



**INSTITUTE WORKS DEPARTMENT
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE
ROORKEE - 247 667, UTTARAKHAND, INDIA**

No: IWD/DI/25-26/corri/55

Date: 06.07.26

Name of Work: "Design, Supply, Installation, Testing and Commissioning of 2 TPD capacity Bio-methanation Plant for IIT Roorkee campus".

Ref: IWD/DI/26-27/RT2/E-12 Dated: 13 June, 2026, Tender ID: 2026_IITR_912948_1

The above referred NIT is amended as follows:

S.no	As per NIT clause			Amended As		
1	Critical Data Sheet			Critical Data Sheet		
	Sr. No.	Name of Organization	Indian Institute of Technology Roorkee	Sr. No.	Name of Organization	Indian Institute of Technology Roorkee
	11	Bid Submission Closing Date	06.07.2026 (13:00 Hrs.)	11	Bid Submission Closing Date	15.07.2026 (13:00 Hrs.)
	12	Bid Opening Date	07.07.2026 (13:00 Hrs.)	12	Bid Opening Date	16.07.2026 (13:00 Hrs.)

All the other Terms & Conditions will remain same. In case of any further clarification, please contact the following officers:

1. Shri Neeraj, Asst. Executive Engineer (E)

Tel.: 01332-285386 Email: neeraj.aee2018@iitr.ac.in


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Details of clarifications			
Sr. No.	Tender Section	Query	Clarification
1	GTP - Background	What is the expected composition of organic waste available daily? Please provide detailed waste characterization data (food waste, horticulture waste, canteen waste, moisture %, TS %, VS %, etc.).	Food waste and canteen waste shall be there but no horticulture waste such as leaves, grass, shrubs etc. As it is a design based tender so the survey is in bidders scope.
2	GTP - Background	Is waste segregation at source already implemented by IIT Roorkee, or is segregation entirely the bidder's scope at the plant (as per the Waste Segregation Shed in BOM)?	Segregated biodegradable waste (approx. 90% segregated) shall be provided by IWD. It will be done sanitation section of IWD.
3	GTP - Background	The waste composition is stated as 45% dry, 35% biodegradable, 11% inert/silt. Is there any plan/scope to reduce inert content at source?	The plant shall be designed for 2 TPD Biodegradable waste shall be there.
4	GTP / Scope of Work	Does the scope include site development works such as drainage, compound wall, approach road, weighbridge, and landscaping, or is the site handed over ready for plant construction only?	The site is a vacant space, and no site development works have been carried out. The successful bidder shall undertake all necessary site development works (except approach road, compound wall, rain water drain, which shall be done by civil section of IWD, IIT Roorkee).
5	SCC Cl. 1(b) / Annexure V	Kindly provide topographical survey, soil investigation/geotechnical report, utility drawings, and existing underground services drawings for the proposed site, to ensure uniform design assumptions across all bidders.	As it is a design based tender so, these are in bidders scope. SBC is approx. 10 t/m ² .

6	General Instructions Cl. 9.2	What is the available electrical load and voltage level at the nearest connection point provided free of cost by IIT Roorkee? What is the distance from the nearest electrical panel/source to the proposed plant location?	Power supply of required load shall be made available by IIT Roorkee at a single point. The successful bidder shall make necessary internal distribution as required.
7	BOM Item A.1.12	"Genset & Equipment Platform" is listed under Civil Units, but no gas genset appears in the Electro-Mechanical BOM. Please confirm: Is a biogas-based power generator (genset) required in scope?	No.
8	BOM	Is the HMI & Instrumentation Panel (Item 35) sufficient? What level of remote monitoring is expected?	The instrumentation and HMI shall be adequate for safe and efficient operation of the plant. Bidders may provide additional monitoring features without any extra cost to IIT Roorkee. No remote monitoring is required.
9	SCC Cl. 4 (Warranty/DLP)	Kindly specify the exact Defect Liability Period (DLP) duration and the bidder's obligations during DLP, especially since SCC Cl. 2(ii) ties DLP to completion of the full 5-year O&M period.	As per tender condition no. 2 of SCC. No change.
10	NIT Critical Data Sheet	Considering engineering, approvals, procurement, fabrication, installation, commissioning and stabilization, please clarify whether the 4-month completion period includes the performance trial run, or whether trial run is a separate post-completion activity.	The stipulated completion period includes successful installation, testing and commissioning including trial runs.
11	SCC Cl. 10 (Environment)	Which statutory approvals are in IIT Roorkee's scope and which are in the contractor's scope - specifically Pollution Control Board (CTE/CTO), Electrical Inspectorate, Fire NOC, and local authority approvals?	The successful bidder shall obtain all approvals required for execution of the work. IIT Roorkee shall extend necessary assistance wherever required.
12	BOM Item A.2.1	A Waste Macerator (disk axial cutter type) is specified, which is a more CAPEX-intensive equipment compared to a conventional shredder. Can the bidder propose a shredder instead, if it meets the functional throughput requirement?	BOM Item A.2.1 shall be followed.
13	BOM Item A.1.12	If a Gas Genset is required in scope (ref Query 7 above), a Hydrogen Sulphide (H2S) scrubbing system is essential for the biogas before genset use, which is currently not considered in BOM. Please confirm if H2S scrubbing is to be included in scope.	As genset is not required at this stage so, H2S scrubbing system is not required.
14	BOM Item A.2.8 / Important Note 1	Digester MOC is specified as RCC. Can the bidder propose an alternate MOC such as MS with epoxy coating, provided it meets the design life and performance requirements?	Equivalent or better material such as dedicated digester tanks, MS with epoxy coating satisfying the design life, structural stability and performance requirements may be considered subject to fulfillment of all tender conditions and objectives.
15	BOM Item A.2.8 / Annexure-VI	The tentative PFD shows a single top-entry agitator as the mixing system. Can the bidder propose an alternate proprietary patented digester/mixing eCSTR technology, side-entry agitators with gas and slurry recirculation achieving superior mixing performance?	Proven proprietary technologies meeting or exceeding the tender performance requirements may be offered subject to approval of IIT Roorkee at the time of presentation.
16	BOQ / Estimated Cost	The estimated CAPEX for Part-A is Rs. 95.34 Lakh. Considering technologically advanced equipment (e.g., macerator, advanced digester design, SLS) the actual CAPEX may be at least 45% higher. Please clarify whether technologically superior proposals with higher CAPEX will be evaluated on merit, or whether the award will strictly be on L1 (lowest quoted) basis as per SCC Cl. 16.	Evaluation shall be carried out strictly as per the tender conditions.
17	Important Note 8	What is the planned mode of discharge/disposal for digestate liquid and solids separated from the SLS, beyond the stated one-day onsite storage and use for gardening?	IIT Roorkee shall use it. One day on site storage shall be in bidders scope.
18	BOM Item 15-16 (Biogas stove/piping)	What is the expected biogas consumption pattern for the kitchen/canteen (e.g., hours of use per day and flow rate per hour)? This is required to correctly size the biogas holder (balloon) capacity.	Approx. 15 LPG cylinders (commercial) per day. Storage should be as per BOM Item no. A.2.9.
19	GTP Background	What is the daily raw material (waste feedstock) availability pattern - is it consistent year-round, or does it reduce during vacations/holiday periods? This is required to define the digester's operational/feed pattern.	Waste generation shall vary. It will reduce during vacation time i.e. may to july. The bidder shall consider such variations in the design.

20	Eligibility Criteria Cl. 2(a)	The bidder "should not be a joint venture". Can a bidder with a consortium/technology tie-up arrangement (not a formal JV) bid, with the technology partner providing design support only?	Eligibility shall be governed strictly by the tender conditions.
21	SCC Cl. 4(c)	Please specify the exact performance guarantee parameters (e.g., minimum gas yield in Nm ³ /day, or kg LPG-equivalent) against which system performance will be measured, and the testing/measurement protocol to be followed.	Performance shall be evaluated as per tender conditions and generation $\geq 50 \text{ Nm}^3 \text{ CH}_4/\text{t}$ wet feed, 30-day rolling average
22	BOM Item A.2.8	Digester liquid volume is indicated as ~120 cum for 2 TPD input. Please confirm the design Hydraulic Retention Time (HRT) assumed, and whether bidders may propose an alternate digester volume if their process design (HRT) differs.	Yes.
23	SCC Cl. 2(ii)	Security Deposit release is tied to completion of the full 5-year O&M (Part-B) Defect Liability Period. Does this mean SD remains locked for the entire ~5.3-year contract duration with no partial release after Part-A completion?	As per tender conditions. No change.
24	NIT Critical Data Sheet, Item 7	Will minutes of the Pre-bid meeting (19.06.2026), along with all bidder queries and the Institute's responses, be published on the portal for all prospective bidders, including those unable to attend in person?	Yes.
25	BOM Item 27 (Solid Liquid Separator)	The tender specifies SLS output moisture of less than 40% via screw press technology. Based on consultation with multiple OEMs, the realistic, guaranteed performance of screw-press technology for this application is in the range of 78–80% moisture removal, i.e., the dewatered cake retains approximately 20–22% solids, meaning the achievable output moisture is higher than the 40% specified. Kindly clarify whether this 40% moisture figure is based on a specific OEM reference, and whether there is flexibility in this specification to align with realistically achievable and guaranteeable performance levels in the market.	20% Total Solids after screw press is expected.
26	BOM Note B (CAO&M)	The BOM specifies a minimum of 2 personnel for the 5-year Comprehensive Annual Operation & Maintenance (CAO&M). Based on our costing analysis, even at a conservative fully-loaded cost of Rs. 20,000/month per person (inclusive of statutory compliance), manpower alone amounts to approximately Rs. 4.8 Lakh per year, before accounting for spares, consumables, and maintenance costs, which appear to be additional to this. Further, 2 personnel may not be operationally sufficient to simultaneously handle daily waste segregation/sorting, digester monitoring, SLS operation, and general plant upkeep. We request the Institute to clarify whether the manpower count of 2 and the corresponding O&M pricing basis in the BOQ is fixed, or whether bidders may propose an alternate manpower structure with appropriate cost justification to ensure realistic and sustainable O&M delivery over the 5-year period.	Manpower, shall be arranged by the contractor at no extra cost except what is quoted in the tender.
27	NIT Critical Data Sheet / BOQ Estimated Cost	Taking into account the technical clarifications and deviations proposed in our queries above (including but not limited to advanced digester/mixing technology, SLS performance specifications, and realistic O&M manpower and cost structuring), our preliminary cost estimate for the complete project (Part-A + Part-B, inclusive of the above considerations) is approximately Rs. 2 Crore, as against the tender's stated Estimated Cost of Rs. 122.70 Lakh (inclusive of GST & Cess). We request the Institute to kindly clarify whether there is budgetary provision/headroom beyond the published Estimated Cost to accommodate a technically superior proposal?	The estimated cost shall remain as published. Evaluation shall be as per tender conditions.
28	Technical Specifications of Bio-methanation Plant	Kindly provide the distance between the proposed biogas plant installation site and the canteen/biogas utilization point along with the tentative routing for the biogas pipeline.	As it is a design based tender so bidders may visit the site as per Annexure-III

29	Technical Specifications of Bio-methanation Plant	Kindly provide the dimensions (Length × Width) of the proposed installation site along with the available clear height and any space constraints.	As it is a design based tender so bidders may visit the site as per Annexure-III
30	Technical Specifications of Bio-methanation Plant	Kindly provide the AutoCAD (DWG) drawing of the proposed installation site showing existing structures, utilities, underground services, levels and access roads.	Available tentative drawings are already attached in the tender document. As it is a design based tender so bidders may visit the site as per Annexure-III
31	Technical Specifications of Bio-methanation Plant	Kindly clarify the mode in which the organic waste will be delivered to the plant, i.e., in bags, bins, trolleys or open trucks. Also specify the unloading arrangement available at site.	Trolley or small trucks. Unloading shall be done by IIT Roorkee at the site of Bio-methanation plant. The platform on which unloading is to be done shall be constructed by IIT Roorkee.
32	Technical Specifications of Bio-methanation Plant	Kindly provide the Safe Bearing Capacity (SBC) of the soil along with the geotechnical/soil investigation report, if available.	SBC is approx. 10 t/m ²
33	Solid-Liquid Separation System	As per the process requirement, the solid fraction obtained after solid-liquid separation needs to be dried before further handling/disposal. Accordingly, a drying shed is essential. However, the tender does not specify any provision or mechanism for drying the separated solids. Kindly clarify the proposed methodology and confirm whether a drying shed shall be included in the project scope.	Bidder shall provide all facilities necessary for successful operation
34	Biogas Burners	The tender BOQ specifies 2 Nos. of biogas burners. However, based on the process design and operational requirements, 6 Nos. of burners are required for efficient operation. Kindly review and confirm whether the quantity of burners may be revised accordingly.	Quantity and type of burners shall remain as per tender.
35	Biogas Balloon & Shed Size	The process requires installation of a 100 m ³ biogas balloon. Accordingly, the shed dimensions provided in the tender may not be adequate to accommodate the required gas storage system. Kindly review and confirm the revised shed dimensions or permit suitable modifications to accommodate the 100 m ³ biogas balloon.	Bidder shall suitably design within the available site while meeting tender requirements.
36	Eligibility criteria for submission of bid documents	With reference to the eligibility criteria stipulated in the tender document, we respectfully submit that our organization has successfully established eleven (11) Biogas Plants in the Union Territory of Jammu & Kashmir under the GOBARDHAN Scheme in association with the Directorate of Rural Sanitation, Swachh Bharat Mission (Gramin), Government of Jammu & Kashmir. Out of these, two plants are of 2 TPD capacity each, thereby meeting the minimum capacity requirement specified under the present tender. While the individual project values of these installations may be lower than the minimum estimated cost threshold prescribed in the tender, the cumulative value and scale of works executed by us under the said projects are substantially higher and adequately demonstrate our technical competence, project execution capabilities, and experience in implementing Bio-methanation facilities of similar nature. Further, we are presently operating a 15 TPD Biomethanation Plant at Kabitkhedi, Indore, Madhya Pradesh, under a Public-Private Partnership (PPP) model. The project is being operated and maintained by us for a concession period of twenty (20) years. Although the project value is not reflected through a conventional work order due to the PPP nature of the contract, documentary evidence in the form of the Letter of Award, Concession Agreement, and related project documents can be furnished for verification. In addition, we are currently executing a 10 TPD Bio-CNG Plant at Chakan, Pune, Maharashtra, which is under construction and development. Relevant documentary evidence, including the Purchase Order and associated project documents indicating the project value, can be submitted for your kind consideration.	Not accepted. Eligibility criteria shall remain unchanged and shall be governed strictly by the tender conditions

The aforesaid projects collectively establish our extensive experience and proven expertise in the design, engineering, supply, installation, commissioning, operation, and maintenance of Bio-methanation and BioCNG facilities, including projects of capacities significantly higher than that required under the present tender.

In view of the above, we humbly request your good office to kindly consider revising or relaxing the requirement relating to the minimum estimated cost of an individual plant experience. Alternatively, we request that cumulative project experience, experience under PPP projects, and ongoing projects of similar nature and capacity may also be considered for the purpose of evaluating technical eligibility.

Such a consideration would enable technically competent and experienced organizations, possessing substantial domain expertise and successful project execution credentials, to participate in the bidding process and submit competitive proposals, thereby fostering greater competition and ensuring successful project implementation.

We shall remain grateful for your kind consideration and look forward to a favourable response.

Note: These clarifications shall form an integral part of the tender document. In the event of any conflict or inconsistency, these clarifications shall prevail subject to fulfillment of tender objectives and scope of work.

06/07/26
ADI(C) Prof. Bhanu Prakash Vellanki
J.E. E.E.(E/M) A.E.(E/M) A.E.(C)-II A.E.(C) 03/07/26 03/07/26

Approved by

06/07/26
Dean Infrastructure