



REQUEST FOR PROPOSAL

Expression of Interest (EOI) and Request for Proposal (RFP) for Turnkey Execution of a 15 MLD Modular Sewage Treatment Plant (STP)” at Mathura, Uttar Pradesh under the cGanga Environment and Technology Verification (ETV) Programme



OCTOBER 10, 2024

Indian Institute of Technology, Kanpur

REQUEST FOR PROPOSAL (RFP)

Expression of Interest (EOI) and Request for Proposal (RFP) for Turnkey Execution of a 15 MLD Modular Sewage Treatment Plant (STP) at Mathura, Uttar Pradesh under the cGanga Environment and Technology Verification (ETV) Programme

No. CGANGA/IITK/2024-25/02

The bid forms and other details may be downloaded from Central Public Procurement Portal (<http://eprocure.gov.in/eprocure/app>). Aspiring bidders who have not enrolled / registered in e-procurement should enroll / register themselves before participating through web site <http://eprocure.gov.in/eprocure/app>. The portal enrolment is free of cost. Bidders are advised to go through instructions provided at "Instructions for online bid submission."

Bidders can access quotation / tender documents on the website (for searching in the NIC site), kindly go to quotation search option and type 'IIT'. Thereafter, click on "GO" button to view all IIT quotations. Select the appropriate quotation / tender and fill them with all relevant information and submit the completed Quotation / Tender document online on the website <http://eprocure.gov.in/eprocure/app> as per the schedule given in the next page.

Note: No manual bids will be accepted. All bids (both Technical & Financial) should be submitted on the e-procurement portal.

Applicants are advised to keep visiting the above-mentioned websites from time to time (till the deadline for bid submission) for any updates in respect of the tender documents, if any. Failure to do so shall not absolve the applicant of his liabilities to submit the applications complete in all respect including updates thereof, if any. An incomplete application may be liable for rejection.

Head

Centre for Ganga River Basin Management & Studies (cGanga)
Indian Institute of Technology. Kanpur
IIT Kanpur Campus-208016, India

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IMPORTANT INFORMATION:

The Head, Centre for Ganga River Basin Management and Studies, IIT Kanpur is requesting for proposal from eligible and competent experienced agencies for **“Expression of Interest (EOI) and Request for Proposal (RFP) for Turnkey Execution of a 15 MLD Modular Sewage Treatment Plant (STP)”** at Mathura, Uttar Pradesh under the **cGanga Environment and Technology Verification (ETV) Programme**

The single point of contact (SPOC) for this solicitation is:

**Project Management Cell, cGanga
Environmental Engineering Laboratory
116 Western Laboratories (WL-116),
IIT Kanpur Campus, Kanpur – 208016, UP**

Email Id: pmc@cganga.org

Questions about this RFP must be submitted via e-mail pmc@cganga.org. No additional questions will be entertained after due date. A response addendum listing all question received and their responses will be posted on web site www.eprocure.gov.in/eprocure/app.

TARGET SCHEDULE OF EVENTS:

EVENT	DATE
Issue of RFP document	10.10.2024
Start date of downloading	10.10.2024
Last date of submission of bid	04.11.2024 up to 4.00 PM
Date of Pre-bid meeting along with site visit	17.10.2024 at 3.00 PM
Date of opening of technical bid	05.11.2024 at 4.30 PM
Date of opening of financial bid	08.11.2024 at 02.00 PM
Venue of Pre-bid meeting	Instruction Room, Environmental Engineering Laboratory, 116 Western Laboratories (WL – 116), IIT Kanpur Campus, Kanpur – 208016, UP
RFP Questions responses	21.10.2024 up to 5.00 PM
Technical Presentation by qualified bidders	Date and time shall be informed
Estimated Cost	Rs. 30,00,00,000.00 (Approx.) / Rs. 30 crores (approximately) exclusive of GST
Earnest Money Deposit	Rs 4,000,000.00 (Rs. Forty lakhs – The EMD shall be in the shape of FDR/ Bank Guarantee from the National Scheduled Bank. The scan copy of the same shall be attached along with the technical bid and original FDR shall be submitted to the office of the “Project

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EVENT	DATE
	<p>Management Cell, Centre for Ganga River Basin Management & Studies (cGanga), Environmental Engineering Laboratory, 116 Western Laboratories (WL – 116), IIT Kanpur, IIT Kanpur Campus-208016, India) on 28.10.2024 up to 5.00 PM</p>
Processing fee	<p>Rs. 40,000/- for non MSME / NSIC / Startup Rs. 10,000/- having MSME/NSIC/Startup Registration (The scan copy of the transaction slip (proof of payment of processing fee) shall be attached along with technical bid, without which the bid shall not be opened.</p>
Details of Institute Account for submitting processing fees	<p>Bank Name: SBI IIT Kanpur Beneficiary Name: The Registrar IIT Kanpur A/c No. 30632766814 IFSC Code: SBIN0001161</p>
Performance Guarantee	<p>5.00% of tender amount (in the form of FDR / Bank Guarantee) in favour of “The Director, IIT, Kanpur” shall be submitted after the award of the work. The Performance Guarantee shall be released after the completion of the work.</p>
Security Deposit	<p>2.5 % of the tendered amount shall be deducted from the running bills. This shall be released after the satisfactory completion of defect liability period of three years.</p> <p>Refund profile shall be: 0% after 1 year of commissioning 1% after 2nd year of commissioning 1.5% after 3rd year of commissioning</p>
Refund of Earnest Money Deposit	<p>The winner will receive it after acceptance of the work order. All others will receive EMD within 15 days of opening of financial bids</p>

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1. Background Information

The Centre for Ganga River Basin Management and Studies (cGanga) at IIT Kanpur, runs the Environment & Technology Verification (ETV) programme that provides a commercial pathway for novel and noble solutions. The core purpose of the ETV programme is to establish the First of a Kind (FOAK) commercial scale demonstration project.

Under this initiative, the National Mission for Clean Ganga (NMCG), Ministry of Jal Shakti, Government of India has mandated cGanga to initiate turnkey execution of a 15 MLD modular sewage treatment plant (STP) at Mathura, Uttar Pradesh.

2. Scope of Services

The scope of work involves the comprehensive turnkey project for the design, construction, erection, testing, installation, commissioning and operations & maintenance of a 15 MLD modular sewage treatment plant (STP) at Mathura, Uttar Pradesh.

3. Technology Specification

The bidders should deploy technology that meets the following criteria:

- Must be modular in 2.5MLD capacity and multiples thereof.
- The land footprint should not be more than 150 sqm per MLD capacity.
- Installation time for a capacity of 5 MLD should not be more than 8 weeks from the date of award of the contract including civil works.
- Power consumption should not be more than 150kWh / ML
- Quality of water to be delivered at the outlet should have the following specification:
 - o Odour – none
 - o Colour < 5 on Co-Pt scale
 - o DO > 3 mg/L
 - o TSS < 5 mg/L
 - o BOD < 5 mg/L
 - o COD < 50 mg/L
 - o NH₄N < 5 mg/L
 - o TKN-N < 10 mg/L
 - o Phosphorous-P < 2 mg/L
 - o pH: 6.5-8.5
 - o Faecal coliform < 100
- The technology should be able to handle varying flow rates as well as varying Total and Volatile Suspended Solids, biochemical oxygen demand (BOD), chemical oxygen demand (COD), volatile organic compounds (VOC), Ammoniacal Nitrogen, Total Kjehldal Nitrogen, Total Phosphate & Oil & Grease loads as per inlet wastewater quality. For reference, range of some inlet parameters estimated during 2023-24 are given in the following Table.

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Table 1: Range of Some Inlet Parameters Estimated based on Samples Taken Every Month During 2023-24

S No	Parameters	Minimum	Maximum
1	pH	7.0	8.0
2	Colour	50	150
3	Total Suspended Solids, mg/L	200	1250
4	Volatile Suspended Solid, mg/L	150	300
5	Total Dissolved Solids, mg/L	1000	2500
6	Oil & Grease, mg/L	5	50
7	DO, mg/L	0	1
8	Biochemical Oxygen Demand, mg/L	25	300
9	Chemical Oxygen Demand, mg/L	400	1200
10	Ammoniacal Nitrogen as (NH ₃ -N), mg/L	5	20
11	Total Nitrogen, mg/L	25	50
12	Phosphate (PO ₄), mg/L	5	90
13	Faecal Coliform,	1.50E+05	3.50E+06
14	Total Coliform	3.00E+05	6.00E+06
15	Iron, mg/L	0.5	3.0
16	Aluminium, mg/L	0.2	1.0

4. Schedule for completing the assignment

The time for completing the assignment is as follows:

- First 5 million litres per day (MLD) capacity commissioned by 31 December 2024
- Additional 5 million litres per day (MLD) capacity commissioned by 31 January 2025
- Additional 5 million litres per day (MLD) capacity commissioned by 28 February 2025

5. Eligibility criteria (minimum) requirement of specialized agencies and kind of expertise (Envelope -1)

The bidder should have the team of expert's agencies and supporting professionals as follows:

- 5.1. The lead agency must have an agreement with the qualifying technology provider. The agreement should be on a stamp paper and be signed on a date prior to the date of bid submission.
- 5.2. The technology provider must provide the following:
 - 5.2.1. Inspection of manufacturing facilities in India of all critical components including storage, biotechnology and bioreactors.
 - 5.2.2. Statement of which components are made in India including names and addresses of all suppliers.
 - 5.2.3. State of proprietary nature of the technology. If proprietary, then submit an affidavit with the details of the Intellectual Property ownership structure. If IP is held within a company, then it must be signed by at least two directors/shareholders who have majority or significant minority stakes. If only a single director/shareholder, then his/her signature on the affidavit will suffice.

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- 5.2.4. Toxicology report of biotechnology, issued by an accredited national institute or a laboratory, to be submitted within 30 days from the date of acceptance of the work order.
- 5.2.5. Affidavit of adequate supply of biotechnology during the duration of the life of the plant. This must bear the signatures of an officer of a lead bidder and 1 Director representing the technology supplier.
- 5.3. The average financial turnover of the bidder for the last 3 financial year should be certified by Chartered Accountant & should be minimum 15 Cr. Lower average turnover of up to Rs.10 Cr will be allowed provided that if such bidder is successful, he will have to furnish an additional BG for shortfall of up to Rs.5 Cr as additional security after award of the contract.

Details to be furnished duly supported by figures in balance sheet/ profit & loss account for the last three financial years duly certified by the Chartered Accountant, as submitted by the applicant to the Income Tax Department (Copies to be attached).

Financial Years	2021-22	2022-23	2023-24
Gross Annual turnover			
Profit/Loss			

- 5.4. Solvency Certificate: 40% of the estimated cost put to tender as per following format. Lower solvency certificate of up to 20% will be allowed provided that if such bidder is successful, he will have to furnish an additional BG for shortfall of up to 20% as additional security after award of the contract.

FORM OF BANKERS' CERTIFICATE FROM A SCHEDULED BANK

This is to certify that to the best of our knowledge and information that M/S having marginally noted address, a customer of our bank are/is respectable and can be treated as good for any engagement up to a limit of Rs..... (Rupees.....). This certificate is issued without any guarantee or responsibility from the bank or any of the officers.

(Signature) For the Bank)

- 5.5. The bidder(s) in their own name or as a member of a Joint Venture should have satisfactorily executed the work as follows of a similar nature during the last seven (7) years ending the last day of month previous to the one in which bids are invited.
- Three similar ongoing or completed works each of value no less than the value equal to Rs. 10 crores {approximately 30% of estimated capex} or
- Two similar ongoing or completed works each of value no less than the value equal to Rs. 12 crore {approximately 40% of estimated capex} or
- One similar ongoing or completed work each of value no less than the value equal

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to Rs. 15 crore {approximately 50% of estimated capex} or

The value of completed works shall be brought to current costing level by enhancing the actual value of work at compound rate of 10% per annum; calculated from the date of completion of last date of receipt of applications for tenders. In case of ongoing works to be considered, the bidder must have received payment bills of 50% of the contract sum for the work / works executed on the last day of month before the one in which bids are invited. The documentary evidence shall be provided to ascertain the receipt of payment bills of 50% of the contract sum.

Similar Experience: For assessing the technical capacity of bidder, similar work shall mean, the completed or ongoing works of Construction of Water or Wastewater flow management or pumping station or/and operations & Maintenance of such pumping station for minimum 1 year of flow capacity of minimum 15MLD

- 5.6. The bidder should have uploaded a scan copy of Earnest Money Deposit.
- 5.7. The bidder should have uploaded a scan copy of proof of payment of the processing fee.
- 5.8. The bidder should have uploaded a scan copy of the details required as per Annexure-C.
- 5.9. The bidders are requested to download the Integrity pack and upload the same dully signed with date and seal.

6. Integrity Pact:

The contractor shall download the Integrity Pact, which is a part of tender documents, affix his signature in the presence of a witness, and upload the scan copy of the same while submitting online bids. The successful bidder has to submit the Integrity pact on Non judicial stamp paper of Rs, 100/- with duly signed in hard copy before award of the work.

7. General Services

- 7.1. All reports, drawings, 3D visual renderings, presentations and other documents to be submitted in fulfilment of the scope of services shall be in 1 set each of printed copies and soft copies in the formats and scales as required for the fulfilment of the scope.
- 7.2. All documents, drawings, reports and any other documents submitted in fulfilment of the scope of services shall be prepared with the best practices and codes applicable to such development.
- 7.3. The solution and services must comply with all environmental regulatory norms and standards.
- 7.4. The contractor shall be responsible for rechecking all the engineering drawings and O&M services plans and reports, if any, provided by the cGanga, IIT Kanpur to ensure that the ground conditions match with the plans and reports. In case no such reports

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are provided the contractor shall ascertain all conditions itself and get these validated/approved from cGanga, IIT Kanpur.

7.5. The lead contractor shall maintain organizational/governance structure, between the various agencies to the satisfaction of the cGanga, IIT Kanpur, to ensure effective completion of the work within the scope of services of various agencies.

7.6. The contractor shall be required to participate in all meetings as and when sought by cGanga, IIT Kanpur. The status/designation/qualifications of the representative(s) who will be allowed to deal/interact with cGanga IIT Kanpur and/or its representatives shall be a matter of discretion of cGanga IIT Kanpur; and the decision of cGanga, IIT Kanpur in this regard shall be final and binding on the contractor.

8. Background material, data, reports and so on, available and to be provided to the Contractor:

The data, plans, materials, reports, survey-reports etc. required to fulfil the scope of work which are available with the IIT Kanpur shall be provided to the contractor. It will be the responsibility of the appointed Contractor to verify it on the ground.

9. Facilities such as local conveyance, office space (storage space), office machines, secretarial assistance, utilities, local services, etc., which would be provided to the contractor by the procuring entity:

Nothing shall be provided by the IIT Kanpur. The contractor must arrange at its own cost for proper completion of the work.

10. Institutional and organizational arrangement:

The Head, Centre for Ganga River Basin Management and Studies (cGanga), IIT Kanpur and its nominated officers shall administer the contract.

11. Procedure for review of the work of contractor after award of contract:

The work shall be reviewed by the Head, Centre for Ganga River Basin Management and Studies (cGanga), IIT Kanpur and their authorised representatives.

12. Contact Information:

Head

Centre for Ganga River Basin Management & Studies (cGanga)

Indian Institute of Technology. Kanpur

IIT Kanpur Campus-208016, India

13. Please note:

13.1. Incorrect, incomplete, inadequate information may lead to rejection of the

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application. Canvassing in any form may lead to summary rejection of application.

- 13.2. Applicants shall submit self-attested copies of certificates, work orders, appointment letters, agreements, references etc. as proof of eligibility.
- 13.3. The Head, Centre for Ganga River Basin Management and Studies (cGanga), IIT Kanpur reserves the right to reject any application without disclosing the reasons.
- 13.4. The Head, Centre for Ganga River Basin Management and Studies (cGanga), IIT Kanpur also will not provide any explanation to the applicants related to the short listing and selection process. The decision of the Head, Centre for Ganga River Basin Management and Studies (cGanga), IIT Kanpur in this respect shall be final and binding on all applicants.
- 13.5. Information contained in this document reflects various assumptions and assessments based on current understanding of the cGanga, IIT Kanpur. These don't necessarily contain all the information that each bidder may require to develop and submit technical and financial proposals.
- 13.6. Bidders are required to make their own assessment and satisfy themselves fully with all aspects of the site conditions, local environment, functional requirements that may be required for development of the design and its execution.

14. Schedule of Fees:

- 14.1. All prices as quoted and agreed under Contract, whether lumpsum or percentage, shall remain fixed for the define scope of work in the excepted technical bid excluding GST.
- 14.2. The quoted prices shall be inclusive of all expenses relating to the performance of the contract for the entire period of the contract.
- 14.3. Deductions because of Income tax and the statutory provisions shall be made by IIT Kanpur, upon payment of work done or any other payments whatsoever to the contractor, as per prevalent rules/provisions.
- 14.4. All payments made by cGanga, IIT Kanpur towards the contract for any purpose whatsoever shall be in Indian rupees only.
- 14.5. Schedule of payment shall be as per the attached Annexure B.

15. Requirements for proposals for selection process

Bidders shall submit their proposals in response to the RFP through only online mode as per tender, no physical copy (Technical or Financial) is accepted. Any violation tends to disqualify the tender

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15.1. Technical Proposal

The technical proposal should demonstrate that the proposer has developed an understanding of the work and cGanga, IIT Kanpur's requirement with reference to the scope of work mentioned in Annexure A.

The bidder must submit the engineering designs and drawings etc. required to complete the scope of work for the STP.

The design should suitably explain the details of the technology, its operations and maintenance plans for the scope of services.

The bidders shall submit a Power-point presentation including the entire contents of the technical proposal in a USB Drive along with the submission package for the technical proposal. All drawings, designs and layouts must be submitted in (.dwg) and (.pdf) format.

The evaluation of bidders shall be based on the response of RFP and presentation before the committee (jury). It will follow a two-tier system, with separate evaluation of technical capability and financial bid. A merit list shall be prepared for the technical score. The financial bid of the top three scorers shall be opened. The work will be awarded based on QCBS - Quality Cum cost Based Selection; i.e. 70% weightage for Technical + 30% weightage for Financial.

The technical proposal should include:

- A brief introduction of lead firm
- List of similar projects undertaken with their completion certificate
- Collaboration agreement with the technology partner
- Name and details of all equipment suppliers.
- BOQ and BOM of all materials.
- Project implementation plan in Gantt chart
- Work plan for the entire scope of work
- Turnover of the lead contractor in the last three financial years
- Furthermore, the technology provider should provide:
 - Inspection of manufacturing facilities of all critical components including storage, biotechnology and bioreactors.
 - Statement of which components are made in India including names and addresses of all suppliers.
 - State of proprietary nature of the technology. If proprietary, then submit an affidavit with the details of the Intellectual Property ownership structure. If IP is held within a company, then it must be signed by at least two directors/shareholders who have majority or significant minority stakes. If only a single director/shareholder, his/her signature on the affidavit will suffice.

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- Toxicology report of biotechnology, issued by an accredited national institute or a laboratory, to be submitted within 30 days from the date of issuance of work order.
- Affidavit of adequate supply of biotechnology during the duration of the life of the plant. This must bear the signatures of an officer of a lead bidder and 1 Director representing the technology supplier.

15.1.1. Evaluation of technical proposal:

The bidder will be expected to make a presentation to the committee (constituted by cGanga, IIT Kanpur). The technical proposal would be evaluated by the committee on the following parameters:

- Lead contractor firm's specific experience
- Methodology
 - Savings on land
 - Time to construct
 - Conforming to treatment norms
 - Environmental norms
- Approach to risk management, quality of work and social impact delivered.
- Key professionals and associates proposed to be associated for the project with their experience and details.

Each bidder will be allowed maximum 20 minutes for the presentation followed by up to 10 minutes for further interaction with the committee.

15.2. Financial proposal

The bidders must submit the complete financial proposal in all respects in the envelope -2 i.e. Financial Bid. The lowest bidder must provide the cost wise breakup details as per Annexure-C before the award of the work.

16. Evaluation of proposal

To review and evaluate the technical proposals submitted by the bidder, cGanga, IIT Kanpur will constitute a committee.

Each proposal shall be awarded a Technical Score (TS). The points commensurate to the evaluation criteria are:

Evaluation Criteria (Technical proposal)		Max. Points
i)	Lead Bidding Firm's specific experience	15
ii)	Methodology	15
	a. Savings on land	15
	b. Time to construct	15

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	c. Conforming to treatment norms d. Environmental norms	15
iii)	Approach to risk management, quality of works and social impact delivered	15
iv)	Key professionals and associates proposed to be associated for the project with their experience and details.	10

{QCBS - Quality Cum cost Based Selection; i.e. 70% weightage for Technical + 30% weightage for Financial; a sample of calculation will be provided if asked by the bidder}

Based on the above evaluation criteria, the committee shall evaluate the detailed technical proposals and list them in order of merit.

The discretion and decision of the committee in respect of the Technical Score (TS) shall be final and binding on all without any right to appeal.

The Technical Score (TS) of the applicants shall be announced before opening of financial bids.

The financial proposals of technically qualified contractors shall be opened. The bidders are requested to download the Integrity pack and upload the same dully signed with date and seal. The lowest bidder must submit the hard copy of the integrity pack on the Non judicial stamp of Rs. 100/- before the award of the work.

After opening the financial proposals, the work will be awarded to the lowest bidder.

17. Award of Contract

- 16.1 The lowest bidder must deposit the **Performance Guarantee 5% of the tender amount in the form of FDR/ Bank Guarantee from the National Scheduled Bank in favour of The Director, IIT, Kanpur.**
- 16.2 The selection, as mentioned above, does not, in any way, automatically confer any right, whatsoever, on any bidder for an award of work.
- 16.3 The Head of Centre for Ganga River Basin Management and Studies (cGanga), IIT Kanpur reserves the right to award whole of the work to any other shortlisted bidder or its constituents or its contractors or sub-contractors as it may deem fit.
- 16.4 The Head, Centre for Ganga River Basin Management and Studies (cGanga), IIT Kanpur will inform the contractor through a 'Letter of Acceptance of offer' by email/letter that it has been selected.
- 16.5 The contractor shall, thereafter, sign the contract agreement within 15 days of the issue of such a letter.
- 16.6 The technical proposal submitted by the successful applicant shall not be deemed to be the final design proposal. The contractor must meet and discuss with authorized representative of cGanga, IIT Kanpur and prepare the final design as per the requirement of the cGanga IIT Kanpur.

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18. General Conditions

- 17.1 Each proposal, whether layouts or services system or policy or any other, must be duly supported by clearly referenced data presented in a logical and quantifiable format.
- 17.2 All proposals must be based on clearly referenced best practices and technologies, and must respect clearly identified and listed local constraints, resources and skills.
- 17.3 The Head, Centre for Ganga River Basin Management and Studies (cGanga), IIT Kanpur reserves the right to seek more details regarding the proof of qualifications, experience and capabilities of the key personnel/associated firms.
- 17.4 The Head, Centre for Ganga River Basin Management and Studies (cGanga), IIT Kanpur reserves the right to issue corrigenda and addenda to this RFP document which shall be binding on all bidders.
- 17.5 The Head of Centre for Ganga River Basin Management and Studies (cGanga), IIT Kanpur reserves the right to amend, alter, modify, add and/or delete in part or full any requirements or terms and conditions contained in the RFP document at any other time during the selection process, which shall be binding on all bidders.
- 17.6 All dates, place and time are subject to change and the latest information and clarifications, if any, shall be communicated to the bidders through the website.
- 17.7 The documents, and other information provided by cGanga, IIT Kanpur or submitted by the bidders to The Head, Centre for Ganga River Basin Management and Studies (cGanga), IIT Kanpur shall remain or become the property of the Head, Centre for Ganga River Basin Management and Studies (cGanga), IIT Kanpur.
- 17.8 All intellectual property rights of the scheme and proposals submitted during the process of selection; and for which any prize money/award/reward has been accepted by any bidder, shall rest with the Head, Centre for Ganga River Basin Management and Studies (cGanga), IIT Kanpur.
- 17.9 No explanation and/or justification in any aspect relating to the selection process shall be given, and the decision of the Head, Centre for Ganga River Basin Management and Studies (cGanga), IIT Kanpur shall be final and binding on all without any right to appeal.
- 17.10 The Head, Centre for Ganga River Basin Management and Studies (cGanga), IIT Kanpur reserves the right to debar the bidder/terminate the agreement with the final bidder selected for award of work, at any period of time, should any of the document/certificates as submitted be found to be fabricated or false, or a material misrepresentation is made or discovered, or the bidder does not provide the requisite information as required by the Head, Centre for Ganga River Basin Management and Studies (cGanga), IIT Kanpur within the stipulated period.

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- 17.11 All provisions in this document are supplementary and complementary to each other and are not to be read in isolation.
- 17.12 The bidders are advised to sign with date & seal all pages of the tender document as well as other required documents shall be uploaded on the www.eprocure.gov.in/eprocure/app.

Scope of Services/ Works

Part A: For EPC and Supply, Installation, Testing and Commissioning of STP services

1. To design a modular 15 MLD Sewage Treatment Plant in 5 MLD capacities
2. The bidder is expected to provide a turnkey solution for the design, construction, erection, installation, commissioning, and operation/maintenance of the FOAK STP, utilizing technology with the following characteristics:
 - a. Must be modular in 2.5 MLD capacities and multiples thereof.
 - b. Must not use land more than 150 sq. mts per MLD
 - c. Installation time for a single module should not be more than 8 weeks including civil works.
 - d. Implementation schedule for the entire system should not be more than 12 weeks for technology excluding civil work.
 - e. Power consumption for the system should be comparable to if not lower than existing technology solutions of similar nature.
3. The technology should use advanced bio-engineering principles such as
 - a. deep-shaft process between 4-6 metres
 - b. high oxygen diffusion rates
 - c. low-retention rates
 - d. ability to handle VOCs
 - e. adapt to low and high BOD/COD loads
 - f. cope with variations in salinity, oil and grease content, and nutrients.
4. Quality of water delivered
 - a. Odour – none
 - b. Colour < 5 on Co-Pt scale
 - c. DO > 3 mg/L
 - d. TSS < 5 mg/L
 - e. BOD < 5 mg/L
 - f. COD < 50 mg/L
 - g. NH₄-N < 5 mg/L
 - h. TKN-N < 10 mg/L
 - i. Phosphorous-P < 2 mg/L
 - j. pH 6.5-8.5
 - k. Faecal coliform < 100/ mL

Part B: Operations and Maintenance

Operation and maintenance of the entire 15 MLD plant with outlet parameters mentioned at 4 above. The delivery of the quantity of treated water shall not be less 12 MLD or 80% of the incoming wastewater quantity. All consumables, and supplies needed, test reports from approved laboratories and required human resources during the operation and maintenance period shall be provided by the contractor.

Schedule of Payment

For EPC and Supply, Installation, Testing and Commissioning of STP services

1. Mobilisation advance of 15% can be released.
2. Thereafter payments shall be made as per the following schedule
 - i. 25% on successful commissioning of the first 5 MLD
 - ii. 25% on successful commissioning of the second 5 MLD
 - iii. 25% on successful commissioning of the third 5 MLD
 - iv. 10% on successful operations for 6 months

For O&M Services

3. All payments will be released on the submission of the RA (running account) bills of work done at the site on a percentage basis.
4. The Contractor must submit the Performa RA bill in duplicate of the work done every month latest by the 5th day of the next month.
5. The Head, Centre for Ganga River Basin Management and Studies (cGanga)m IIT Kanpur will take five working days to verify the bill from site and issue an approved copy of the bill after any variation/ deduction withheld amount etc. to the Contractor.
6. The Contractor will issue a GST invoice of work contract of exact amount of bill duly approved to the Project Management Cell, cGanga,. IIT Kanpur within the next two days.
7. On submission of the GST invoice, the Head, cGanga, IIT Kanpur will release the payment within five working days.
8. On each RA bill, 2.5% retention money will be deducted from the basic value of work done.
9. Applicable TDS will be deducted from each RA bill.

Notes for O&M Services

The bidder shall quote annual O&M prices for treatment of threshold/quality, sewage flow rate after commencement of the Operations Period. The O& M tenure may be extended for another 4 years on the basis of satisfactory performance.

These prices should include costs of skilled and unskilled manpower, establishment, consumables, energy consumption, replacements, routine maintenance and periodic maintenance of the STP in compliance with the provisions of the Contract, etc.

While quoting O&M prices, the bidder shall assume that full requirements of power for operating the STP shall be met by supply from the Electricity Utility Company throughout the

O&M period. The actual Payment of O&M price to the Operator shall, however, be based on the actual quantities of sewage handled by the STP, subject to the condition that the price quoted for the Threshold Flow shall be the base (minimum) price which shall not be subject to adjustment in case actual sewage flow falls short of the Threshold Sewage Flow.

The Payment of O&M price shall also be subject to adjustment to compensate the Operator for the extra cost on account of Diesel consumption incurred by the Operator for using the power supply from the back-up power supply unit (DG set) when power from the Electricity Utility Company is not available.

The bidder is advised to refer to Terms and Procedure of Payment.

Additional O&M Prices for treatment of sewage flow in excess of Threshold/Quality Sewage Flow on a per MLD basis for each of the 15 years after commencement of Operations Period will be admissible and shall include all the fixed and variable costs such as costs of consumables, chemicals, energy consumption, etc. for treatment of the additional sewage flow in compliance with the provisions of the Contract.

Penalties and Liquidated Damages

Contractor shall pay liquidated damages to the cGanga, IIT Kanpur, at the rate per week or part thereof for the period that the Completion Date is later than the Intended Completion Date. Liquidated damages at the same rates shall be withheld if the Contractor fails to achieve the milestones prescribed in the Contract Data. However, in case the Contractor achieves the next milestone, the amount of the liquidated damages already withheld shall be restored to the Contractor by adjustment in the next payment certificate. The Head, CGanga, IIT Kanpur may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's other liabilities.

Liquidated damages for failure to comply with time for completion shall be calculated as follows

1. 0.5% of contract Price of respective milestone per week or part thereof for delay
2. Maximum limit of liquidity damages for delay will be 10% of contract price

Annexure C

Financial Bid format, The values are to be provided in Financial bid (This format is for reference only).

Our quotation for the scope of services described in the RFP/EOI are as follows:

A. BOQ/BOM

S. No	Name of Item	Unit Cost	Quantity	Total
1.	Individual Components (BOQ and BOM)	Lumpsum	Number	Lumpsum
2.				
3.				
Total				

B. EPC Services

S. No	Name of Service	Cost
1	Construction services	
2	Supply of parts including transportation	
3	Testing & Commissioning	
Total		

C. Operations and Maintenance Services (per month basis)

S. No	Name of Service	Unit Cost	Quantity	Total
1.	Consumables	Lumpsum	Number	Lumpsum
2.	Manpower			
3.	Power (energy consumption)			
4.	Testing services			
5.	Sludge removal services			
	Others..			
Total				

Notes: Annual O & M Prices of STP, for treatment of Threshold Sewage Flow indicated in the RFP,

GST: The GST as applicable shall be paid extra. All other taxes, duties, levies, transportation, insurance etc. should be include in the quoted amount.

The undersigned is fully authorised by M/s_____ (Name of the Organisation) to submit this Financial Proposal.

Thank you.

Yours sincerely,

Signature of lead Contractor / Authorized Representative of the Organization

Seal of the Organisation,

Date:

Place:

Our GST No. is _____