needed and also to state whether Air-conditioned environment is needed to house the system and to run the tests. i.e. pre-installation facilities required for installation may please be intimated in the technical bid.
- 34) **INSTALLATION:** Bidder shall be responsible for installation / demonstration wherever applicable.
- 35) Acceptance tests to be prescribed later will be carried out after installation and the items will be taken over only after successful completion of the acceptance tests.
- 36) The tenders must be clearly written or typed without any cancellations / corrections or overwriting.
- 37) IITM will not be responsible:
- a) For delayed / late quotations submitted / sent by Post / Courier etc.
 - b) For submission / delivery of quotations at wrong places other than the Office of Director, IITM, Pune,
- 38) In case of Foreign Quote, the mode of dispatch should be by Air Post Parcel/Ocean Freight/Air Freight (By Air India Freight) and on Freight to-pay basis only. The approximate dimensions of the packages and weight of consignment are to be indicated.
- 39) The makes / brand and name and address of the manufacturer, Country of Origin, Country of Shipment and currency in which rates are quoted are to be mentioned.
- 40) The Technical Bid should accompany with complete specification, Manufacturer's name, address and relevant Technical Literature/Brochures with Warranty Terms.
- 41) The tender / quotation / offer submitted by you should be valid for a minimum period of **One Hundred Eighty (180) days** from the date of opening the tender.
- 42) The quotation should be only in Indian Rupees for indigenous items. In case of foreign quote, the vendors may quote their rates in currency in which payment is required -Indian Rupees or Foreign Currency.
- 43) The bidder who submits the tender on behalf of their principals should produce documentary evidence in support of their authority to quote or submit preformat invoice of their principals.
- 44) Installation demonstration to be arranged by the supplier free of cost and the same is to be done within 15 days of the arrival of the equipment at site after site readiness.
- 45) IITM will not provide any accommodation/transportation for the Engineers/ Representatives

for attending Installation, Commissioning and Demonstration Work. It is the absolute responsibility of the Principal Supplier/Indian Agent to make their own arrangements.

46) **WARRANTY/GUARANTEE:**

- (a) Please see the complete detail in OMC Clause of tender document.
 - (b) The equipment should be guaranteed for trouble free performance during OMC period after installation. Supplier shall finally warrant that all the stores, equipment and components supplied under the ORDER shall be new and of the first quality according to the specifications and shall be free from the defects (even concealed fault, deficiency in the design material and workmanship). The defects, if any, during the guarantee period are to be rectified free of charge by arranging free replacement wherever necessary. Further, the technical specifications and requirements may also be verified.
- 47) Details of onsite warranty, agency that shall maintain during warranty and undertake Operational Comprehensive Service Maintenance Contract (OMC) beyond warranty shall be given in the offer. In case of foreign quote, the Indian Agent who shall maintain during warranty and AMC / OMC beyond warranty shall be given in the Technical Offer along with the name of Firm, address, contact person, phone no., fax no. etc.
- 48) The supply of spare parts is to be guaranteed at least for a period of 10 years after the supply of the equipment.
- 49) AQMS stations need to be installed in Ahmedabad at the vendor's cost.
- 50) No sub-contracting will be allowed for installation or maintaining system/ equipment / instrument during or after warranty period.
- 51) You have to quote rates for AMC / OMC, if any, only in commercial bid.
- 52) Any upgrade in Operating System (OS) and other associated software during the warranty and OMC period should be supplied free of charge.
- 53) Discount offered should be mentioned clearly in the commercial bid only.
- 54) This Institute is an autonomous scientific research organization under the Ministry of Earth Sciences and is a recognized centre for studies leading to M.Sc. and Ph.D. of the University of Pune and various other Universities. As such, all possible concessions / discounts / rebates applicable for educational Institutions may be given being an Educational Institution.
- 55) a) The Earnest Money Deposit of **Rs.20,00,000.00 (Rs. Twenty Lakhs only)** must be paid / sent along with your technical bid in the form of a Demand Draft, Banker cheque or Bank Guarantee from a commercial Bank in India drawn in favour of The Director, Indian Institute of Tropical Meteorology, Pune payable at Pune, otherwise your technical & financial bids will not be considered at all. The Earnest Money of successful bidder will be returned only after acceptance of supply order along with submission of performance security deposit. If the successful bidder fails to do so before the due date,

he will forfeit the EMD.

The Earnest Money of the unsuccessful bidder whose technical bid has not been found suitable will be returned within **FORTY FIVE DAYS** after receipt of Technical Committee recommendations. For successful technical bidder but not L1, it will be 45 days from placing the order to successful bidder.

- b) Those who are registered with Central Purchase Organization (e.g. DGS&D), National Small Industries Corporation or the concerned Ministry / Department need not to furnish EMD along with their bids.
 - c) Though EMD has to be submitted by Demand Draft, Banker's Cheque or Bank Guarantee, we prefer to have Bank Guarantee for easy return to the bidders once a decision is taken by IITM. (Specimen of Bank Guarantee is enclosed at Proforma-02).
- 56) a) Tenders, which are submitted without adhering to the Two-Bid Offer System, will summarily be rejected.
b) Unsigned Tenders will also be rejected.
c) Part and incomplete tenders are liable to be rejected.
- 57) If the supplier fails to Supply, Install and Commission the system as per specifications mentioned in the order within the due date, the Supplier is liable to pay liquidated damages @ one percent of order value per every week delay subject to a maximum of 10% and such money will be deducted from any money due or which may become due to the supplier or performance security deposit.
- 58) The purpose of certain specific conditions is to get or procure best Equipment / service etc. for IITM. The opinion of Technical Committee shall be guiding factor for Technical short listing.
- 59) Firms which have already supplied similar equipment to IITM and have not completed required installation / commissioning / after sales service / warranty replacements etc. such firms' offers will not be considered for further evaluation and no enquiries thereafter will be entertained.
- 60) In the event the Manufacturer / Supplier proposes for amalgamation, acquisition or sale of its business to any firm during the contract period, the Buyer/Successor of the Principal Company are liable for execution of the contract and also fulfilment of contractual obligations i.e. supply, installation, commissioning, warranty, maintenance/replacement of spares accessories etc. at the same cost / ordered value.
- 61) For AQMS-MAPAN stations, the terms and conditions of the OMC (services and penalty clauses, etc) will remain same as that are proposed for SAFAR Ahmedabad project.

62) Force Majeure :

Notwithstanding the provisions of the tender, the Bidder shall not be liable for forfeiture of its performance guarantee, liquidated damages or termination for default, if and to the extent that, it's delay in performance or other failure to perform its obligations under the contract is the result of an event of Force Majeure.

For purposes of this Clause, "Force Majeure" means an event beyond the control of the Bidder and not involving the Bidder and not involving the Bidder's fault or negligence and not foreseeable. Such events may include, but are not restricted to, acts of the Client either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.

If a Force Majeure situation arises, the qualified Bidder shall promptly notify the Client in writing of such conditions and the cause thereof. Unless otherwise directed by the Client in writing, the Bidder shall continue to perform its obligations under the contract as far as reasonably practical and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event. The Client may terminate this contract, by giving a written notice of minimum 30 days to the Bidder, if as a result of Force Majeure, the Bidder being unable to perform a material portion of the services for a period of more than 60 days.

63) Confidentiality: Each party shall maintain as confidential all information received from the other party that is identified as confidential at the time of disclosure (hereinafter for brevity referred to as Confidential Information). Confidential Information shall not include information that is independently developed by recipient or is in public knowledge or is already in the possession of the recipient or is received by receiving party from a third party having been independently developed by such third party. If receiving party is required to disclose Confidential Information due to a legal requirement, it shall provide prompt prior written notice of the same to disclosing party. Confidentiality obligation shall survive for a period of two years after termination/expiry of this Agreement.

Each party shall maintain as confidential all information received from the other party that is identified as confidential at the time of disclosure (hereinafter for brevity referred to as Confidential Information). Confidential Information shall not include information that is independently developed by recipient or is in public knowledge or is already in the possession of the recipient or is received by receiving party from a third party having been independently developed by such third party. If receiving party is required to disclose Confidential Information due to a legal requirement, it shall provide prompt prior written notice of the same to disclosing party. Confidentiality obligation shall survive for a period of two years after termination/expiry of this Agreement.

The supplier and its consultants, representatives and personnel shall not, either during the term or after expiration of this contract, disclose any proprietary or Confidential Information relating to the services, contract or the Purchaser's business or operations or the details or configuration of the system and/or its functions without the prior written consent of the purchaser. No sub-contractor shall be engaged unless with the prior written consent of the purchaser.

The supplier shall treat the details of the Contract as private and confidential, save insofar

as may be necessary for the purposes thereof, for which any disclosures shall be on a need to know basis with the recipients bound by confidentiality requirements which shall be and remain enforceable by supplier at its cost and responsibility mandatorily at the instance of IITM in the event of any breach of confidentiality, such enforcement being by enforcement and inflicting of penal and civil consequences up to the maximum permissible under law, and shall not publish or disclose the same or any particulars thereof in any trade or technical paper or elsewhere without the previous consent in writing of purchaser.

If any dispute arises as to the necessity of any publication or disclosure for the purpose of the Contract the same shall be referred to purchaser whose determination and decision shall be final and binding on both the parties.

The Supplier shall not disclose details except for disclosing to employees and permitted sub-supplier/s on “need to know basis”. No photograph of the works or any part thereof or equipment employed thereon shall be unauthorised taken, retrieved, retained, stored, modified, defaced, erased and/or published or circulated without the prior written approval of the purchaser in writing. The responsibilities of the supplier shall not be assigned transferred or otherwise parted with in favour of any other party unless purchaser has permitted such step in advance in writing.

The Supplier confirms and assures IITM that it has signed confidentiality Agreements with its consultants, representatives and personnel, with all such consultants, representatives and personnel bound by confidentiality requirements which shall be and remain enforceable by supplier at its cost and responsibility mandatorily at the instance of IITM in the event of any breach of confidentiality, such enforcement being by enforcement and inflicting of penal and civil consequences up to the maximum permissible under law, and in case of a breach of any of these provisions the Supplier will use all available legal means to forthwith secure injunctions against any unauthorized disclosures by its consultants, representatives and personnel. In the event of a breach of this provision, IITM shall be entitled to seek direct damages from the Supplier subject to the limit of the full value of the present contract.

64) Conditional Offers will not be considered.

65) Corrupt or Fraudulent Practices: IITM as well as Vendor under this contract observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, this Institute shall reject a proposal for award if it determines that the vendor recommended for award after financial evaluation has engaged in corrupt or fraudulent practices in competing for the contract in question. It shall declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a IITM Contract if any time it determines that the firm has engaged in corrupt or fraudulent practice in competing for, or in executing, a contract.

The Integrity pact as per proforma should be signed and submitted along with the technical bid.

- 66) All disputes are subject to exclusive jurisdiction of Competent Court and Forum in Pune, India only.
- 67) The Director, Indian Institute of Tropical Meteorology, Pune - 411 008, India reserves the right to accept any tender in full or in part or to reject the lowest or any or all tenders without assigning any reason.
- 68) In case of any dispute regarding part-shipment, non-compliance of any feature etc., The Director, Indian Institute of Tropical Meteorology, Pune will be the final authority to decide the appropriate action and it will be binding on the Vendor.

(V. R. MALI)
Scientific Officer, Grade-I
For Director
Email: psu.iitm@tropmet.res.in
Tel: ++91-20-25894483

Tender No. :

PROFORMA 01 (A)

The Bill of materials must be included in the technical offer as well as commercial offer. **However the Technical offer should not contain any price information.**

ALL THE BIDDERS SHOULD QUOTE THEIR OFFER IN FOLLOWING FORMAT FOR UNIFORMITY

(I) Imported Supply (Air Quality Monitoring Stations for SAFAR – Ahmedabad)

Sr. No.	Item Description	Quantity	Rate	Total Amount Currency
1				
2				
3				
Total Ex-Works				
FOB/FCA Charges				
FOB/FCA Price, <u>Name of Port</u>				
CIF/CIP Charges				
CIF/CIP Price, <u>Name of Port</u>				
Charges for Customs Duty				
Charges for Customs Clearance + Unloading + Insurance etc.				
Total DDP Price				
Amount in Words :				

(II) Indigenous Supply (Local Supply) (Air Quality Monitoring Stations for SAFAR – Ahmedabad)

Sr. No.	Item Description	Quantity	Rate	Total Amount. Currency (Rs)
1				
2				
3				
			Total	
			(+) Taxes etc.	
			Grand Total	
Amount in Words (in Rs)				

(Separate sheet for detailed tax structure may attached with the Commercial Bid)

(III) Operational & Maintenance Contract (OMC) (Air Quality Monitoring Stations for SAFAR – Ahmedabad)

Sr. No.	Item Description	Total Amount. in INR
1	1 st Year OMC	
2	2 nd Year OMC	
3	3 rd Year OMC	
4	4 th Year OMC	
5	5 th Year OMC	
	Total	
	(+) Taxes etc.	
	Grand Total	
	Amount in Words (in Rs)	

(Note : Separate sheet showing yearwise OMC Charges in details for all components mentioned in list of deliverables on Page No.23 along with Manpower charges may be attached in the financial bid.)

Witness
Signature

Company Seal

Name :
Address :
Date :

Tender No. :

PROFORMA 01 (B)

The Bill of materials must be included in the technical offer as well as commercial offer. **However the Technical offer should not contain any price information.**

ALL THE BIDDERS SHOULD QUOTE THEIR OFFER IN FOLLOWING FORMAT FOR UNIFORMITY

1. Imported Supply (Air Quality Monitoring Stations for MAPAN Project)

Sr. No.	Item Description	Quantity	Rate	Total Amount Currency
1				
2				
3				
Total Ex-Works				
FOB/FCA Charges				
FOB/FCA Price, <u>Name of Port</u>				
CIF/CIP Charges				
CIF/CIP Price, <u>Name of Port</u>				
Charges for Customs Duty				
Charges for Customs Clearance + Unloading + Insurance etc.				
Total DDP Price				
Amount in Words :				

2. Indigenous Supply (Local Supply) (Air Quality Monitoring Stations for MAPAN Project)

Sr. No.	Item Description	Quantity	Rate	Total Amount. Currency (Rs)
1				
2				
3				
			Total	
			(+) Taxes etc.	
			Grand Total	
Amount in Words (in Rs)				

(Separate sheet for detailed tax structure may attached with the Commercial Bid)

3. Operational & Maintenance Contract (OMC) (Air Quality Monitoring Stations for SAFAR – Ahmedabad)

Sr. No.	Item Description	Total Amount. in INR
1	1 st Year OMC	
2	2 nd Year OMC	
3	3 rd Year OMC	
4	4 th Year OMC	
5	5 th Year OMC	
	Total	
	(+ Taxes etc.	
	Grand Total	
	Amount in Words (in Rs)	

(Note : Separate sheet showing yearwise OMC Charges in details for all components mentioned in list of deliverables on Page No.24 along with Manpower charges may be attached in the financial bid.)

Witness
Signature

Company Seal

Name :
Address :
Date :

Tender No. :

PROFORMA 02

TECHNICAL DEVIATION STATEMENT FORM

PART-A

Technical Deviation Statement Form

1. The following are the particulars of deviations from the requirements of the tender specifications

SECTION	PAGE No.	ITEM	SPECIFICATION	REMARKS (including justification)

The system configuration/technical specifications furnished in the tender document shall prevail over those of any other document forming a part of our bid, except only to the extent of deviations furnished in this statement.

Dated:

Signature and seal of
The manufacturer/Bidder

NOTE:

1 Where there is no deviation, the statement should be returned duly signed with an endorsement indication " No Deviations".

PART-B

Terms and Conditions Deviation Statement Form

1. The following are the particulars of deviations from the requirements of the conditions/terms of the Tender:

SECTION	PAGE No.	ITEM	SPECIFICATION	REMARKS (including justification)

Dated:

Signature and seal of
the manufacturer/Bidder

NOTE:

1 Where there is no deviation, the statement should be returned duly signed with an endorsement indication " No Deviations".

Tender No. :

PROFORMA 03

Details about supply of systems for similar requirements:-

1. Name of the Organisation :
2. Address :
3. Phone/FAX/E-Mail :
4. Nature of operation :
5. Detailed Configuration of system supplied :
6. Actual use of system given under item 5 above :

Witness
Signature

Company Seal

Name :
Address :
Date :

Tender No. :

PROFORMA 04

Commercial bid details

1. Country of Origin :
2. Quantity of Equipment :
3. Delivery Schedule :
4. Place of delivery :
5. Acceptable Payment terms:
6. Validity of Quotation :
7. Warranty/Guarantee :
8. Name and address of Indian Agent (If any):
9. Percentage of Agency Commission details:

Witness

Signature

Company Seal

Name :

Address:

Date

Important Note: The above formats are representative and not exhaustive. Additional features at appropriate places depending on the specifications of offer may be added, if desired.

Tender No. :

PROFORMA 05

Undertaking

It is certified that the information furnished here in and as per the document submitted is true and correct and nothing has been concealed or tampered with. We have gone through all the conditions of tender and is liable to any punitive action for furnishing false information / documents.

Dated this _____ day of _____ 2016

Signature

(Company Seal)

In the capacity of

Duly authorized to sign bids for and on behalf of:

Tender No. :

PROFORMA 06

Format for Covering Letter

To
The Director
IITM Ministry of Earth Sciences
Dr. Homi Bhabha Road
Pashan,
Pune -411008
India

Sub: Technical Bid for Air Quality Monitoring Stations for SAFAR – Ahmedabad.

Dear Sir,

(a) Having examined the tender document and Annexures thereto and addenda numbers _____ thereto, we, the undersigned, in conformity with the said contract, offer to provide the said services on terms of reference to be signed upon the award of contract for the sum indicated as per financial bid.

(b) We acknowledge having received the following addenda to the bid document:

SI No	Addendum No.	dated

(c) We undertake, if our proposal is accepted, to provide the services comprise in the contract within time frame specified, starting from the date of receipt of notification of award from IITM.

(d) We agree to abide by this proposal for the period of 180 days from the date of bid opening and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

(e) We agree to execute a contract in the form to be communicated by IITM, incorporating all agreements with such alterations or additions thereto as may be necessary to adapt such agreement to the circumstances of the standard and notice of the award within time prescribed after notification of your intention to accept this proposal.

(f) Unless and until a formal agreement is prepared and executed this proposal together with your written acceptance thereof shall constitute a binding contract agreement.

(g) We understand that you are not bound to accept a lowest or any bid you may receive, not to give any reason for rejection of any bid and that you will not defray any expenses incurred by us in bidding.

(h) We would like to clearly state that we qualify for this work as our company meets all the pre-qualification criteria indicated on your tender document. The details have been provided separately.

(i) As security for the due performance of the undertaking and obligation of the bid we submit herewith a Demand Draft / Banker's Cheque bearing no. _____ dated _____ drawn in favour of **Director, IITM** for ₹20,00,000/- (₹ Twenty Lakhs only), payable at Pune.

Dated this _____ day of _____ 2016

Signature

(Company Seal)

In the capacity of

Duly authorized to sign bids for and on behalf of:

Tender No. :

PROFORMA 07

FORMAT OF BANK GUARANTEE FOR PERFORMANCE OF CONTRACT

(Covering Delivery obligations)

1. This guarantee should as per the format specified by RBI be furnished by a Nationalised Bank / Scheduled Bank, authorised by RBI to issue a Bank Guarantee excepting Bank of Baroda.
2. This bank guarantee should be furnished on stamp paper value as per Stamp Act. (at present not less than Rs. 100./-)
3. The stamp paper should have been purchased in the Name of the Bank executing the Guarantee .

To

The Director

IITM

Dr. Homi Bhabha Road, Pashan

Pune - 411008

Pursuant to a delivery contract No.. which M/s
. . . concluded with you on the aforementioned firm undertook to
delivery the following:-

S.No.	Description	Qty.	Value
-------	-------------	------	-------

We, the undersigned (Name of the Bank)
.herewith assume the guarantee for the fulfillment of the contractual
obligations, in accordance with the stipulations of the above mentioned
contract entered into by and between you as buyer and M/s
. . . as seller, to the amount of Rs. viz., 10% of the contract
value, to the effect that we irrevocably undertake to pay you upon your
first demand the above sum or part thereof provided you advise us that
M/shave failed to fulfill the terms and conditions of contract
including the delivery obligations stipulated therein.

In accordance with the stipulation of the clause of the instructions appended to the contract, this guarantee will become invalid after completion of supplies or as soon as this letter of guarantee has been returned to us, at the latest, however, on .

. (here mention the period or due date) unless a claim has been lodged against us under our guarantee until that date.

In any case, our liability under this guarantee of performance does not exceed
₹.....

This guarantee deed must be returned to us upon expiration of the period of guarantee.

Seal: (Countersigned) Name of the Bank.

Witness
Signature

Company Seal

Name:
Address:
Date:

PROFORMA 08

Format of the Integrity Pact **PRE CONTRACT INTEGRITY PACT**

General

This pre-bid-contract Agreement (hereinafter called the Integrity Pact) is made on _____ day of the month of _____ 2010, between, on one hand, the Director IITM, Pune acting through Shri _____, Designation of the officer, Ministry/ Department, Government of Indian (hereinafter called the 'BUYER", which expression shall mean and include, unless the context otherwise required, his successors in office and assigns) of the First Part and M/s _____ represented by Shri _____, Chief Executive Officer (hereinafter called the 'BIDDER/Seller" which expression shall mean and include, unless the context otherwise requires, his successors and permitted assigns) of the Second Part.

WHEREAS the BUYER proposes to procure (Name of the Stores/Equipment/Item) and the BIDDER /Seller is willing to offer/has offered the stores and

WHEREAS the BIDDER is private company/public company/Government undertaking/partnership/registered export agency, constituted in accordance with the relevant law in the matter and the BUYER is a Ministry/Department of the Government of India/PSU performing its functions on behalf of the President of India NOW, THEREFORE,

To avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to :-

Enabling the BUYER to obtain the desired said stores/equipment at a competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement, and

Enabling BIDDERS to abstain from bribing or indulging in any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and BUYER will commit to prevent corruption, in any form, by its officials by following transparent procedures.

The parties hereto agree into this Integrity Pact and agree as follows :-

Commitments of the BUYER

- 1.1 The BUYER undertakes that no official of the BUYER, connected directly or indirectly with the contract, will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the BIDDER, either for themselves or for any person, organization or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the contract.
- 1.2 The BUYER will, during the pre-contract stage, treat all BIDDERS alike, and will provide to all BIDDERS the same information and will not provide and such information to any particular BIDDER which could afford an advantage to that particular BIDDER in comparison to other BIDDERS.
- 1.3 All the officials of the Buyer will report the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.

2. In case any such preceding misconduct on the part of such official(s) is reported by the BIDDER to the BUYER with full and verifiable facts and the same is prima facie found to be correct by the BUYER, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceeding, or any other action as deemed fit, including criminal proceedings may be initiated by the BUYER and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted the BUYER the proceedings under the contract would not be stalled.

Commitments of BIDDERS

3. The BIDDER commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its bid or during any pre-contract stage in order to secure the contract or in furtherance to secure it and in particular commit itself to the following :-
 - 3.1 The BIDDER will not offer directly or through intermediaries, any bribe, gift, consideration, reward, favor, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BUYER, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.
 - 3.2 The BIDDER further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration Reward, favor, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BUYER or otherwise in procuring the Contract or forbearing to do so having done any act in relation to the obtaining or execution of the contract or any other contract with the Government for showing or forbearing to show favor or disfavor to any person in relation to the contract or any other contract with the Government.
 - 3.3* BIDDERS shall disclose the name and address of agents and representatives and Indian BIDDERS shall disclose their foreign principals or associates.
 - 3.4* BIDDERS shall disclose the payments to be made by them to agents/brokers or any other intermediary, in connection with this bid/contract.
 - 3.5* The BIDDER further confirms and declares to the BUYER that the BIDDER is the original manufacturer/integrator/authorized government sponsored export entity of the defense stores and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the BUYER or any of its functionaries, whether officially or unofficially to the award of the contract to the BIDDER, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.
 - 3.6* The BIDDER, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payments he has made, is committed to or intends to make to officials of the

BUYER or their family members, agents, brokers or any other intermediaries in connection with the contract and the details if services agree upon for such payments.

- 3.7 The BIDDER will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.
- 3.8 The BIDDER will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.
- 3.9 The BIDDERS shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the BUYER as part of the business relationship, regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The BIDDER also undertakes to exercise due and adequate care lest any such information is divulged.
- 3.10 The BIDDER commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.
- 3.11 The BIDDER shall not instigate or cause to instigate any third person to commit any of the action mentioned above.
- 3.12 If BIDDER or any employee of the BIDDER or person acting on behalf of the BIDDER, either directly or indirectly, is a relative of any of the officers of the BUYER, or alternatively, if any relative of an officer of the BUYER has financially interested/stake in the BIDDER's firm, the same shall be disclosed by the BIDDER at the time of filling of tender.
The term 'relative' for this purpose would be as defined in Section 6 of the Companies Act 1956.
- 3.13 The BIDDER shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the BUYER.

4. Previous Transgression

- 4.1 The BIDDER declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify BIDDER's exclusion from the tender process.
- 4.2 The BIDDER agrees that if it makes incorrect statement on this subject BIDDER can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

5. Earnest Money (Bid Security Deposit)

- 5.1 While submitting technical bid, the Bidder shall deposit an amount _____ as Earnest Money/ Security Deposit, with the BUYER through any of the following instruments:
- i) Bank Draft or a Pay Order in favor of **The Director, INDIAN INSTITUTE OF TROPICAL METEOROLOGY**", payable at **Pune**
 - ii) A confirmed guarantee by an Indian Nationalized Bank. Promising payment of the guaranteed sum to the BUYER on demand within three working days without any demur whatsoever and without seeking any reason whatsoever. The demand for payment by the BUYER shall be treated as conclusive proof of payment.

iii) Any other mode or through any other instruments (to be specified in the RFP).

5.2 The Earnest Money/ Security Deposit shall be valid upto a period of three years or the complete conclusion of the contractual obligation to the complete satisfaction of the both the BIDDER and the BUYER, including warranty period, whichever is later.

5.3 In case of the successful BIDDER a clause would also be incorporated in the Article pertaining to performance Bond in the Purchase Contract that the provisions of Sanctions for Violation shall be applicable for forfeit the same without assigning any reason for imposing sanction for violation of this Pact.

5.4 No interest shall be payable by the BUYER to the BIDDER on Earnest Money/Security Deposit for the period of its currency.

6. Sanction for Violations

6.1 Any breach of the aforesaid provisions by the BIDDER or any on employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER) shall entitled the BUYER to take all or any one of the following actions, wherever required:

i) To immediately call off the pre contract negotiations without assigning any reason or giving any compensation to the BIDDER. However, the proceedings with the other BIDDER(s) would continue.

ii) The Earnest Money (in pre-contract stage) and/or Security Deposit/ Performance Bond (after the contract is signed) shall stand forfeited either fully or partially, as decided by the BUYER and the BUYER shall not be required to assign any reason thereof.

iii) To immediately cancel the contract. If already signed, without giving any compensation to the BIDDER.

iv) To recover all sums already paid by the BUYER, and in case of an Indian BIDDER with interest thereof at 2% higher that the prevailing Prime Lending Rate of State Bank of India, while in case of a BIDDER from a country other than India with interest thereon at 2% higher than the LIBOR. If any outstanding payment is due to the bidder from the BUYER in connection with any other contract for any other stores, such outstanding payment could also be utilized to recover the aforesaid sum and interest.

v) To encash the advance bank guarantee and performance bond/warranty bond, if furnished by the BIDDER, in order to recover the payments, already made by the BUYER, along with interest.

vi) To cancel all or any other Contracts with the BIDDER. The BIDDER shall be liable to pay compensation for any loss or damage to the BUYER resulting from such cancellation/rescission and the BUYER shall be entitled to deduct the amount so payable from the money(s) due to the BIDDER.

vii) To debar the BIDDER from participating in future bidding processes of the Government of India for a minimum period of five years, which may be further extended at the discretion of the BUYER.

Viii) To recover all sums paid in violation of this Pact by BIDDER(s) to any middleman or agent or broker with a view to securing the contract.

ix) in case where irrevocable Letters of Credit have been received in respect of any contract signed by the BUYER with the BIDDER, the same shall not be opened.

- (x) Forfeiture of Performance Bond in case of a decision by the BUYER to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.
- 6.2 The BUYER will be entitled to take all or any of the actions mentioned at para 6.1 (i) to (x) of this Pact also on the Commission by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER), of an offence as defined in Chapter IX of the Indian Penal Code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.
- 6.3 The decision of the BUYER to the effect that a breach of the provisions of this Pact has been committed by the BIDDER shall be final and conclusive on the BIDDER. However, the BIDDER can approach the Independent Monitor(s) appointed for the purposes of this Pact.
- 7. Full Clause**
- 7.1 The BIDDER undertakes that it has not supplied/is not supplying similar product/systems or subsystems at a price lower than that offered in the present bid in respect of any other Ministry/Department of the Government of India or PSU and if it is found at any stage that similar product/systems or sub systems was supplied by the BIDDER to any other Ministry/Department of the Government or India or a PSU at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in cost would be refunded by the BIDDER to the BUYER, if the contract has already been concluded.
- 8. Independent Monitors**
- 8.1 The BUYER has appointed Independent monitors (hereinafter referred to as Monitors) for this Pact in consultation with the Central Vigilance Commission (Names and Addresses of the Monitors to be given).
- 8.2 The task of the Monitors shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact.
- 8.3 The Monitors shall not be subject to instructions by the representatives of the parties and perform their functions neutrally and independently.
- 8.4 Both the parties accept that the Monitors have the right to access all the documents relating to the project/procurement, including minutes of the meetings.
- 8.5 As soon as the Monitor notices, or has reason to believe, a violation of this Pact, he will so inform the Authority designated by the BUYER.
- 8.6 The BIDDER(s) accepts that the Monitor has the right to access without restriction to all Project documentation of the BUYER including that provided by the BIDDER. The BIDDER will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor shall be under contractual obligation to treat the information and documents of the BIDDER/Subcontractor(s) with confidentiality.
- 8.7 The BUYER will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the parties. The parties will offer to the Monitor the option to participate in such meetings.
- 8.8 The Monitor will submit a written report to the designated Authority of the BUYER/Secretary in the Department/ within 8 to 10 weeks from the date of

reference or intimation to him by the BUYER / BIDDER and, should the occasion arise, submit proposals for correcting problematic situations.

9. Facilitation of Investigation

In case of any allegation of violation of any provisions of this Pact or payment of commission, the BUYER or its agencies shall be entitled to examine all the documents including the Books of Accounts of the BIDDER and the BIDDER shall provide necessary information and documents in English and shall extend all possible help for the purpose of such examination.

10. Law and Place of Jurisdiction

This Pact is subject to Indian Law. The place of performance and jurisdiction is the seat of the BUYER.

11. Other Legal Actions

The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

12. Validity

12.1 The validity of this Integrity Pact shall be from date of its signing and extend upto 5 years or the complete execution of the contract to the satisfaction of both the BUYER and the BIDDER/Seller, including warranty period, whichever is later. In case BIDDER is unsuccessful, this Integrity Pact shall expire after six months from the date of the signing of the contract.

12.2 Should one or several provisions of this Pact turn out to be invalid, the remainder of this Pact shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions.

13. The parties hereby sign this Integrity Pact at _____ on

BUYER
Name of the Officer
Designation
Deptt./Ministry/PSU

BIDDER
CHIEF EXECUTIVE OFFICER

Witness

1. _____

2. _____

Witness

1.

2.

*Provisions of these clauses would need to be amended/deleted in line with the policy of the BUYER in regard to involvement of Indian agents of foreign suppliers.

BID SECURITY FORM

Whereas 1 (hereinafter called "the Bidder") has submitted its bid dated (*date of submission of bid*) for the supply of _____ (*name and/or description of the goods*) (hereinafter called "the Bid").

KNOW ALL PEOPLE by these presents that WE _____ (*name of bank*) of (*name of the country*), having our registered office at (*address of bank*)(hereinafter called "the Bank"), are bound unto (*name of Purchaser*) (hereinafter called "the Purchaser") in the sum of _____ for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successors, and assigns by these presents. Sealed with the Common Seal of the said Bank this ___ day of 20___ THE CONDITIONS of this obligation are:

1. If the Bidder withdraws it's bid during the period of bid validity specified by the Bidder on the Bid Form; or
2. If the Bidder, having been notified of the acceptance of it's bid by the Purchaser during the period of bid validity:
 - a) fails or refuses to execute the Contract Form if required; or
 - b) fails or refuses to furnish the performance security, in accordance with the Instruction to Bidders.

We undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, Without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee shall remain in force up to forty five days after the period of the bid validity, and any demand in respect thereof should reach the Bank not later than the above date.

(Signature of the Bank)
Name of Bidder.