

	<p>Centre for Campus Management &amp; Development <b>Indian Institute of Science</b> Bangalore 560 012, (India) Telephone: 22932202/2203/2008/2765 email: <a href="mailto:office.ccmd@iisc.ac.in">office.ccmd@iisc.ac.in</a></p>	
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### **Expression of Interest**

EoI 1/CCMD/2019-2020

06.01.2020

Expression of Interest is invited from eligible vendors for the Operation and Maintenance of STP-1, STP-II of capacity 0.5MLD each (SMBR Technology) and ETP of capacity 0.1 MLD at Indian Institute of Science, Bangalore campus.

Your EOI should be submitted by **27.01.2020**, 5.30 PM at the office of CCMD.

Detailed scope and Terms and conditions attached at Annexure-I.

Sd/-, Registrar

## Annexure-I

### **A. SCOPE OF THE WORK**

- i. Management, Operation and maintenance of Sewage Treatment Plant-I & II (Submerged Membrane BioReactor Technology) of 0.5MLD capacity each and ETP of 100 KLD capacity in IISc, located at eastern side of the campus (Along new BEL road).
- ii. Management and Maintenance of all the structures, equipment and housekeeping of the premises in the battery limits of the STP-I, STP-II and ETP.
- iii. Supply and provide chemicals that are required for daily chemical dosing of the plant.
- iv. Setting up of a lab for day-to-day analysis of sewage and treated water.
- v. Maintaining Minimum managing staff, appropriately qualified, as per the details given under clause I, Section D, Special Conditions of contract in this document.

## **B. ESSENTIAL REQUIREMENTS OF THE BIDDER COMPANY/FIRM/AGENCY**

- i. The bidder should fulfil the following technical specifications:
- ii. The bidder/ Company/Firm/ Agency should be registered with the appropriate registration authority (labour commissioner, etc.,)
- iii. The bidder/ Company/ Firm/ Agency should have reputation with at-least five years experience in providing similar services to Public Sector Companies/ Banks/ Government Departments/ Research Organizations/ Reputed Private Sector Companies.
- iv. The bidder/ Company/ Firm/ Agency should be registered with Income Tax and Service Tax departments.
- v. The bidder/ Company/ Firm/ Agency should be registered with appropriate authorities under Employees Provident Fund and Employees State Insurance Act.
- vi. Either the Registered Office or one of the Branch Office's of the bidder should be located in Bangalore.
- vii. The bidder/ Company/ Firm/ Agency should have its own Bank Account.
- viii. The bidder/ Company/ Firm/ Agency should have a minimum FINANCIAL turnover during the last five years as specified in schedule A.
- ix. The bidder/ Company/ Firm/ Agency should have trained manpower technically qualified to handle SCADA based systems and operation of SMBR(Submerged Membrane Bio Reactor) technology Sewage Treatment Plant.
- x. The agency should have past experience of at least 3 years in Operation and Maintenance of SMBR technology STP.

### C . BILL OF QUANTITIES

S.no	item	Quantity
1.	Total management, Operation & Maintenance of 0.5 MLD STP-I	24 months
2.	Total management, Operation & Maintenance of 0.5 MLD STP-II	24 months
3.	Total management, Operation & Maintenance of 0.1 MLD ETP	24 months

## **D.SPECIAL CONDITIONS OF CONTRACT**

### **I. Staff Requirement for Management and Maintenance of**

#### **i. STP-I**

- a) Plant Manager (Diploma Holder in Engineering) – Minimum 1
- b) Plant Operator(s) (ITI) (to work in shifts) -Minimum 3(1 per shift)
- c) Reliever Operator-1(Any shift as required)
- d) Electrical/Mechanical Technician(s) -As and when required
- e) Labour/Helper(Semi-Skilled Labour) (to work in shifts)-Minimum 3(1 per shift)

#### **ii. STP-II**

- a) Plant Manager(Diploma Holder in Engineering) – Minimum 1
- b) Plant Operator(s) (ITI) (to work in shifts) -Minimum 3(1 per shift)
- c) Electrical/Mechanical Technician(s) -As and when required
- d) Labour/Helper (Semi-Skilled Labour) (to work in shifts)-Minimum 3(1 per shift)

#### **iii. ETP**

- a) Plant Operator-Minimum 1(General Shift)
- b) Helper-1(General Shift)

### **II. The Sewage Treatment Plant has to be monitored for the following parameters:**

- i. pH
- ii. Total Solids (TS)
- iii. Suspended Solids (SS)
- iv. Total Dissolved Solids (TDS)
- v. Biochemical Oxygen Demand (BOD)
- vi. Chemical Oxygen Demand (COD)
- vii. Dissolved Oxygen (DO)
- viii. Temperature
- ix. Chlorine Demand
- x. Residual Chlorine
- xi. Mixed Liquor Suspended Solids (MLSS)
- xii. Mixed Liquor Volatile Suspended Solids (MLVSS)

xiii. Sludge Volume Index (SVI)

**The Management and Maintenance envisages all the required tasks to ensure**

- i. 24X7 and 365 days availability of plant.
- ii. Most efficient and effective Sewage Treatment.
- iii. Enhance the life expectancy of membrane, pipelines, pumps and other connected equipment.
- iv. Regular maintenance of Membrane, Pumps, Pipes, all structures and equipment in the battery limits of the STP-I, STP-II and ETP
- v. Preventive maintenance/scheduled maintenance.
- vi. Breakdown maintenance.
- vii. Maximum service to Institute community through proper maintenance of Sewage Treatment Plant.
- viii. Maintenance of proper records of maintenance and repairs. (Logbook, registers, check list etc., as approved by IISc).
- ix. Assistance to IISc in up-keep of Plant and improvement measures.
- x. **Taking preventive maintenance such as maintenance of defective lines, pump sets, PLC, membrane and other connected equipment, etc.**

Agency has to maintain a check list for preventive maintenance & upkeep the system accordingly. However, Agency has to prepare a detailed check list covering all the required items and submit for IISc approval before being implemented.

The Management of Sewage Treatment Plant and effluent treatment plant involves deployment of right persons as mentioned above for maintenance and these persons would be responsible for the work contracted for this purpose.

**III. The main jobs will include:**

- i. Operation of Sewage Treatment plant 24 X 7, 365 days.
- ii. Operation of ETP in general shift (9.00 AM to 5.30 PM 365 days)
- iii. Routine maintenance of all equipment connected to the Sewage Treatment Plant.
- iv. Daily chemical dosing as per the requirement of the plant.

- v. Deep cleaning of all processes periodically to ensure design efficiency and performance.
- vi. Filling up of Approved Data Sheets for the different tools, tackles and equipment, raising deficiency reports and communicating to IISc Engineers and maintenance staff.
- vii. Recording all complaints/equipment failures and other events that occur in the order of sequence with the time of occurrence correctly and record them in Logbook.
- viii. Carrying out maintenance correctly and accurately and recording the same in the relevant Logbooks.
- ix. Strictly following maintenance instructions given by the IISc.
- x. Observing all safety precautions and ensure safety to men and material and the equipment during the contract period.
- xi. Attending to all emergencies which may arise during the contract period such as sudden break downs of pumps and other equipment connected to the STP, ETP etc., The maintenance personnel shall get acquainted with the maintenance of all tools and equipment covered under the contract.
- xii. Attending to all complaints pertaining to non-availability of treated water and address the issue promptly.
- xiii. Preparing daily reports and periodic returns in the prescribed format in duplicate and submit to the concerned IISc authority.
- xiv. Assuming responsibility for the tools, equipment & other materials for any damages that occur due to mal operation of equipment and shall make good the loss suffered by IISc.
- xv. To be alert in attending to all maintenance and events promptly without delay.
- xvi. Updating of break downs, registers, Data Books, etc. Apart from the above, the agency shall carry out the checks in the document during the contract period daily.
- xvii. Ensuring routine, preventive and breakdown maintenance works for the Maintenance of Sewage Treatment Plant which involves all the routine.

**V. Co-ordination with IISc Engineers and complaint cell:**

- i. Co-ordination with IISc officials for all related works and giving reports to regarding, information from IISc complaint cell and Co-ordination with Engineers and staffs of IISc in all relevant activities.

## **VI. Terms and Conditions**

- i. All disputes that may arise shall be referred to the Director of IISc, whose decision in this regard shall be final.
- ii. All major faults and problems shall be reported to IISc within half a day of occurrence through a memo. After inspection by IISc, procedures for rectification shall be got approved by the agency.
- iii. Any damage or loss due to failure to carry out prescheduled maintenance work shall be to the risk and cost of the agency.
- iv. Any other work covered under respective terms and conditions, if required or insisted by any regulatory body including hiring of tools & machinery, etc., shall be undertaken by the agency.
- v. The necessary salary and other allowances due to the employees by the agency shall be paid by them and shall strictly comply with all rules and regulations of statutory bodies and other labour laws. All employees engaged by the agency shall be comprehensively insured for accidents and injuries.
- vi. The monthly service charges for the above work shall be paid to the agency on monthly basis on production of bill.
- vii. The payment to the successful agency is subject to all statutory deduction like Security Deposit, Income Tax, Tax, etc., as are applicable at the time of payment.
- viii. All materials and tools used for replacement, repairs, testing, etc., shall be approved by IISc.
- ix. The annual service maintenance of the equipment's shall be carried out as applicable from time to time. The work shall be carried out through authorized personnel. The service charges shall be paid by the agency.
- x. The agency shall note that they shall have to carry out their work in close co-ordination with other contractors/agencies working in the same premises.
- xi. In the event of agency showing lack of attendance to the work, negligence or unfair performance in the opinion of IISc, then the contract may be terminated at any stage without prejudice to the right by action under any other relevant clause of the contract.
- xii. The agency shall follow all security rules framed by IISc from time to time regarding removal of materials from site, issue of identity cards, control of entry of persons and other similar matters.



- xiii. The agency's personnel shall not disclose any information or drawings furnished to him by IISc. Any drawings, records and other information's prepared by the contractor or by IISc or jointly by both for the execution of the works shall not be disclosed without the prior approval of the IISc. No photograph of the Pumping station, treatment plant or any other place within the premises of IISc shall be taken without the prior approval of the IISc.
- xiv. The agency shall keep his work spot, site office and surroundings neat, clean and tidy. It should be free from dust, rubbish, scrap, surplus materials and unwanted tools and equipment's. All scaffolding and temporary structure including the tools and equipment's shall be removed as soon as the job for which they are intended are completed. All equipment and material to be taken inside the plant building shall be cleaned thoroughly before taking them inside. The agency shall employ adequate housekeeping staff for above purpose. The Engineer-in-charge has the right to stop the work, if the agency fails to improve upon the house keeping after having been notified.
- xv. IISc will have the right to withdraw the works permit for any of the workmen for reasons of misconduct, incompetence in work, violation of safety and fire rules, negligence on duty etc.
- xvi. Cost of damages caused due to bad workmanship shall be recovered from the agency.
- xvii. The knowledge/Information of availability of manpower on daily basis shall be the responsibility of agency and not of IISc. Agency should ensure availability of their representative throughout the contract period who shall be responsible for manpower availability and their record keeping.
- xviii. The agency shall depute competent staff to ensure round-the clock maintenance services on all days in a Month as per requirement.
- xix. Agency will have to issue uniform and personal protection equipment (PPE) to all staff employed for maintain these plants. Periodic safety audit to be conducted by the agency and records to be maintained regularly. These should be produced for scrutiny by inspecting officers from safety of IISc or SPCB authorities.
- xx. The duration of the contract is 24 months.
- xxi. Agency is fully responsible for any losses/damages caused to the personnel deployed, plant, equipment and buildings with in the battery limits of the plant.

## **VII. Documents To be submitted along with EOI:**

- i. Details of turnover of last five financial year certified by Chartered Account (2018-19,2017-18,2016-17,2015-16,2014-15).
- ii. Works Completion Certificates related to similar work (O & M of SMBR technology STPs) issued by customers / clients.
- iii. E.P.F registration (Attested copy).
- iv. E.S.I registration (Attested copy).
- v. Labour Registration no (Attested copy)
- vi. GST registration no. (Attested Copy)
- vii. PAN/GIR/TIN No. (Attested copy)

**EOI with all enclosures should be emailed to [office.ccmd@iisc.ac.in](mailto:office.ccmd@iisc.ac.in) or posted to the Office of the Project Engineer-cum-Estate Officer, CCMD, Indian Institute of Science, Sir CV Raman Road, Bengalure-560 012 on or before 5.30 pm on 27th of Jan 2020. Late submissions will not be considered.**

**IISc reserves the right to reject any/or all the EOI's without assigning any reasons whatsoever.**