

Involvement of Expert for Technical Design of Decentralized Municipal Solid Waste Treatment Plant in Udaipur

Terms of Reference

Title	Technical Expert for Feasibility Assessment and Technical Design of Biomethanation based Municipal Solid Waste Treatment Plant in Udaipur (approx. 1.5 Tonne per Day) along with a recyclables segregation and management plan
Location	Udaipur City, Rajasthan, India
Time (12 Months)	<ul style="list-style-type: none"> • TOR published on ICLEI South Asia website: 08 January 2018 • Last date of acceptance of proposals: 22 January 2018 • Identification of winning proposal and selection of consultant: 01 February 2018 • Initial information, data collection, review of existing conditions, and analysis: 20 February 2018 • Output of study: Technical Design Document of Biomethanation based Decentralized Municipal Solid Waste Treatment Plant (1 Tonne per Day): 15 March 2018 • Tender document preparation: 30 March 2018 • Supervision of Construction: 01 May 2018 – 30 November 2018

Background:

Swiss Agency for Development and Cooperation (SDC) is supporting the Capacity Building for Low Carbon and Climate Resilient City Development (CapaCITIES) project in 4 Indian cities including Udaipur. The project aims at strengthening the capacities of Indian cities to identify, plan and implement measures for achieving lower greenhouse gas emissions.

About 150 TPD of waste is generated in Udaipur from a population of about 5 lakh distributed in 55 wards¹. The average per capita waste generation is estimated to be 300 gm/day. There is no systematic storage and collection practice in Udaipur, with door-to-door waste collection taking place only in a few wards. From the rest of the city, the waste is collected by sweepers from the road periodically - twice a week or once a week. Community bins have been recently installed in a few wards. The collected waste is being directly dumped at the landfill site at Saveena Kheda. This could lead to severe environmental and health impacts in the city. Therefore, it is important to put in place a mechanism for proper collection, transportation, and processing and disposal of municipal solid waste in the City.

Keeping in view the above scenario, ICLEI Local Governments for Sustainability, South Asia (ICLEI South Asia) on behalf of Udaipur Municipal Corporation and CapaCITIES project implementation agency, invites proposals from technical experts for the 'Technical design of the biomethanation based decentralized municipal solid waste treatment plant' for approximately **1.5 tonnes of biodegradable** waste being generated per day.

Objective of the project

This project will result in assessing the feasibility of and providing the designs for a decentralized waste management system catering to segregated waste collected from wards 1 and 41 in Udaipur and will also provide a recyclables segregation and management plan. Detailed technical design will be developed for the technology most appropriate for local needs, existing institutional capacity, financial and environmental sustainability.

Outputs of the project

Listed below are envisaged outputs of study:

- Feasibility assessment of the biomethanation based waste processing treatment system for segregated solid waste from wards 1 and 41 and proposal of an appropriate end-to-end system
- Detailed technical design of the selected system, including conceptual design drawings
- Detailed execution plan and financial plan for operational feasibility of the system
- Tender package which includes BOQ, Good for construction drawings as per the requirements of Udaipur Municipal Corporation

Study area: Ward No 1 and Ward no 41 in Udaipur. Brief details of the project area are provided below:

¹ Project Information Memorandum (PIM) for Implementation of Municipal Solid Waste Processing Plant adopting Waste to Energy technology with Engineered Sanitary Landfill Facility at Saveena Kheda (Balicha) for Nagar Nigam Udaipur under Swachh Bharat Mission

Wards	Population (Census 2011)	Waste generation ² rate	Quantum of waste generation (TPD)	Organic waste (TPD) ³	Total Waste to be treated (TPD)
Ward No 1	9112	124.79 g/capita/day	1.13	0.680 (Considering that 60% of waste generated is organic)	1.488
Ward No 41	7278	209.08 g/capita/day	1.52	0.806 (Considering that 53% of waste generated is organic)	

(Based on actual survey conducted in these wards in March, 2017)

Scope of Work

The detailed scope of work will include:

- Conduct a preliminary analysis of the project area and existing waste management system. Assess feasibility of the biomethanation treatment system for biodegradables waste from wards 1 and 41 and identification/selection of most suitable system ideal for local context, existing institutional capacity, financial and environmental sustainability. Include a plan and designs for a recyclables management system. Waste quantity and characteristics will be provided by ICLEI South Asia
- Identify a suitable site for the proposed system.
- Prepare feasibility assessment and detailed technical design of the plant.
- Financial plan which includes cost estimates (capex and opex), means of financing, user charges and suitable modes of cost recovery (user charges collection, sale of biogas/compost etc.)
- Develop Bill of Quantity (BOQ) as per the Schedule of Rates (SOR) applicable to Udaipur Municipal Corporation and Monitoring & Evaluation (M&E) plan.
- While designing and adopting a particular technology, consideration should be given to the life-cycle costs of the proposed systems, financial and technical capacities of the city to operate and maintain the proposed system. Design of the proposed technology should be in accordance with the standards set by Municipal Solid Waste Rules, 2016.

²Based on actual surveys conducted in these wards by ICLEI South Asia

³ Based on actual surveys conducted in these wards by ICLEI South Asia

- Provide handholding and guidance to selected Contractor(s) to ensure successful construction and implementation of the plant, support during tendering, construction supervision and any other requirements that may arise to ensure successful execution of the project.

Qualification and Experience

The following criterion for eligibility would be considered:

- Minimum experience of 10 years in waste sector and/or allied sectors. Experience in designing biomethanation plants for municipal solid waste processing is essential. Experience in operation of decentralized solid waste processing plants would be preferred.
- Institutions as well as individual consultants can apply. For institutions, minimum 5 years of relevant proven experience is required.
- Consultant should be able to undertake travel to Udaipur City

Proposal submission:

The selection of Expert(s) would be on the basis of Technical and Financial bid submitted by the Expert(s). 70% weightage would be given to the technical proposal and 30% to the financial bid.

Technical Bid should cover the following aspects:

- CV of key personnel (World Bank format, Max 4 pages).
- Details of organization/institute (Only in case of Institutes). In case of institutions, CVs of key personnel along with time distribution should be given.
- Experience on assignments of similar nature, the outline should indicate, inter alia, the profiles and names of the staff provided (if in case of a firm), duration of the assignment, contract amount, and firm's involvement.
- Detailed Approach and Methodology for undertaking the current assignment, project Schedule with activity and duration to accomplish the task within the scheduled project duration along with detailed work plan.
- Indicative timelines

Financial bid should include:

- Cost of man-days (unit rate)
- Minimum and maximum number of days that can be committed by the Expert(s)
- Any additional costs/overheads/administrative charges.
- Travel, per diems (where applicable) and accommodation expenses should be quoted separately as part of the bid.
- The Financial Proposal shall be inclusive of all the costs including taxes associated with the assignment.
- It is clarified that, the financial Proposal should be prepared in INR.

- The total amount indicated in the financial Proposal shall be without any condition attached or subject to any assumption, and shall be final and binding. In case any assumption or condition is indicated in the financial Proposal, it shall be considered non-responsive and liable to be rejected.
- The final amount should be quoted in both figures and words.
- A copy of valid Pan Number, registration with GST, last 3 financial year's balance sheet (or as applicable), audited by certified Chartered Accountant need to be submitted.

Date of Submission and Notification

Expert(s) are requested to submit their bids by 22nd January, 2018. The selected Expert(s) would be notified through email latest by 1st February, 2018.

Release of Payment

Professional Costs:

- First instalment (20%): At the time of signing the contract
- Second instalment: (20%)
 - Feasibility assessment report for decentralised biomethanation plant or suggestion of suitable technology
 - Submission of document on selection of suitable treatment system
- Third Instalment (40%):
 - Satisfactory submission of document(s) on Detailed Technical Designs of the selected technology
 - Detailed Financial Plan
 - Satisfactory submission of Tender package
- Fifth Instalment (20%): On successful completion of construction of treatment system

Travel Costs:

- Travel and per diem costs (which also include local travel costs, accommodation and food costs) will be reimbursed at the end of every month, upon submission of all relevant documentation

Other Terms and conditions:

- The Terms of Reference (ToR) can be downloaded from the ICLEI South Asia website (<http://southasia.iclei.org>).
- The financial & technical proposals should be submitted as separate documents.
- The Proposal should be submitted with title "Expert for Technical Design of Decentralized Municipal Solid Waste Treatment Plant in Udaipur" under CapaCITIES Project
- The Proposal can be submitted by applicant through email to soumya.chaturvedula@iclei.org on or before 22nd January 2018
- In case of any doubt/query regarding any portions of ToR, the applicant should send it by mail to the contact person mentioned above.

- ICLEI South Asia reserves the right to reject any proposal, and to annul the selection process and reject all proposals at any time, without thereby incurring any liability to the affected applicant or any obligation to inform the affected applicants of the grounds for such decision.
- It should be noted that the project is being implemented in Udaipur Municipal Corporation jurisdiction area and hence instructions to bidders will be given by ICLEI South Asia in consultation with UMC officials. ICLEI South Asia will be overall in-charge for all the works that would be executed under the present scope of work
- The applicant shall also obtain necessary permissions from concerned government departments related to the work/data collection if deemed necessary and in coordination with UMC and ICLEI South Asia.
- All data and information received from ICLEI South Asia for the purpose of this assignment are to be treated confidentially and are only to be used in connection with the execution of these Terms of Reference. The contents of written materials obtained and used in this assignment may not be disclosed to any third parties without written approval from ICLEI South Asia and UMC.
- The decision of ICLEI South Asia will be final and binding.
- The proposals received will be scrutinized & evaluated by the CapaCITIES Implementing Agency in consultation with senior officials of UMC involved in the execution of CapaCITIES project. The decision shall be informed to the winning applicant.
- Detailed Work Order will be issued to winning applicant within 10 days of announcing the results.
- The selected applicant is to forward the signed and sealed work order to ICLEI at the earliest or not more than 3 (three) working days of issue of work order.

Contact Information

For Further information, please contact:

Ms. Soumya Chaturvedula

Deputy Director

ICLEI - Local Governments for Sustainability, South Asia

C-3, Lower Ground Floor

Green Park Extension

New Delhi-110016, India

Tel: +91 11 49747200; +91-9866168713

Fax: +91 11 49747201

Email: soumya.chaturvedula@iclei.org

