

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

Terms of Reference

Title	Technical Expert for Feasibility Assessment and Technical Design of Biomethanation based Municipal Solid Waste Treatment Plant in Coimbatore (1.5 Tonnes per Day) along with a recyclables segregation and management plan
Location	Coimbatore, Tamil Nadu, India
Timelines	<ul style="list-style-type: none"> • TOR published on ICLEI South Asia website: 20th March 2018 • Last date of acceptance of proposals: 5th April 2018 • Identification of winning proposal and selection of consultant: 15th April 2018 • Initial information, data collection, review of existing conditions, and analysis: 15th May 2018 • Output of study: Technical Design Document of Biomethanation based Decentralized Municipal Solid Waste Treatment Plant (1 Tonne per Day): 30th May 2018 • Tender document preparation: 30th May 2018 • Supervision of Construction: 20th June 2018 – 20th December 2018

Background:

The Swiss Agency for Development and Cooperation (SDC) is supporting the CapaCITIES project in 4 Indian cities including Coimbatore. The project aims at strengthening the capacities of Indian cities to identify, plan and implement measures for achieving lower greenhouse gas emissions and improve urban resilience.

Coimbatore generates an estimated 890 Tonnes per day of which it manages to collect close to 855 tonnes. The primary collection is handled completely by CMC either through its own

employees or through contract labour. In all, CCMC has four transfer stations at Peelamedu, Sathy Road, Ukkadam and Ondipudur, out of which the one at Sathy Road is not operational anymore. The disposal site at Vellalore consists of a biomechanical composting plant, a sanitary landfill, and a recently constructed vermi-compost plant. There are plans of a waste to energy plant being built in the same premises. Within the premises, there is also a waste segregation facility where dry waste is segregated and sold outside, removing a large percentage of waste from going to the landfill.

Around 70% of the population is covered by door to door waste collection. Currently through a pilot intervention, efforts are being made to collect segregated waste from 100% of the households in wards 22, 23, and 24. The recyclable dry waste is being collected and sold by the collectors. However, there is a large amount of wet waste being generated from the wards, and the corporation wants to set up a decentralized facility for this segregated wet waste to avoid mixing of waste during transfer to the Vellalore site.

Keeping in view the above scenario, ICLEI Local Governments for Sustainability, South Asia (ICLEI South Asia) on behalf of Coimbatore City Municipal Corporation (CCMC) and CapaCITIES project implementation agency, invites proposals from technical experts for the 'Technical design of a biomethanation based decentralized municipal solid waste treatment plant' (1.5 TPD capacity).

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 22, 23 and 24 in Coimbatore 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 22, 23 and 24 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 Bill of Quantity (BOQ), Good for construction drawings as per the requirements of CCMC
- Recyclables Segregation and Management Plan

Study area: Ward 22, 23 and 24 of Coimbatore city. Brief details of the project area are provided below based on actual survey conducted by ICLEI South Asia and CCMC:

Wards	Population	Total Households	Total waste generated per day (Kg)	Amount of segregated recyclable waste collected per day (kg)	Amount of segregated organic waste collected per day (kg)	Amount of mixed waste sent to compost yard per day (Kg)
22	26710	5100	20000	500	3500	16000
23	10595	2199	11000	600	6500	3900
24	29180	6200	12000	400	5000	6600

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 bioemethanation treatment system for biodegradables waste from wards 22, 23, and 24 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
- Prepare feasibility assessment and detailed technical design of the plant to be established at the site identified by CCMC.
- 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 BOQ as per the Schedule of Rates (SOR) applicable to Coimbatore City 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.

- 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 Coimbatore 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, as applicable.

- 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) and/or institutions are requested to submit their bids by **5th April, 2018**. The selected Expert(s) and/or institutions would be notified through email latest by **15th April, 2018**.

Release of Payment

Professional Costs:

- First instalment (20%): At the time of signing the contract
- Second instalment: (60%)
 - Feasibility assessment report for decentralised biogas plant or suggestion of suitable technology and recyclables plan
 - Submission of document on selection of suitable treatment system
 - Satisfactory submission of document(s) on Detailed Technical Designs of the selected technology
 - Detailed Financial Plan
 - Satisfactory submission of Tender package
- Third 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 Coimbatore" under CapaCITIES Project
- The Proposal can be submitted by applicant through email to shruti.sadhukhan@iclei.org on or before 5th April 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 CCMC 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 CCMC 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 CCMC.
- 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 CCMC 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 7 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:

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