



IIT Madras Research Park.
No.1FA, First Floor, Kanagam road, Taramani Chennai – 600113.

NOTICE INVITING TENDER.

Tender No. IITMRP/AMC/AHU/01

dated 23-07-2018.

The IIT Madras Research park Chennai 600113 invites item rate sealed tenders for the following work from reputed contractors who have met the eligibility criteria as stipulated in the tender document. The eligibility criteria and other details are available in the tender document available in the website www.respark.iitm.ac.in. The last date of receipt of bids is 3-08-2018

Name of Work. **Comprehensive Annual Maintenance for AHUs, CSUs, FCU, Cassette units in Phase 1 & Phase 2 for IIT Madras Research Park for the year 2018-2020.**

Chief operating officer.
IITM Research Park.

NOTICE INVITING TENDER

1. Sealed Item rate Tenders in sealed cover are invited from reputed contractors for the following work:

Name of work: **Comprehensive Annual Maintenance for AHUs, CSUs, FCU, Cassette units in Phase 1 & Phase 2 for IIT Madras Research Park for the year 2018-2020.**

1.1 Tender Details:

Estimated cost put to tender	Rs. 30,00,000/-
Pre bid meeting (Date, time and venue)	30-07-2018 at 1500 hrs at IITMRP office.
Last date & Time of submission of Tender	03-08-2018 up to 1500 Hrs.
Address for submission of Bid	Chief Operating Officer IITMRP, No 1FA, First floor, Kanagam Road, Chennai - 600113

- 1.2. Applicants who fulfill the following minimum eligibility criteria, with the following "Factors to be considered" (indicated at B) shall be eligible to apply:

- i) The applicant(s) may be individual or firm.
- ii) The firm shall have minimum 3 years of experience.
- iii) The contractor shall have enlistment in the appropriate class commensurate to the value of work as prescribed by the concerned Registering Authorities of central/State/ public sector undertaking of state or central Governments/ central Government Autonomous Institutions.
- iv) The contractors who have successfully completed
 - a) one similar work costing not less than 80 % or
 - b) Two similar works costing not less than 60% or
 - c) Three similar works costing not less than 40%Of the estimated cost put to tender during last 7 years ending one month prior to the date of tender. Out of these work at least one work should have been done in Central Govt./state government/Central autonomous bodies/Central public sector undertaking..

B) Factors to be considered to assess similar nature of work.

The similar nature of work shall have the meaning for the works carried out in the HVAC with centralized chiller plants. With AHUs attached with VAV and automatic actuators, BTU meters with VFD controls in the low end of minimum 300TR capacity.

INSTRUCTION TO BIDDERS

1. **VALIDITY OF THE TENDER/QUOTATION**

- 1.1. The Tender/Quotation shall be valid for a period of 90 days from the date of opening of bid.
- 1.2. Extension of Tender validity, if any shall be decided by IITMRP.
- 1.3. Prior to the expiry of the original Tender, IITMRP may request bidders to extend the bid validity period for a specified additional period.

2. **PERFORMANCE SECURITY:**

The successful applicant shall furnish to IITMRP a security in the form of a **Bank Guarantee @ 5% of the accepted value of the Tender** from a scheduled Commercial bank based in India in the format given in Form-B, valid for a period of (24+2) 26 months from the date of start of work which includes, 2 months defect liability period. The Performance Security shall be furnished within the time limit specified.

The performance guarantee should be submitted immediately after issue of letter of award but not later than 10 days of issue of letter of award.

Failure of the successful applicant to submit the required Performance Security by due date, shall constitute sufficient grounds for the annulment of the award of contract.

3. **POINTS TO BE NOTED**

- 3.1. The bidder shall submit a power of attorney authorizing the signatory / (ies) to submit the tender / bid / quotation.
- 3.2. The authorized signatory of the bidder shall sign on each page of the tender / bid/ quotation
- 3.3. Experience should be in the name of the bidding company and not in subsidiary / associate company / Group Company etc.
- 3.4 The tenderer shall not be permitted to tender for works in IITMRP if his near relative is posted as Accountant, or as an officer in any capacity in the grades of all Engineers (All inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him who are near relatives to any officer in IITMRP. Any violation of this by the tenderer would render him liable to be removed from the approved list of tenderers and the tender is liable to be rejected

SCOPE OF WORK

CHILLED WATER AHUs,CSUs.

The scope of work under Scheduled Preventive Maintenance Contract for 'Chilled Water Air Handling Units ' shall cover the following:

A) Attending to break-down calls as and when the same arise. All break-down calls will be responded within 4 hours of lodging of complaint. Break-down calls will be resolved within the following time frames:-

Minor Complaints such as repairs/replacement of electrical contactors, relays, sensors, belts, bearings, blower shaft, water leakages, shall be resolved within 12 hours of lodging of complaint.

In case of motor bearing failure or winding burnout, a replacement motor shall be provided within 6 hours of complaint. The original motor has to be repaired / replaced within 48 hours.

B) Carrying out at least 4 Routine Preventive Maintenance Service, spread out evenly over a period of one year.

A general scope of work under such Service shall include:

Works to be carried out monthly interval.

- 1 General cleaning filters
- 2 Check. Adequacy of flow and temperature of inlet and return water
- 3 Check the settings of VAV, VFDs, actuators connectivity of BTU meters with BMS.
- 4 General checking of working of motors, Fan belt noise level for Vibration etc.

Works to be carried out at Quarterly Interval.

- 1) Checking water inlet and outlet pressures and temperatures – Quarterly.
- 2) Checking for any abnormal noise or vibration – Quarterly.
- 3) Checking foundation bolts of all blowers and motors – Quarterly.
- 4) Carrying out balancing work on blower if there are abnormal vibrations due to imbalance – As required.
- 5) Cleaning of filters – Quarterly.
- 6) Cleaning of Y – Strainers, if the same is provided in the system – Fortnightly.
- 7) Closing and opening of butterfly valves to ensure that they do not rust / malfunction because of lack of operation – Quarterly.
- 8) Checking the position of balancing valve and ensuring the same is as per settings made during balancing work.
- 9) Checking the settings of dampers and ensuring the same is as per settings marked during balancing work.
- 10) Draining of complete water in the , CSUs, FCU, Cassette units, AHUs after closing the isolation valves and flushing once by opening the inlet valve – Yearly.
- 11) Checking for operation of 2way / 3 way valve by varying the set temperature in the thermostat.
- 12) Checking for satisfactory operation of all components of the unit – Quarterly.
- 13) Checking of current drawn by motors – Quarterly.
- 14) Checking for operation of all safety provisions such as fan motor door interlock, tripping of AHU on fire signal, closing of fire dampers at AHU outlet/RA – Quarterly.
- 15) Checking calibration of sensors by observing the resistance values – Half yearly.
- 16) Calibration of all gauges - Yearly

- 17) Cleaning of cooling coils - Quarterly. One of which will be a chemical cleaning.
- 18) Cleaning of blower fan blades – Quarterly.
- 19) Checking and adjusting fan motor belt tension - Quarterly.

Works to be carried out at HALF YEARLY

- 20) Checking of fan pulley alignment – Half yearly.

Works to be carried out at ANNUALLY

- 21) Checking of blower alignment using laser equipment - Yearly
- 22) Lubricating of all parts as specified in the equipment manufacturer's manual – Quarterly.
- 23) Checking of all electrical terminations for any loose connections - Quarterly.
- 24) Cleaning of drain tray – Quarterly.
- 25) Blowing air / nitrogen into drain pipe to remove any organic growth / blockages – Quarterly.
- 26) Replacement of filters – yearly.
- 27) Chemical Cleaning/ compressed air cleaning of coils for any obstructions and cleaning the Surface of coil.

BILL OF QUANTITIES.

Sub Head : Maintenance of AHU,CSU & Cassette Unit.

The campus is provided with AHU, CSU, Cassette units . In order to carry out the works outlined above the vendors are requested to quote the rate on monthly basis. The payment will be made on quarterly basis on completion of work in each quarter.

Item No.	Description	Qty.	unit	Rate in Fig.	Rate in words	Amount
1.	AHU up to 30 TR capacity	50	Per month per AHU			
2	AHU up to 60 TR capacity	7	Per month per AHU			
3	AHU above 60 TR and up to 100 TR	3	Per month per AHU			
4	CSU upto 10 TR	69	Per month per CSU			
5	CSU upto 25 TR	22	Per month per CSU			
6	ACU upto 3TR	20	Per month per ACU			
	TOTAL	171				
	GST					
	GRAND TOTAL PER MONTH					
	COST PER YEAR					

Signature and Address of the vendor